Annual Report 2023-24

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प्रौद्योगिकी
संस्थान
काशी हिन्दू विश्वविद्यालय

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BANARAS HINDU UNIVERSITY

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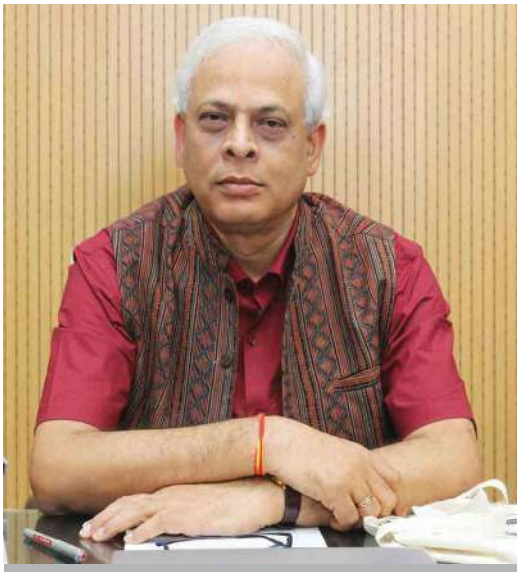


Prof. Amit Patra
Director, IIT (BHU) Varanasi

"The New IIT (BHU) Varanasi emerges from the old, building on its earlier strengths and transforming itself to meet the challenges of the future."

Engineering education requires development of expert knowledge and skills in respective branches of engineering, whereas technology development requires broad based fundamental knowledge of both science and engineering with analytical skills and innovative thinking. Quality engineering education should inculcate a broad foundation along with deeper knowledge, understanding and expertise in the branch or discipline of specialization of students, with a further inclusion of humanism, social responsibilities, business aptitude and soft skills. The Indian Institute of Technology (BHU) at Varanasi, which was founded in 1919 as Banaras Engineering College has a glorious history of academic achievements. It was made the Institute of Technology, Banaras Hindu University (IT-BHU) in 1968. It was in the 10th meeting of IIT Council in 1972 a proposal came to convert IT-BHU into IIT. Finally, from 29 June 2012 it joined the great galaxy of Indian Institutes of Technology as one of its bright stars with full-fledged status of IIT (BHU) Varanasi. The Institute has in all 15 departments and 3 inter-disciplinary Schools.

IIT (BHU) Varanasi is also making significant reforms in the educational ecosystem and is dedicated to implementing National Education Policy (NEP-2020), a government's vision for a paradigm change in Indian education. Research and development are an essential function of national institutions like the Indian Institute of Technology (BHU) Varanasi and ever-increasing emphasis is being laid to this important aspect of academic pursuit by different departments and schools of the institute. Institute is collaborating with various Institutions of high repute in India and abroad and also industries involved in high tech research like Tata Motors, Nissan Motors, Amazon AWS Educate, Power Grid Corporation of India Ltd., Indian Refractory Makers Association (IRMA), Indian Pharmacopoeia Commission (IPC), NCL, CISCO, UPEIDA, ISRO, GAIL (India) Limited, etc. Indian Institute of Technology (BHU) Varanasi has a very rich central instrumentation facility (CIF) for producing futuristic research infrastructure and quality education service in support of advanced instrumentation. The CIF offers facilities of sophisticated instruments and technical expertise to support faculty/student research and industry. The institute has several MoUs with international Institutes for academic exchange to promote knowledge of students. Our Institute has a mission to fulfil the needs of the nation through Research and Innovation. Faculty members and students are engaged in cutting-edge research under various areas. The Institute has proven expertise in the areas of steels, advanced materials, microwave technology, electrical and electronic devices, artificial intelligence, composite materials, novel reactor design, new drugs, and sensors/biosensors apart from others. The Institute is also developing expertise and research facilities in quantum technology.

Academic Activities

The Institute has always maintained high academic standards since its inception. It has produced visionary engineers and administrators who have lead the corporate world with elan and served the nation with distinction.

The institute offers Ph.D. Programmes in 17 departments (department of Humanistic Studies established in 2015-16), M.Tech. programme in 13 disciplines, M.Pharm. programme in one discipline (M.Tech.

programme started in Decision Sciences and Engineering instead of Industrial Management from the session 2020-21), B.Tech. programmes in 10 engineering departments, Dual Degree (B.Tech. and M.Tech.) programmes in 14 engineering departments/schools/science departments, B.Arch. programme in 1 department (Department of Architecture, Planning and Design, established in 2019-20), besides a preparatory course for SC/ST/PwD students during the year under report. An academic section, examination unit and scholarship section are under the Dean (Academic Affairs) of the Institute. Three smart lecture theatre complexes have been established and equipped with LCD projector in each classrooms alongwith the backup of the electricity. The classes for the Institute core courses, HULM and Institute Open elective are being held centrally in the lecture theaters of the Institute. The Examination unit publishes the online application forms for the admission to PG programmes annually and for Ph.D. Programmes biannually every year. Online profile registration, add/drop courses, department-wise/subject-wise students list, grade submission, declaration of results, transcripts has keen automated and taken care by the examination unit. The Scholarship section administers the fellowships (Institute or other) of the students. Academic Section administers the works related to Ordinances, admissions process for B.Tech./B.Pharm./IDD through JEE(Advanced) and M.Sc. through JAM jointly conducted by the IITs, students leave, conducting semester examinations, preparation of academic calendar, class time-tables under supervision of Dean (Academic Affairs)/ Associate Dean (Academic Affairs), UG/Core Courses. The office of the Dean (Academic Affairs) has totally automated for the Ph.D. submission as well as for the submission of grades on the portal, overload, physical registration also.

The current student strength is 8735 with 4560 B. Techs, 1973 IDDs, and 90 B.Archs., 725 M.Techs, 96 M.Scs., 95 M. Pharms. and 1196 Ph.D. students after Ph.D. admission of even semester 2023-24.

The current strength of regular faculty members of the Institute is 349. In addition to this, 07 visiting professors also contribute to the academic activities of the Institute. Further, under the alums visiting program, alumni also participate in teaching and help the students learn about latest industy practices and keep them abreast about the skill requirements in various industry sectors. This adds practical value to the overall education being imparted to the students.

Candidates for admission to the 4-Year B.Tech., 5-Year B.Arch. and 5-Year Dual Degree programmes were selected through JEE (Advanced) and on the basis of the All India Rank. 2-Year M.Sc. programmes started from the session 2019-20 and onwards in the Department of Physics and Chemistry, the candidates were selected through JAM, jointly conducted by the IITs. 2-Year M.Tech./M.Pharm. programmes, candidates get admitted on the basis of GATE/GPAT score. Quite a few candidates were also selected for the M.Tech. programme under the Sponsored and Q.I.P. programmes through interviews and/or written tests. Selection for the Ph.D. programmes was done through tests/interviews, they must qualify the GATE or GPAT or UGC/CSIR-NET. To attract the foreign national students for studies in India, the Institute has also taken admission in PG and Ph.D. Programmes through the Study in India Portal as well as ASEAN Fellowship programmes conducted by the Govt. of India. The Institute also takes admission of foreign nationals for the PG and Ph.D. programs from the session 2021-22 onwards through the newly started A2A Scholarship Scheme under ICCR, Govt of India.

Research & Development activities

The institute is dedicated to fulfilling national needs through Research and Innovation. Faculty members and students actively engage in cutting-edge research across various schemes. To foster a research-oriented culture among students, Tinkering Labs have been established in several departments, enabling students to participate in research projects early in their academic journey. The institute supports faculty research initiatives through grants such as Seed Money, Research Support Grant, and R&D Thrust Area Grants. In addition, the institute provides Lab Grants to upgrade teaching labs and supports the acquisition of central instruments. Faculty members are actively involved in pioneering research areas, receiving support from government research agencies and reputable industries. A significant initiative of IIT (BHU) Varanasi focuses on green and sustainable technology, promoting interdisciplinary research in collaboration with industry to develop indigenous, cost-effective, and scalable technologies that meet local needs and have global potential. This initiative aims to excel in research, build capacity in green and sustainable technologies, and utilize these technologies for India's benefit. The institute also seeks to expand collaborations with renowned international universities and institutions to enhance research exchange activities.

(i) Sponsored Projects and MOUs

The institute has proven expertise in the areas of steel, advanced materials, microwave technology, electrical and electronic devices, artificial intelligence, composite materials, novel reactor design, new drugs, and sensors/biosensors apart from others. The institute has identified thrust areas of Research in Hydrogen Energy, Environment and Water, Healthcare, Biomedical Devices, Biosensors, Smart microgrids, Smart e-mobility, Quantum Computing, Precision Engineering, Material Science and Drone Technologies. Various technology development and research projects are going on in these areas of research.

Significant numbers of projects have been initiated to address the national needs and social issues like the development of functional materials for energy, the development of compact hydrogen generation devices, and biofuel cells. Key issues taken up for studies include real-time simulation of smart grids with distributed energy resources and integration/control of renewable

energy systems. There are faculty members extensively involved in the design and development of new drugs, biomimetic materials for organs, and biosensors. Institute is collaborating with various other institutions of high repute in India and abroad.

The Institute has signed several international MoUs with renowned international Institutes/Universities like Deutscher Akademischer Austauschdienst German Academic Exchange Service (DAAD), Australian and the Indian Partners in the Australia India Water Centre, Australian and the Indian Partners in the Australia India Water Centre. Likewise, during the last one year the institute has signed several national MoUs with Union Bank of India, Reinventbio Private Limited, Dr BR Ambedkar, National Institute of Technology (NIT) Jalandhar, CSIR - Central Road Research Institute, and Indian Institute of Technology, Delhi Unnat Bharat Abhiyan and Regional Coordinating Institution.

IIT (BHU) Varanasi has developed a research and innovation friendly environment supported through state of art infrastructure at Department/School level. In IIT (BHU) Varanasi, total numbers of on-going projects are 406 till F.Y 2023-24 amounting to Rs. 147.69 Crores. including 11 Internationally funded projects of amount Rs. 2.31 Crores. Additionally, there are 45 Institute projects/schemes running in the Institute with a total cost of ~Rs. 436 crores.

While in the financial year 2022-23 total 91 sponsored projects amounting to ~27.17 crores were received by the faculty members of the Institute, in 2023-24, 93 new projects with total value of Rs. 29.75 crores were awarded to the faculty members of Institute. Likewise. 05 new Institute projects/schemes of total value ~Rs. 54.81 crores were sanctioned in 2022-23. Significant improvement was seen in 2023-24 with 07 new Institute projects/schemes with total value of approximately Rs. 118 crores.

The Institute has shown significant improvement in IPR as well. In 2022-23, total 32 patents were filed and 49 patents were awarded, while in the financial year 2023-24, 46 patents were filed and 66 patents were awarded.

While the total number of publications in the scopus index journal was 1847 in 2022-23, the number has increased to 2044 in 2023-2024. Likewise, the number of citations has increased to 49670 in 2023-24 compared to 44384 in the previous year i.e., 2022-23.

(ii) Central Instrumentation Facility (CIF)

Central Instrumentation Facility (CIF) is one of the Specialized Research Facilities at IIT (BHU) Varanasi. Our mission is to provide futuristic research infrastructure and quality education services in support of advanced instrumentation. The CIF offers facilities of sophisticated instruments and technical expertise to support faculty and students' research and industrial R&D. The center has state-of-the-art facilities like Prototyping Machine for electronic circuits, Magnetic Property Measurement System, Tribometer, NMR (500 MHz), thin-film & powder XRD, BET, ICP-MS, high-resolution SEM, Confocal Microscope, and TEM. Few other sophisticated instruments like XPS and Tabletop SEM, Confocal Microscope are recently added to the list amongst others.

(iii) Centre for Computing and Information Services (CCIS)

Centre for Computing and Information Services (CCIS) offers high-end computational servers, web servers, network services, and provides a robust platform for various academic and research activities of the institute. CCIS is a growing unit and poised horizontally to meet the crescent demand of the scientific and research community of the institute.

(iv) Precision Engineering Hub

A Precision Engineering Hub (PEH) is one of the state of art facilities of the Institute. The purpose of the hub is to serve as an ecosystem for product ideation and creation. The hub is built with the help of funds from Defence Corridor, Design Innovation Centre, and Technology Innovation Hub. The main focus of PEH is aligned with the national objective to support the Make in India and Atma Nirbhar Bharat initiatives. The latest technology that the hub is equipped with includes laser cutting machines, CNC machines, high strength color polymer 3D printer, composite 3D printer, Metal 3D Printer, Multilayered PCB prototyping and Ultimaker S5 Pro 3D printer.

(v) Design and Innovation Centre (DIC)

DIC, IIT (BHU) has been established to work on the possibilities of innovation in Technology and Humanities, Liberal Arts, Social Science, Art, Culture, Music, languages, and other relevant areas. DIC, IIT (BHU) Varanasi and DIC, BHU work as HUB, and the center has three spokes; (i) Indian Institute of Information Technology, Allahabad, (ii) Motilal Nehru National Institute of Technology, Allahabad, (iii) University of Allahabad. The Center has established three labs namely; Graphics and Digital Media Lab, Digital Innovation Gallery & Design Cafe (Prototype lab and Workshop place).

(vi) Intellectual Property Rights, Testing, and Consultancy

The extension of our expertise and laboratory facilities to the industries of this region is a crucial service activity of the institute. All the major departments of the institute actively engage in providing industrial consultancy and testing services

to a large number of industries and entrepreneurs of the region and also to large industrial houses. During this year, several consultancies and testing projects valued approximately Rs.12.88 crores were completed successfully. Further, valuing research and innovation, IIT (BHU) Varanasi has kept exploring ideas and continued experimenting with them. Shouldering its responsibility as one of the premier institutes of our country, the institute has undertaken various initiatives in the Research and Development sector including patents and IPR. In 2022-23, a total of 32 patents were filed and 49 patents were awarded while in the last financial year 2022-23, 46 patents have been filed and 66 patents have been awarded. After the last convocation 20 patents were awarded and few patents were commercialized.

(vii) Research Centers

- **DRDO Industry Academia-Centre of Excellence (DIA-CoE)**

  Indian Institute of Technology (BHU), Varanasi has taken a big step towards making the defence sector self-reliant and sustainable, in line with the dream of Hon'ble Prime Minister for "Atmanirbhar Bharat". Indian Institute of Technology (BHU) is on the way to setup a DRDO Industry Academia-Centre of Excellence (DIA-CoE). Hon'ble Raksha Mantri Shri Rajnath Singh has approved to set DRDO Industry Academia-Centre of Excellence (DIA-CoE) at IIT (BHU) Varanasi. The centre would enable research for accelerated development of specific and futuristic technologies for defence and security needs of India. Initial phase of this centre shall focus to accelerate research problems under three verticals – Powder Metallurgy, Functional Electronics Materials, and High Power Microwave Sources and Devices. These research domains were identified with vision of immediate support towards current defence related challenges and issues.

- **Supercomputing Centre**

  A Supercomputing Center has been set up in the institute under the National Supercomputing Mission. The supercomputer PARAM Shivay has a peak processing speed of 833 Tera FLOPS. Sixty percent of the processing power is for local use by the IIT (BHU) Varanasi and BHU research community, and the rest for other CFTIs and research labs across the nation. The system has been commissioned under the "Make in India" program. The system is a sophisticated mix of CPUs and GPUs with relevant systems and application software based on open source. IIT (BHU) Varanasi Supercomputing Centre was inaugurated by honorable Prime Minister Shri Narendra Modi.

- **Malaviya Centre of Excellence for Defence Corridor**

  The Government of Uttar Pradesh has also made IIT (BHU) Varanasi a primary knowledge partner in its prestigious defense corridor project, and the institute has thus inked an MoU with Uttar Pradesh Expressway Industrial Development Authority (UPEIDA). Uttar Pradesh Government has allocated Rs. 69 crores for the creation of R&D facilities in niche areas as Centre for Defense Materials and Precision Engineering. The proposal also envisages IIT (BHU) Varanasi as a hub for skill development for defense industrial needs.

- **ISRO Regional Academic Centre for Space**

  ISRO has recognized IIT (BHU) Varanasi as Regional Academic Centre for Space (RAC-S). The RAC-S is pursuing advanced research in the areas of relevance to the future technological and programmatic needs of the Indian Space Programme and act as a facilitator for the promotion of space technology activities in the central region comprising the states of Chattisgarh, Madhya Pradesh, and Uttar Pradesh. RAC-S is also engaging other institutes of excellence in the area of Science and Technology in the region to take part in the research and development activities of the centre. ISRO & IIT (BHU) Varanasi have identified the associating institutes from these three states to take part in the programme and to develop joint project proposals in the research areas of relevance to the space programme.

- **Sustainable Coal Mining in Northern Coalfields Limited**

  IIT (BHU) Varanasi and NCL joined hands to ensure a robust Industry-Institute partnership given mutual benefit and in the interest of mineral conservation, mine productivity, and advancement in clean technologies in the energy sector. Through this collaboration, NCL also ensures social upliftment of the region surrounding Varanasi, Singraulli, and Sonbhadra by planning and execution of dedicated CSR / welfare projects strictly in terms of the company's CSR policy by involving the Incubation Cell and Coal Research Lab of IIT (BHU) Varanasi.

- **Collaborative research centre of the Indian Pharmacopoeia Commission**

  IIT (BHU) Varanasi is now recognized as a collaborative research center of the Indian Pharmacopoeia Commission (IPC) of Ministry of Health and Family Welfare, which will help to promote quality research in the area of pharmaceutical and medical devices. This will aim to develop new methods and procedures for the analysis of pharmaceutical substances and dosage forms. IIT (BHU) Varanasi also has a focus to reduce healthcare costs by developing low-cost methods of Active Pharmaceutical Ingredients (APIs) to make India self-reliant (Atmnirbhar Bharat) in the sector of bulk drugs. As the regulatory landscape in the health sector has been dynamically evolving in the country to protect the safety, rights, and

wellbeing of the patients, the current scientific innovations in drug development and medical devices would play an important role in the healthcare profession. Therefore, IIT (BHU) Varanasi is striving hard to strengthen the standard setting processes in the sector of pharmacovigilance and medical devices.

- **Centre of Excellence in Refractories**

  The primary aims and objectives of the center are to build up a self-sustaining center for hands-on ceramic research & training atthe institute for contributing to our country's knowledge economy. The centre also aims at extending the testing facilities of refractories/high-temperature ceramics and composites for industries as well as national labs/ institutes and government organizations nationwide. The centre is involved in industrial-training programs in key emerging areas that lead to technology-driven innovations for future generation technologies. This center and its facilities are dedicated to implementing various national missions, including, "Make in India", "Creative India Innovate India", "Start-up India", "Kaushal Bharat Kushal Bharat" and "Atmanirbhar Bharat (self-reliant India)".

- **Center of Energy and Resource Development (CERD)**

  The Centre for Energy and Resources Development was established under the Frontier Areas of Science & Technology (FAST) scheme of MHRD. The broad aim of this Centre is to undertake world-class research that integrates the scientific, technological, economic, policy, and socio-technical aspects of energy to deliver key tools needed to enable, enhance and accelerate the transition toward sustainable energy systems. The Centre is developing cutting-edge technologies in the energy sector for rural, urban, SMEs, and other industries of the region. The center's research activities also include solar-based energy systems, future energy technologies, fuel cells, hydrogen energy etc.

- **Technology Innovation Hub (TIH)**

  The Department of Science and Technology, Government of India has identified Data Analytics and Predictive Technologies (DAPT) as one of the domain areas of Technology Innovation Hub (TIH) under India's National Mission on Interdisciplinary Cyber Physical System (NM-ICPS). DST has identified IIT (BHU) Varanasi as one of the institutes for establishing TIH under this scheme. As a part of this development, I-DAPT Hub Foundation, IIT (BHU) a non-profit section 8 company was established. In order to meet the mandate of IDAPT Hub Foundation in terms of better societal outreach and Industry 4.0 functioning, five thrust areas, 1) Telecommunications, 2) Power, 3) Defence Research and Development, 4) Road Transport and Highways, and 5) Health and Family Welfare have been identified. The activities envisioned under the I-DAPT Hub Foundation will provide impetus to smart cities mission, smart and optimized energy/ power management, state-of-art defense infrastructure development, and the health and family welfare of the country. It helps in manufacturing via the invention of new products, services and the creation of skilled young human resources at all levels (technicians, researchers, scientists, and entrepreneurs) and will become a key contributor to realizing the vision of "Digital India."

Ideation, Innovation and Incubation Foundation (I-3F)

Ideation, Innovation and Incubation Foundation (I-3F), earlier known as Technology Innovation and Incubation Center (TIIC), is an umbrella organization at IIT (BHU) Varanasi for fostering an entrepreneurial ecosystem and nurturing start-ups in the East UP region. It administers various units which provide 'Start to Scale' support for entrepreneurship and facilitates research activities to convert into commercial ventures. Different units under I-3F are:

NCL-IIT(BHU) Incubation Centre: NCL-IIT(BHU) Incubation Centre (NIIC) is a joint collaboration of the Indian Institute of Technology (Banaras Hindu University) and Northern Coalfields Limited. NCL – IIT (BHU) Incubation Centre, is a Technology Business Incubator for fostering entrepreneurship and nurturing tech start-ups of IIT(BHU) Varanasi. The business incubator provides 'Start to scale' support for technology-based entrepreneurship and facilitates the conversion of research activity.

RKVY-RAFTAAR Agri Business Incubator (R-ABI): R-ABI is a scheme funded by the Ministry of Agriculture and Farmers' Welfare (MoA & FW) which is working in close collaboration with other incubators. This scheme aims at strengthening the infrastructure in agriculture and allied areas in order to promote agripreneurship and agri business by providing financial support and nurturing the incubation ecosystem in and around Uttar Pradesh.

CISCO thing Qbator Makerspace Program: As a part of a CSR initiative, Cisco Systems along with NASSCOM Foundation has established a "thingQbator" makerspace at IIT (BHU). This AI and IoT-based makerspace program helps to accelerate innovation and entrepreneurship among the student community of IIT (BHU) Varanasi. Students not only play with the ideas but become creative problem solvers and strengthen the start-up ecosystem of India.

E-Cell: The Entrepreneurship Cell (E-Cell) is an institute body run by the students of IIT (BHU) Varanasi helps in creating a Startup Ecosystem, building relations for the promotion of Startups and Entrepreneurship at IIT (BHU) Varanasi. E-Cell organized several business plan competitions, workshops, hackathons, and interactive sessions from high-end speakers and

entrepreneurs. One flagship event, Founder's Speak is a monthly event to connect aspiring entrepreneurs with successful founders and serial entrepreneurs with great exits. Research Innovation and Entrepreneurship Unit (RIEU) is a dedicated unit under the helm of E-Cell, IIT (BHU) Varanasi that aims to promote innovation-driven research entrepreneurship in various fields of science and technology. RIEU focuses on cultivating artistic research culture on the campus by seeking industrial collaborations to build a concrete connection between the institute and the industry. CiscothingQbator under the helm of E-Cell, IIT (BHU) Varanasi is the bridge of communication between the student and the thingQbator community, making the interaction more obvious. Another big event organized under E-cell was "Fusion'21" an inter-thinkubator idea storm providing an opportunity to work on mind-boggling ideas.

Joint Incubation Centre in collaboration with Union Bank of India: IIT (BHU), Varanasi, inaugurated its Joint Incubation Centre in collaboration with Union Bank of India, with support from the Ideation Innovation & Incubation Foundation (I3F), the umbrella organization at IIT (BHU) for fostering an entrepreneurial ecosystem and nurturing start-ups. The center aims to establish a platform for technological advancements and value creation in society by focusing on critical areas such as software development, quantum computing, cybersecurity, IoT, and data analytics.

Unnat Bharat Abhiyan

Unnat Bharat Abhiyan (UBA) is a Ministry of Education initiative with a total sanctioned cost of Rs 3.50 crore and aimed at solving the technological problems of the common man. This project is a joint venture of all IITs and many other Institutes of National Importance. UBA is conceptualized as a movement to connect institutes of higher education with local communities to address the development challenges of rural India through appropriate technological inventions. IIT (BHU) Varanasi is also identified as one of the Regional Coordinating Institutions (RCIs) on the basis of their earlier experience and infrastructural competence. Several villages in and around Varanasi and Mirzapur were adopted and IIT (BHU) Varanasi students are actively involved in counseling and providing the necessary technical inputs (such as preservation and promotion of rural crafts, advice for sanitation and hygiene, rainwater harvesting, solar lights for the community, forestation, drinking water quality, etc.) to the villagers.

Shreenivas Deshpande Library and E-resources

The IIT (BHU) Varanasi library system consists of the Shreenivas Deshpande Library and five departmental libraries, which collectively support teaching, research, and extension programs of the institute. The library system, besides having an excellent print collection of over 1,42,000 volumes of books, journals, theses, reports, pamphlets, also provides access to over 15,000 electronic journals and more than 3,000 electronic books, e-standards, and databases in science, engineering, and technology. Library provides reading room facilities, access to Digital Library, web OPAC, remote access of e-resources, discussion room facility, and reference services related to research and teaching. The library has also created the Indian Research Information Network System (IRINS) database of institute researcher's profile and institutional repository. Library also supports research activities by providing the research support tools (Anti-Plagiarism software, Grammarly, InSite, JCR, reference management tools, etc.). Recently, the library organized an author(s) workshop by Wiley, Taylor & Francis, and Workshop cum User Awareness Program on InSite and Turnitin.

Alumni Connect, Endowment, Scholarship and Resource Generation

The Institute is proud of its Alumni Community which has always come forward in times of need and volunteered for providing support and guidance. With the mission to strengthen the bond between the alumni and the students, frequent engaging sessions and formal/informal meets were organized both online and in person by the Student Alumni Interaction Cell (SAIC) of the Institute. The annual Student Alumni Mentorship Program, aimed at providing personalized guidance and insights to students from the alumni, witnessed registrations from 450+ students who received one-on-one guidance from 140+ alumni mentors across 12 diverse domains. Institute, Student Alumni Interaction Cell (SAIC) also organized the Ask program. The Alumni initiative as part of the previous program, which received registrations from 165+ students and around 50+ alumni. This initiative is specially curated for 1st-year students, targeting their holistic development. Connect & Learn - the Student Alumni Meet-up saw an increase in participation from both students and alumni this year. In this initiative, about 100+ student registrations and 50+ alumni registrations were recorded this year across the cities of Bangalore and Delhi.

To update the alumni community about the latest developments at the Institute, Student Alumni Interaction Cell (SAIC) under the guidance of the Dean (Resource and Alumni) released 11 editions of its monthly alumni newsletter- Alma Communiqué, from April 2023. Covering information from different sections of all the realms- students, alumni, and the Institute, the newsletter had an overall readership of 4000+ alumni from across the globe. In the online setting, SAIC's website (saic.iitbhu.ac.in) acted as the single-point platform for all alumni services and updates throughout the year. It hosted 14,000+ users and touched a total of 51,000+ page views. Apart from increasing the awareness of the Alumni Registration Portal through its social media platforms, SAIC also converted its database to add 6,300+ members to the portal. The current registration

stands at 18,100+. Moving forward, SAIC aims to build more alumni connections and closely knit the Institute's vast alumni network together. The UI/UX design and the front-end development of the new SAIC website have been completed. The back-end development is in process

Institute witnessed 7 mesmerizing reunions, bringing families of 275+ alumni together to reminisce fond memories whilst establishing connection with the Institute. The details of the reunions are given below:

Dates	Batch	Number of Alumni Attended
Jul 22 '23	2003	35+
Nov 17 '23 - Nov 19 '23	1993	30+
Nov 22 '23	BENCO-64	25+
Nov 24 '23 - Nov 27 '23	CSE 2003	15+
Feb 16 '24	MIN 1999	15
Feb 17 '24	1984	85+
Feb 20 '24	1979	70+

The Alumni Sports meet was organized where students interacted with Alumni visiting the Institute for Spardha in collaboration with the Sports Council.

In FY 2023-24, total contributions received by the Institute from Alumni is Rs. 6,30,49,054/-

In Addition to above, IIT (BHU) Signed following MoUs and MoAs

1. MoA Signed between IIT (BHU) Varanasi and Sri Raj Yavatkar for Student Academic Center on 14.08.2023.
2. MoA Signed between IIT (BHU) Varanasi, IIT (BHU) Foundation and Rajiv Khanna for establishment Vishwashanti Advanced Vibration and Dynamic Materials Testing Laboratory on 08.02.2024.
3. MoU Signed between IIT (BHU) Varanasi and HSIL Corporate Social Responsibility Foundation for Dr. R. K. Somany Memorial Scholarships during February 2024.
4. MoU draft between IIT (BHU) Varanasi and Tata Steel Foundation (TSF) for Scholarship Award Program (SAP) is approved.
5. Proposal received from Sri Sushil Kumar, Alumnus of Chemical Engineering, for Up-gradation of Four Class Rooms in the Department of Chemical Engineering and Technology, IIT (BHU) and approved.

Fund Received During FY 2024-25 Till Date

1. Rs. 30,00,000/- Received from Sri Sudha Gupta, for Aditya Gupta Endowment Scholarship for Metallurgical Engineering students.
2. Rs. 5,00,884/- Received from Dr. Tridibesh Satpathy for Dr. Tridibesh satpathy Medal of Excellence for Mechanical Engineering.
3. Rs. 39,42,500/- received from Rajiv Khanna for establishment Vishvashanti Advanced Vibration and Dynamic Materials Testing Laboratory.
4. Rs. 49,80,000/- received from IIT (BHU) Foundation for Jay Chaudhary Software Technology Seed Fund.

Distinguished Alumnus/Alumna Awards 2023-24

Alumni are an important part of any institute. The Distinguished Alumnus/ Alumna Award is the highest award given by IIT (BHU) Varanasi to its alumni in recognition of their achievements in Profession, Industry/ Entrepreneurship, Academics, Research & Innovation, Public Life and Distinguished Service to the Institute.

The following table shows the details of the distinguished Alumnus/Alumna Awards 2023-24:

Sl. No.	Name of Candidate	Category
1	Prof. Alok Gupta	Academics
2	Dr. Manu K Vora	Public Life
3	Shri Sudhir Singh	Industry/Entrepreneurship
4	Shri Ghanshyam Prasad	Profession
5	Shri Pratik Maheshwari	Young Alumni achiever awards
6	Dr. Akshay Kumar Rathore	
7	Shri Abhilash Sridharan	
8	Shri Soumyo Sarkar	Distinguished Service to the Institute
9	Shri Vikash Aggarwal	

Best Teacher Award

In order to recognize the teaching, research and outreach services performed by the faculty members, the Institute gives the Best Teacher Award. The award for Best Teacher Awards' 2023 under different categories as given in the following table.

Sl. No.	Category	Name & Designation	Department/School
1	I : UG 1st Year	Dr. Rakesh Kumar Singh Associate Professor	Department of Physics
2	II : PG Classes	Dr. Arnab Sarkar Associate Professor	Department of Mechanical Engineering
3	III : UG Sciences & Humanities	Dr. Avanish Singh Parmar Associate Professor	Department of Physics
4	IV : UG Engineering	Dr. Sanjeev Kumar Mahto Associate Professor	School of Biomedical Engineering

Institute Works Department (IWD) & Infrastructure Development

Infrastructure development is the need of the hour. Repair and maintenance work of many units such as hostels, guest house, faculty apartments/ quarters, academic buildings, roadside development, maintenance of the pavements/bituminous roads are duly undertaken by IWD. In addition, at present, following major construction projects are ongoing in the Institute.

Ever since its inception in the year 2014, Institute Works Department (IWD) in IIT (BHU) shoulders the onus of major/ minor repairs, maintenance, retrofitting, renovation and development of infrastructure along with proper operation and sustenance of existing utility lines. The upkeep and functioning of water distribution system, sewerage network, electrical overhead/underground cable lines, distribution sub-stations (DSSs), power sub-stations (PSSs) and SCADA systems also pertain to the prime responsibility of IWD.

In addition to repair and maintenance of the hostels, guest house, faculty apartments/quarters and academic buildings, road side development and maintenance of the pavements/bituminous roads are duly undertaken by IWD. Depending upon the extent and quantum of work, IWD floats online tenders to award work-contracts to various vendors/contractors to execute maintenance/development related works of IIT (BHU) under compliance of GFR and standard practices of Civil/Electrical Engineering.

Major construction work completed by NBCC (India) Ltd. under HEFA-2nd loan scheme during the period from 01st April 2023 to 31st March 2024:

Sl. No.	Name of work	AA & ES amount (Rs. in Crores)
1.	Construction of Faculty Apartments (S+10) (Two Blocks) near Vishwakarma Hostel at IIT (BHU), Varanasi	50.00
	Total	**50.00**

Major construction work in progress by NBCC (India) Ltd. under HEFA-2nd loan scheme during the period from 01st April 2023 to 31st March 2024:

Sl. No.	Name of work	AA & ES amount (Rs. in Crores)
1.	Construction of Morvi Hostel-II (S+10) and Dining block (2nd, 3rd& 4th Floor) at IIT (BHU), Varanasi	97.00
	Total	**97.00**

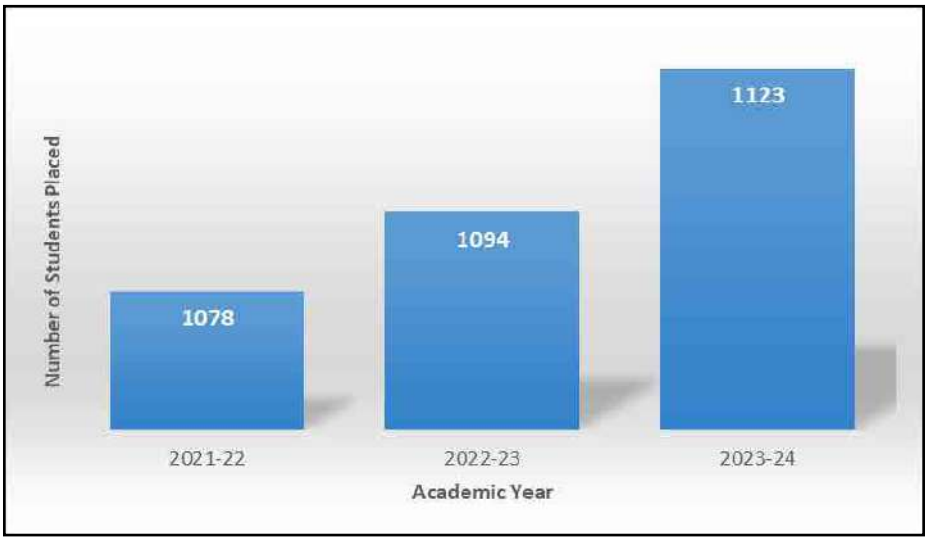
Major construction works in progress by CPWD during the period from 01st April 2023 to 31st March 2024:

Sl. No.	Name of work	AA & ES amount (Rs. in Crores)
1.	Construction of Guest Room Block (G+4) (extension of GTAC) at IIT (BHU), Varanasi	14.50
2.	Construction of Redevelopment of Dhanrajgiri Hostel (Wing-1) at IIT (BHU), Varanasi	28.04
3.	Construction of Lecture Hall Complex (G+2) at IIT (BHU), Varanasi	22.28
4.	Construction of Academic Building for Department of Architecture, Planning & Design and Naresh C. Jain School of Decision Science & Engineering (G+5) at IIT (BHU), Varanasi	31.33
	Total	**96.15**

Training and Placement Training and Placement Cell

The Training and Placement Cell of IIT (BHU) Varanasi facilitates the process of placement of students passing out of the Institute. During the academic session 2023-24, 352 companies visited the campus to hold campus interviews and made an average CTC of INR 22.56. The number of companies visiting the campus has increased by ~ 14.28% compared to last academic year i.e. 2022-23. The highest package offered this year was 1.68 Cr INR by N.K. Securities. The industries visiting were of varied nature: Core Engineering, IT & IT-enabled Services, Manufacturing, Consultancy, Finance, Management, R & D, etc.

The Institute boasts of some of the best placement packages among the IITs. The Cell has managed to arrange 380 paid internships through campus selection during 2023-24. Improvement in placement during the last three years is shown in the figure below: -



Student Activities and Achievements

The Institute nurtures technical, social, cultural, and sporting activities pursued by the Students' Gymkhana through different councils, Students' Parliament and other student groups. Besides games and sports, the artistic and creative talents of students are encouraged through various activities like dramatics, debates, music, visual arts, etc. and clubs like Radio, Audio, Photography, Automobile, Aero-Modeling, Cine and Computer Club. Students Gymkhana successfully organized its annual techno-management festival Technex, cultural festival Kashi Yatra & games event Spardha. The students' activities are usually classified in the following councils: Council of Social Services, Cultural Council, Film and Media Council, Science and Technology Council, Sports Council.

The sudents of IIT (BHU) participated in various IIT meet and brought laurels to the Institute. Few achievements of the students are given below:

- The Film and Media Council of the Institute won gold in Animation events at Inter IIT Cultural Meet 6.0 organised by IIT Kharagpur. The council also won Gold in Online Theme Photography, in Inter IIT Cultural Meet 6.0 as well as Gold and Silver medals in Street photography in Inter IIT Cultural Meet 6.0, held at IIT Kharagpur.
- In the inter-IIT Sports meet held at IIT Bombay and IIT Gandhinagar. Our Volleyball (Women's) team secured 4th position in the tournament. The athletics (Women's) team secured 4th position in the relay event. Our Aquatics team participated in the event organized at IIT Gandhinagar. Our team bagged 3 Silver and 3 Bronze medals.
- Our Science and Technology Council was National Finalist in Flipkart Grid 4.0 Robotics Challenge.
- **Team AVERERA**

The Team AVERERA of the institute is a group working on next generation automotive and energy-efficient cars. Team AVERERA brought laurels to the Institute and secured the first position in Asia-Pacific & Middle-east and ranked 3rd Globally at the Shell Eco-marathon 2022 season among 157 teams from 537 nations. Other accomplishments include first position in Shell Eco Marathon Global League 2021 success in Autonomous Programming and Virtual Off-Track awards for Vehicle Design, Engineering Simulation Practices, and Driver Safety competitions. The accomplishments advanced them to the first position in the Virtual League Table.

Concluding Remarks

My concluding remarks, in fact, point towards a new beginning for IIT (BHU) Varanasi which is continuously striving to make this world a better place through sustainable development with humane technological intervention. The new IIT (BHU) Varanasi emerges from the old, building on its earlier strengths and transforming itself to meet the challenges of the future.

The major highlights of this Year's (2023-24) achievements of IIT (BHU) Varanasi are:

- The Training and Placement Cell of IIT (BHU) Varanasi facilitates the process of placement of students passing out of the Institute. During the academic session 2023-24, 352 companies visited the campus to hold campus interviews and made an average CTC of INR 22.56. The number of companies visiting the campus has increased by ~ 14.28% compared to last academic year i.e. 2022-23. The highest package offered this year was 1.68 Cr INR by N.K. Securities.
- While the total number of publications in the scopus index journal was 1847 in 2022-23, the number has increased to 2044 in 2023-2024. Likewise, the number of citations has increased to 49670 in 2023-24 compared to 44384 in the previous year i.e 2022-23.
- While in the financial year 2022-23 total 91 sponsored projects amounting to ~27.17 crores were received by the faculty members of the Institute, in 2023-24, 93 new projects with total value 29.75 crores were awarded to the faculty members of Institute. Likewise. 05 new Institute projects/schemes of total value ~Rs. 54.81 crores were sanctioned in 2022-23. Significant improvement was seen in 2023-24 with 07 new Institute projects/schemes with total value of approximately 118 crores.
- The Institute has shown significant improvement in IPR as well. While in 2022-23, total 32 patents were filed and 49 patents were awarded, in the financial year 2023-24, 46 patents were filed and 66 patents were awarded.
- IIT (BHU), Varanasi, has significantly improved its performance in this year's QS (Quacquarelli Symonds) World University Rankings 2024. While the Institute was placed amidst the 651-700 band last year, it established its mark in the top 600 universities worldwide by acquiring an individual ranking of 571 globally this time and 13th rank among
- Indian universities. Notably, it secured the 78th rank globally and 7th rank amongst the Indian institutes evaluated by QS in the Citation Per Faculty (CPF) category. With 9,240 Scopus-indexed papers published in various domains, garnering 92,822 citations between 2017 and 2022, IIT (BHU) continues to strive forward while emphasizing a strong research culture and output.
- IIT (BHU) Varanasi bags 336 positions globally under good governance and 303 global positions under knowledge exchange in QS world ranking Sustainability 2024. The institute has an impressive 503 global rank under Environmental impact which includes environment-related research, sustainability, employability and outcome as well as equality. The overall rank of the Institute in the QS world ranking Sustainability 2024 is 684 globally. The institute entered into such a prestigious ranking under the QS world ranking based on sustainability first time
- IIT (BHU), Varanasi has ranked among the top ten in NIRF ranking under Innovation Category. The Institute has performed very well and improved on most of the parameters in the Engineering Category. An excellent improvement in parameters like Research and Professional Practice (RP), Graduation Outcome (GO) as well as Outreach and Inclusivity (OI) has been witnessed. Some loss was there in Teaching, Learning & Resources (TLR) that is heavily dependent on the student-teacher ratio and spending per student. The Institute was ranked 15th in the Engineering Category.
- IT (BHU), Varanasi hosted the 3rd edition of Khelo India University Games from 25th May, 2023 to 3rd June, 2023. The closing ceremony was held on 3rd June, 2023 at the Techno Stadium Pavilion ground of IIT (BHU), which was attended by Sh. Anurag Singh Thakur, the Union Youth Affairs and Sports Minister, Sh. Nisith Pramanik, the Union Minister of State for Sports, and Sh. Yogi Adityanath, the Chief Minister of Uttar Pradesh. The Games were hosted in four cities of Uttar Pradesh, namely Lucknow, Varanasi, Gorakhpur, and Gautambuddh Nagar, with the Shooting competition taking place in Delhi.
- The Y20 Summit under G20 was hosted by the Department of Youth Affairs, Ministry of Youth and Sports, Government of India in Varanasi from 17th-20th August, 2023. The event commenced with the delegates visiting the Super Computing Centre and Precision Engineering Hub at IIT (BHU), where faculty members showcased the modern technologies driving the RnD sector of the nation. The event proceeded with various presentations based on the Institute's ever-evolving history, research and placement activities, innovation, and the startup ecosystem at the Rudraksh International Cooperation and Convention Centre (RICCC).

- The IIT Alumni Centre, Bengaluru (IITACB) was inaugurated on 9th September, 2023, where the Dean (Resource & Alumni), Prof. Rajeev Srivastava, and Dean (Research & Development), Prof. Vikash Kumar Dubey graced the ribbon-cutting ceremony for the IIT (BHU) office. The IITACB has been established with a purpose to foster a spirit of community learning and growth among the alumni, students and faculty connected with various IITs.
- Team Averera, IIT (BHU) represented India at the Shell Eco-Marathon (Asia Pacific and Middle East) 2023 and won the 'Carbon Footprint Reduction Award'. The team has won USD 3,000 with a winner's trophy. The event was organized at Pertamina Mandalika International Street Circuit, Lombok Island, Indonesia from 4th to 9th July, 2023 and was attended by over 80 teams representing 15 countries. Most of the vehicle's parts, except the motor, were designed and developed by the team in-house. The efforts resulted in a highly aerodynamic, ergonomic, and lightweight vehicle, as electric efficiency was the competition's primary goal

IIT (BHU) Varanasi has been and will continue to be a major contributor to the epochal transformation of our country and the world.

*******JAI HIND, JAI BHARAT ********

2. Apex Committees

Members of Board of Governors (BoG) (2023-24) as on 31.03.2024

Sl. No.	Name	Duration
1	**Chairman** Dr. Kota Harinarayana	Continuing
2	Prof. Pramod Kumar Jain, Director (ex-officio) IIT Director (ex-officio) IIT (BHU), Varanasi – 221 005	Continuing as on 31.03.2024
Council Nominee		
3(a)	Prof. Praveen Kumar Transportation Engineering Group, Department of Civil Engineering Indian Institute of Technology Roorkee, Roorkee-247667 (Uttarakhand)	Continuing
3 (b)	Joint Secretary (TE), Ministry of Education, ex-officio, Ministry of Education	Continuing
State Government Nominee (Uttar Pradesh Government Nominee)		
4(a)	Prof. Vinay Kumar Pathak, Vice-Chancellor, CSJM UNIVERSITY, KANPUR, Office of the Vice Chancellor, Chhatrapati Shahu Ji Maharaj University, Kanpur-208024 (U.P.)	Till 19.08.2023
4(b)	Prof. S.K. Singh, Vice-Chancellor Rajasthan Technical University, Kota Rajasthan	From 20.08.2023
IIT (BHU) Senate Nominee		
5(a)	Prof. Sunil Mohan, Department of Metallurgical Engineering, IIT (BHU)	Till 31.12.2023
5(b)	Prof. Vikash Kumar Dubey School of Bio-Chemical Engineering, IIT (BHU)	Till 31.12.2023
5(c)	Prof. Rajeev Kumar Singh Department of Electrical Engineering, IIT(BHU)	From 01.01.2024
5(d)	Prof. Sandip Chatterjee Department of Physics, IIT(BHU)	From 01.01.2024
6	Shri Rajan Srivastava, Registrar (*ex-officio*) Secretary Registrar, Indian Institute of Technology (BHU)Varanasi – 221 005	Continuing

Members of Senate (2023-24)

A.	**Chairman, Senate Nominee**
1.	General Manager, Bharat Heavy Electrical Ltd., Heavy Equipment Repair Plant, Tarna, Shivpur, Varanasi-221003 (included vide mail dated 19.05.2020)
2.	Mr. Manish Bhardwaj, Director, DRDO Transit Facility, 3/240, Vishal Khand, Gomti Nagar, Lucknow-226010 (included vide mail dated 19.05.2020)
B.	**Chairman, BoG Nominee**
1.	Prof. Uday Shanker Dixit, Dept. of Mechanical Engineering, IIT Guwahati (uday@iitg.ac.in)
2.	Dr. Anuradha Dube, Central Drug Research Institute, Lucknow (anuradha_dube@gmail.com, anuradha_dube@hotmail.com)
3.	Dr. Nagendra Kumar, Department of Humanities & Social Science, IIT Roorkee (nagendra.kumar@hs.iitr.ac.in)
C.	**Chairman, Senate Nominee (Member of Academic from each Department and Schools)**
1.	Dr. Surya Deo Yadav, Dept. of Metallurgical Engineering
2.	Dr. Rajesh Rai, Dept. of Mining Engineering
3.	Dr. Shivam Verma, Dept. of Electronics Engineering
4.	Dr. Chinmaya K.A., Dept. of Electrical Engineering
5.	Dr. Shishir Gaur, Dept. of Civil Engineering
6.	Dr. Joy Prakash Misra, Dept. of Mechanical Engineering
7.	Dr. Hari Prabhat Gupta, Dept. of Computer Science & Engineering
8.	Dr. Ashutosh Kumar Dubey, Dept. of Ceramic Engineering

9. Dr. Shreyans Kumar Jain, Dept. of Pharmaceutical Engineering & Tech.
10. Dr. Rohit Kumar, Dept. of Chemical Engineering & Tech.
11. Dr. Aditya Kumar Padhi, School of Biochemical Engineering
12. Dr. Deepesh Kumar, School of Biomedical Engineering
13. Dr. Ravi Panwar, School of Materials Science & Technology
14. Dr. Amit Kumar, Dept. of Mathematical Sciences
15. Dr. Anita Mohan, Dept. of Physics
16. Dr. Bhuvaneshwari B., Dept. of Chemistry
17. Dr. Sukhada, Dept. of Humanistic Studies
18. Dr. Harsimran Kaur, Dept. of Architecture, Planning & Design
D. Professor and Heads/Coordinators
Department of Ceramic Engineering
19. Prof. Vinay Kumar Singh
Department of Chemical Engineering and Technology
20. Prof. Pradeep Kumar Mishra
21. Prof. Pradeep Ahuja
22. Prof. Manoj Kumar Mondal
23. Prof. Ram Saran Singh
24. Prof. (Mrs.) Vijaya L. Yadava
25. Prof. Satya Vir Singh
26. Prof. Hiralal Pramanik
27. Prof. R.K. Upadhyay
Department of Civil Engineering
28. Prof. Goutam Banerjee
29. Prof. Devendra Mohan
30. Prof. Prabhat Kumar Singh
31. Prof. Prabhat Kumar Singh Dixit
32. Prof. Sasankasekhar Mandal
33. Prof. Rajesh Kumar
34. Prof. Shyam Bihari Dwivedi
35. Prof. K.K. Pathak
36. Prof. Arun Prasad
37. Prof. Brind Kumar
38. Prof. Anurag Ohri
Department of Computer Science and Engineering
39. Prof. A.K. Tripathi
40. Prof. Rajeev Srivastava
41. Prof. S.K. Singh
Department of Electrical Engineering
42. Prof. R.K. Pandey
43. Prof. Rakesh Kumar Srivastava
44. Prof. Rakesh Kumar Mishra
45. Prof. Ranjeet Mahanty
46. Prof. Devender Singh
47. Prof. Mitresh Kumar Verma
48. Prof. Ram Khelawan Saket

49. Prof. R.K. Singh
50. Prof. S. K. Singh
Department of Electronics Engineering
51. Prof. V.N. Mishra
52. Prof. Satyabrat Jit
53. Prof. M.K. Meshram
Department of Mechanical Engineering
54. Prof. Santosh Kumar
55. Prof. K.S. Tripathi
56. Prof. A.P. Harsha
57. Prof. Sanjay Kumar Sinha
58. Prof. Sandeep Kumar
59. Prof. Rajesh Kumar
60. Prof. Prashant Shukla
61. Prof. Pradumna Ghosh
62. Prof. Shailendra K. Shukla
63. Prof. Rajnesh Tyagi
64. Prof. Saroja Kanta Panda
65. Prof. Prabhash Bhardwaj
66. Prof. R.K. Gautam
67. Prof. Jahar Sarkar
Department of Metallurgical Engineering
68. Prof. R.K. Mandal
69. Prof. N.K. Mukhopadhyay
70. Prof. Sunil Mohan
71. Prof. (Mrs.) N.C. Shanti Srinivas
72. Prof. B. Nageshwar Sarma
73. Prof. Kamlesh Kumar Singh
Department of Mining Engineering
74. Prof. Aarif Jamal
75. Prof. Piyush Rai
76. Prof. Sanjay Kumar Sharma
77. Prof. Suprakash Gupta
Department of Pharmaceutical Engg. & Technology
78. Prof. B. Mishra
79. Prof. S.K.Singh
80. Prof. Sanjay Singh (On deputation w.e.f. 23.02.2019)
81. Prof. S.K. Shrivastava
82. Prof. (Mrs.) S. Hemalatha
83. Prof. Sairam Krishnamurthy
Department of Chemistry
84. Prof. Syed Hadi Hasan
85. Prof. (Mrs.) Vandana Srivastava
86. Prof. Yogesh Chandra Sharma
87. Prof. D. Tiwary
88. Prof. K.D. Mandal

Department of Mathematical Sciences
89. Prof. Tanmoy Som
90. Prof. Lal Pratap Singh
91. Prof. Sanjay Kr. Pandey
92. Prof. (Mrs.) S. Mukhopadhyay
93. Prof. S.K. Upadhyay
94. Prof. Subir Das
95. Prof. Murali Krishna Vemuri
Department of Humanistic Studies
96. Prof. Prasant Kumar Panda
97. Dr. Ajit Kumar Mishra (Head)
Department of Physics
98. Prof. D. Giri
99. Prof. Prabhakar Singh
100. Prof. Sandeep Chatterjee
101. Prof. Rajendra Prasad
102. Prof. Raghava Varma
School of Bio Chemical Engineering
103. Prof. Pradeep Srivastava (On deputation w.e.f. 18.02.2020)
104. Prof. Vikash Kumar Dubey
School of Bio Medical Engineering
105. Prof. Neeraj Sharma
106. Dr. Sanjeev Kumar Mahto (Coordinator)
School of Materials Science & Technology
107. Prof. Rajiv Prakash (On deputation)
108. Prof. Pralay Maiti
109. Dr. A.K. Singh (Coordinator)
Department of Architecture, Planning & Design
110. Prof. Rajesh Kumar (Head)

Finance Committee Members

Sl. No.	Name	Duration
1	**Chairman** Dr. Kota Harinarayana, Chairman, BoG, IIT(BHU), ex-officio	Continuing
2	Prof. Pramod Kumar Jain, Director (ex-officio), IIT (BHU), Varanasi – 221 005	Continuing as on 31.03.2024
(Nominated by the Central Government)		
3(a)	Joint Secretary (TE), Ministry of Education, Shastri Bhawan New Delhi – 110 001.	Continuing
3(b)	Joint Secretary & Financial Advisor to the Government of India Integrated Finance Division, Ministry of Education, Department of Higher Education, New Delhi	Continuing
(Board Nominee)		
4(a)	Prof. S.B. Dwivedi, Department of Civil Engineering, IIT (BHU), Varanasi – 221 005	Till 11.03.2024
4(b)	Prof. Rajnesh Tyagi, Department of Mechanical, IIT (BHU)	Till 11.03.2024
4(c)	Prof. Sunil Mohan, Department of Metallurgical Engineering, IIT (BHU)	From 12.03.2024
4(d)	Prof. Vikash Kumar Dubey, School of Bio-Chemical Engineering, IIT (BHU)	From 12.03.2024
5	Shri Rajan Srivastava, Registrar (I/C), IIT(BHU) Registrar (*ex-officio*) Secretary Registrar, Indian Institute of Technology (BHU) Varanasi – 221 005	Continuing

Building & Works Committee Members (B&WC)

Sl. No.	Name	Designation	Address	Duration
1	Prof. Pramod Kumar Jain Director (ex-officio)	Chairman	IIT (BHU), Varanasi – 221 005	Continuing as on 31.03.2024
2	Prof. A.K. Jain	Member	Dept. of Civil Engg., IIT Delhi, New Delhi- 110 016.	Continuing
3	Prof. S.Y. Kulkarni Ex-Professor & Head, Dept. of Architecture & Planning, IIT-Roorkee	Member	Prof. S. Y. Kulkarni, 103 Palm Green Apartments, Milap Nagar, Delhi Road, Roorkee, 247667	Continuing
4	Shri Shyam Mohan Garg	Member	General Manager (Mech.), UP State Bridge Corporation Ltd., Setu Bhawan, 16 MM Malaviya Marg, Lucknow – 226 001.	Continuing
5	Shri Vijay Pal	Member	Ex-Superintending Engineer, Urban Electric Distribution Circle Pashchimanchal Vidyut Vitaran Nigam Limited, Meerut	Continuing
6	Prof. S.B. Dwivedi	Member	Dept. of Civil Engg., IIT (BHU), Varanasi	Continuing
7	Kamal Nain Rai Former Chief Executive (CW&E) and Advisor (Special Projects), DRDO, Min. of Defence	Member	C 4/ 4112, Vasant Kunj, New Delhi 110070.	Continuing
8	Shri Rajan Srivastava, Registrar (I/C), IIT (BHU)	Secretary	Registrar, IIT (BHU) Varanasi – 221 005	Continuing

List of Deans in the Institute (Session 2023-24)

Sl. No.	Name	Designation	Department/School	Duration
1.	Prof. Shyam Bihari Dwivedi	Dean (Academic Affairs)	Civil Engineering	Continuing
2.	Prof. Rajnesh Tyagi	Dean (Faculty Affairs)	Mechanical Engineering	Continuing
3.	Prof. Vikash Kumar Dubey	Dean (Research & Development)	Biochemical Engineering	Continuing
4.	Prof. Rajeev Kumar Srivastava	Dean (Resource & Alumni)	Computer Science and Engineering	Till 31.12.2023
5.	Prof. Hiralal Pramanik	Dean (Resource & Alumni)	Chemical Engineering	From 01.01.2024
6	Prof. L. P. Singh	Dean (Student Affairs)	Mathematical Sciences	Till 31.12.2023
7.	Prof. Rajesh Kumar	Dean (Student Affairs)	Mechanical Engineering.	From 01.01.2024

List of Conveners of Under Graduate Committees (DUGC) and Post Graduate Committees (DPGC) of the Departments/Schools for the Session 2023-2024 (w.e.f. 01.09.2023)

Department/School	DUGC Conveners	DPGC Conveners
Bio-Chemical Engineering	Dr. Sanjay Kumar	Dr. Pranjal Chandra
Bio-Medical Engg.	Dr. Deepesh Kumar	Dr. A.R. Jac Fredo
Ceramic Engineering	Dr. Md. Imteyaz Ahmad	Dr. P. K. Roy
Chemical Engineering & Technology	Dr. Ankur Verma	Dr. Manoj Kumar
Chemistry	Dr. Asha Gupta	Dr. Indrajeet Sinha
Civil Engineering	Dr. Manas Chakraborty	Dr. P. R. Maiti
Computer Science and Engineering	Dr. Ajay Pratap	Dr. Sukomal Pal
Electrical Engineering	Dr. Chinmaya K.A.	Dr. S. R. Mohanty
Electronics Engineering	Dr. Shivam Verma	Dr. K. P. Sarawadekar
Humanistic Studies	Dr. Kavya Krishna K.R.	Dr. Anil Kumar Thakur
Materials Science & Technology	Dr. Nikhil Kumar	Dr. Ravi Kumar Panwar
Mathematical Sciences	Dr. Divya Goel	Dr. Anuradha Banerjee
Mechanical Engineering	Dr. Amitesh Kumar	Dr. Arnab Sarkar
Metallurgical Engineering	Dr. Lakindra Marandi	Dr. Ashok Kumar Mondal
Mining Engineering	Dr. Rajesh Rai	Dr. Ashok Jaiswal
Pharmaceutical Engineering and Technology	Dr. S. K. Mishra	Dr. A. N. Sahu
Physics	Dr. Prasun Dutta	Dr. A. S. Parmar
Architecture, Planning and Design	Dr. Sneha	Dr. Rabi Narayan Mohanty

3. Faculty Administration

ADMINISTRATION (Faculty Affairs)

Faculty Position as on 31.03.2024

Faculty Members	349
Visiting Faculty/Institute Professor/Emeritus Professor	07 + 00 + 00 = 07

Faculty Members appointed

Professors	11
Associate Professors	15
Assistant Professors	13
Visiting Faculty/Institute Professor	00
Contractual Faculty	Nil

List of Faculty Members appointed

Sl. No.	ID No.	Name of Faculty/Staff	Designation	Department/Section	Date of Joining
1	50338	Dr. Kaushik Sarkar	Assistant Professor	Ceramic Engineering	20.04.2023
2	50337	Dr. Pramod Soni	Assistant Professor	Civil Engineering	26.04.2023
3	50339	Dr. Pavan Pujar	Assistant Professor	Ceramic Engineering	25.05.2023
4	50340	Dr. Anshuman Sharma	Assistant Professor	Civil Engineering	24.07.2023
5	50383	Dr. Ganesh Madabattula	Assistant Professor	Chemical Engineering & Technology	15.12.2023
6	50382	Dr. Subho Paul	Assistant Professor	Electrical Engineering	20.12.2023 (AN)
7	50384	Dr. Muralikrishnan Srinivasan	Assistant Professor	Electronics Engineering	22.12.2023
8	50385	Dr. Suman M	Assistant Professor	Electrical Engineering	01.01.2024
9	50417	Dr. Satarupa Dutta	Assistant Professor	Chemical Engineering & Technology	01.02.2024
10	50418	Dr. B N V Siva Prasad	Assistant Professor	Mining Engineering	14.02.2024
11	50419	Dr. Uday Shankar	Assistant Professor	Materials Science & Technology	15.02.2024
12	50420	Dr. Sharon Mano Pappu J	Assistant Professor	Bio-Chemical Engineering	18.03.2024
13	50422	Dr. Sake Narayanaswamy	Assistant Professor	Metallurgical Engineering	27.03.2024

List of internal faculty/staff members who joined

Sl. No.	ID No.	Name of Faculty/Staff	Designation	Department/Section	Date of Joining with (FN/AN)
1	17065	Dr. Anurag Ohri	Professor	Civil Engineering	13.06.2023
2	50025	Dr. Ravi Prakash Jaiswal	Associate Professor	Chemical Engineering & Technology	13.06.2023
3	19770	Dr. Sweta	Associate Professor	Chemical Engineering & Technology	26.09.2023
4	19844	Dr. Jyoti Prasad Chakraborty	Associate Professor	Chemical Engineering & Technology	26.09.2023
5	50026	Dr. Ankur Verma	Associate Professor	Chemical Engineering & Technology	26.09.2023
6	19847	Dr. Kishor Prabhakar Sarawadekar	Associate Professor	Electronics Engineering	26.09.2023
7	50074	Dr. Somak Bhattacharyya	Associate Professor	Electronics Engineering	26.09.2023
8	50101	Dr. Smrity Dwivedi	Associate Professor	Electronics Engineering	26.09.2023
9	17446	Dr. Santosh Kumar Singh	Professor	Electrical Engineering	28.10.2023
10	17464	Dr. Rajeev Kumar Singh	Professor	Electrical Engineering	28.10.2023
11	16732	Dr. Chhail Kumar Behera	Professor	Metallurgical Engineering	05.01.2024 (AN)
12	18221	Dr. Nand Kishore Prasad	Professor	Metallurgical Engineering	05.01.2024 (AN)
13	16828	Dr. Senthil Raja A	Professor	Pharmaceutical Engineering & Technology	05.01.2024 (AN)

Sl. No.	ID No.	Name of Faculty/Staff	Designation	Department/Section	Date of Joining with (FN/AN)
14	18199	Dr. M. S. Muthu	Professor	Pharmaceutical Engineering & Technology	05.01.2024 (AN)
15	16830	Dr. Abha Mishra	Professor	Bio-Chemical Engineering	05.01.2024 (AN)
16	17280	Dr. Chandana Rath	Professor	Materials Science & Technology	05.01.2024 (AN)
17	17387	Dr. Akhilesh Kumar Singh	Professor	Materials Science & Technology	05.01.2024 (AN)
18	50200	Dr. Shreyans Kumar Jain	Associate Professor	Pharmaceutical Engineering & Technology	05.01.2024 (AN)
19	50212	Dr. Ashish Kumar Agrawal	Associate Professor	Pharmaceutical Engineering & Technology	05.01.2024 (AN)
20	50067	Dr. Sanjay Kumar	Associate Professor	Bio-Chemical Engineering	05.01.2024 (AN)
21	50065	Dr.Ashish Kumar Mishra	Associate Professor	Materials Science & Technology	05.01.2024 (AN)
22	50071	Dr. Shrawan Kumar Mishra	Associate Professor	Materials Science & Technology	05.01.2024 (AN)
23	50072	Dr. Sanjay Singh	Associate Professor	Materials Science & Technology	05.01.2024 (AN)
24	18241	Dr. Kausik Chattopadhyay	Professor	Metallurgical Engineering	08.01.2024
25	50075	Dr. Tanima Dutta	Associate Professor	Computer Science & Engineering	15.02.2024
26	50127	Dr. Lakshmanan K	Associate Professor	Computer Science & Engineering	15.02.2024

Faculty/staff members who resigned/were relieved

Sl. No.	ID No.	Name of Faculty/Staff	Designation	Department/Section	Date of Relieve (with FN/AN)
1	18361	Dr. Kalyani Mohanta	Associate Professor	Ceramic Engineering	30.07.2019 (FN)
2	50302	Dr. Rabindra Mohanty	Assistant Professor	Electrical Engineering	12.05.2023 (AN)
3	50241	Dr. Shedbale Amit Subhash	Assistant Professor	Mechanical Engineering	14.06.2023 (AN)
4	50225	Dr. Ajinkya Nandkumar Tanksale	Assistant Professor	Mechanical Engineering	26.08.2022
5	50203	Dr. Vishwanath Dhital	Assistant Professor	Humanistic Studies	05.10.2023 (AN)
6	50330	Dr. Rakesh Kumar Saunthwal	Assistant Professor	Chemistry	16.01.2024 (AN)

Faculty/staff members who retired

Sl. No.	ID No.	Name of Faculty/Staff/ Officer	Designation	Department	Date of Birth	Date of Retirement (with FN/AN)
1	13772	Dr. K. K. Shukla	Professor	Computer Science & Engineering	02.05.1958	31.05.2023
2	16730	Dr. Anil Kumar	Associate Professor	Ceramic Engineering	19.06.1958	30.06.2023
3	13802	Dr. P. K. Jain	Professor	Electronics Engineering	02.07.1958	31.07.2023
4	17282	Dr. Netai Chandra Karmakar	Professor	Mining Engineering	22.08.1958	31.08.2023
5	12106	Dr. Prem Chandra Pandey	Professor	Chemistry	01.09.1958	31.08.2023
6	13821	Dr. K. S. Tripathi	Professor	Mechanical Engineering	03.10.1958	31.10.2023
7	17178	Dr. Goutam Banerjee	Professor	Civil Engineering	06.01.1959	31.01.2024
8	17040	Dr. Vandana Srivastava	Professor	Chemistry	19.03.1959	31.03.2024

Faculty members/officers/staff members on long leave (On Deputation/ Lien/CCL)

Sl. No.	Name	Designation	Department	From	To	Details	Remarks
1	Dr. Sanjay Singh	Professor	Pharmaceutical Engg. & Tech.	23.02.2019 (AN)	05.05.2024	On Deputation for 5 years	
				05.05.2024	31.05.2028	On deputation for 5 years	Date of Retirement: 31.05.2028
2	Dr. Pradeep Srivastava	Professor	Bio-Chemical Engineering	18.02.2020 (AN)	18.02.2025	On Deputation for 5 years	
3	Dr. Rajiv Prakash	Professor	Materials Sciences & Technology	26.09.2022 (AN)	26.09.2027	On deputation for 5 years	
4	Dr. Jeyakumar Kandasamy	Associate Professor	Chemistry	31.08.2022 (AN)	31.08.2024	On Lien for 1 year	Extended for one more year w.e.f. 01.09.2023
5	Dr. Amit Kumar Verma	Associate Professor	Mining Engineering	10.05.2023 (AN)	10.05.2024	On Lien for 1 year	
6	Dr. Sundaram Singh	Associate Professor	Chemistry	16.05.2023	13.08.2023	CCL	Re-joined the Institute on 14.08.2023
7	Dr. Vinita Chandra	Associate Professor	Humanistic Studies	01.08.2022	16.06.2023	CCL	Re-Joined on the Institute on 19.06.2023
8	Dr. Binita Pathak	Assistant Professor	Mechanical Engineering	25.07.2023	29.04.2024	CCL	Re-joined the Institute on 30.04.2024

Faculty/staff members on extraordinary leave

Sl. No.	Name	Designation	Department	From	To	Details	Remarks
1	Dr. Syed Hadi Hasan	Professor	Chemistry	26.08.2023	30.04.2024	Personal ground	Date of Retirement: 30.04.2024
2	Dr. Ayan Haldar	Assistant Professor	Civil Engineering	06.02.2024	10.05.2024	To avail MSCA-Cofund Fellowship at AMBER University of Limerick & University of Bristol	

Faculty members on sabbatical leave

Sl. No.	Name	Designation	Department	From	To	Remarks
1	Dr. Prasanta Kumar Nayak	Assistant Professor	Pharmaceutical Engineering & Technology	07.05.2022	06.05.2023	Re-joined the Institute on 08.05.2023
2	Dr. Shailendra Kumar Shukla	Professor	Mechanical Engineering	02.12.2022	01.06.2023	Re-joined the Institute on 02.06.2023

4. Non-Faculty Administration

Staff Position (as on 31 March 2024): Non-faculty members

Staff members in Position

Group A Staff	28
Scientific Officers	5
Technical Staff	217
Administrative Staff	156

Staff Members appointed during 2023-24

Administrative Staff	41
Technical Staff	33
Contractual Staff	0

List of Staff Members appointed

Sl. No	EID	Name	Designation	Department/School/Unit	DOJ
1	50341	Sujata	Junior Library Assistant	Sreenivas Deshpande Library	24-07-2023 AN
2	50342	Uday Pratap Singh	Junior Library Assistant	Sreenivas Deshpande Library	25.07.2023
3	50343	Renuka	Junior Library Assistant	Sreenivas Deshpande Library	02.08.2023 AN
4	50344	Mansa	Junior Library Assistant	Sreenivas Deshpande Library	14.08.2023 AN
5	50345	Amarjeet Kumar	Junior Library Assistant	Sreenivas Deshpande Library	16.08.2023
6	50347	Sawan Kumar Prasad	Junior Library Assistant	Sreenivas Deshpande Library	24.08.2023 AN
7	50346	Hema	Trainee	Non-Faculty Recruitment Cell	28.08.2023 AN
8	50364	Abhinav Pandey	Junior Assistant	Service Book & Pension Section	30.10.2023 FN
9	50365	Arvind Kumar Bharti	Junior Assistant	Academic Affairs	30.10.2023 AN
10	50374	Shashank Saurabh	Junior Assistant	SMST	31.10.2023 FN
11	50366	Amit Kumar Yadav	Junior Assistant	Accounts (Cheque)	30.10.2023 FN
12	50367	Shivendra Tripathi	Junior Assistant	Faculty Affairs	31.10.2023 FN
13	50368	Suman Kumar Sharma	Junior Assistant	Architecture, Planning & Desgn.	01.11.2023 FN
14	50369	Alok Ranjan	Junior Assistant	Humanistic Studies	01.11.2023 FN
15	50370	Apurva Srivastava	Junior Assistant	Estate & PR Section	01.11.2023 FN
16	50375	Divya Jyoti Singh	Junior Assistant	Chemical Engineering & Tech	02.11.2023 FN
17	50371	Neha Singh	Junior Assistant	Faculty Affairs	03.11.2023 FN
18	50372	Ankita Mishra	Junior Assistant	Internal Audit	03.11.2023 FN
19	50376	Sakshi Pandey	Junior Assistant	PA Section	03.11.2023 AN
20	50373	Alok Kumar Chauhan	Junior Assistant	Annual Accounts & Balance Sheet	07.11.2023 FN
21	50380	Shubham Kumar	Junior Assistant	Main Workshop	23.11.2023 FN
22	50397	Siddhanta Jha	Junior Assistant	Pharmaceutical Engg. & Tech.	26.12.2023 FN
23	50399	Simran Akhauri	Junior Assistant	Administration (Establishment)	26.12.2023 FN
24	50389	Arvind Yadav	Junior Assistant	Metallurgical Engg.	26.12.2023 FN
25	50396	Shivanshu Srivastava	Junior Assistant	Accounts (Trade Bill Section)	26.12.2023 FN
26	50398	Siddhartha Srivastava	Junior Assistant	R&D	26.12.2023 FN

Sl. No	EID	Name	Designation	Department/School/Unit	DOJ
27	50390	Ashish Kannaujiya	Junior Assistant	Accounts (IDF)	26.12.2023 FN
28	50388	Aman Deep	Junior Assistant	Institute Works Department	26.12.2023 FN
29	50393	Preeti Dayal Gautam	Junior Assistant	Electrical Engg.	27.12.2023 FN
30	50394	Shalini Gupta	Junior Assistant	Mechanical Engg.	28.12.2023 FN
31	50392	Pratyay Agrawal	Junior Assistant	Accounts (AA&BS)	28.12.2023 FN
32	50386	Abhinav Kumar Upadhyay	Junior Assistant	MR Cell	28.12.2023 FN
33	50387	Abhishek Kumar	Junior Assistant	Physics	29.12.2023 FN
34	50391	Ekta Sakshi	Junior Assistant	R&D	29.12.2023 FN
35	50400	Vandana Preyasi	Junior Assistant	Budget Section	29.12.2023 FN
36	50395	Shivam Yadav	Junior Assistant	Biochemical Engg.	01.01.2024 FN
37	50401	Yaman Jaiswal	Junior Assistant	Chemical Engg. & Tech.	01.01.2024 FN
38	50408	Saatvik Dev Tripathi	Junior Assistant	CCIS/Supercomputing Centre	16.01.2024 FN
39	50348	Vikranti Gaurav Dayal	Junior Technician	Civil Engineering	29.09.2023 FN
40	50349	Rahul Yadav	Junior Technician	Mining Engineering	11.10.2023 FN
41	50350	Shubham Gupta	Junior Technician	Architecture, Planning & Design	19.10.2023 FN
42	50351	Raghvendra Tiwary	Junior Technician	Civil Engineering	30.10.2023 AN
43	50352	Manish Kumar	Junior Technician	Mining Engineering	30.10.2023 AN
44	50353	Piyush Tiwari	Junior Technician	Central Instrument Facility	31.10.2023 FN
45	50354	Jugendra Pal Singh Baghel	Junior Technician	Metallurgical Engineering	31.10.2023 FN
46	50355	Anil Kumar	Junior Technician	Ceramic Engineering	31.10.2023 FN
47	50356	Shiva Krishna Pandey	Junior Technician	Mechanical Engineering	31.10.2023 AN
48	50357	Swarnim Trivedi	Junior Technician	Physics	01.11.2023 FN
49	50358	Vinish Singh	Junior Technician	Electrical Engineering	01.11.2023 FN
50	50359	Nar Singh Rao	Junior Technician	Chemistry	01.11.2023 FN
51	50360	Anurag	Junior Technician	Chemical Engg. & Technology	01.11.2023 FN
52	50361	Satyam Pandey	Junior Technician	SMST	01.11.2023 FN
53	50632	Anand Kumar Sahu	Junior Technician	Mathematical Sciences	01.11.2023 FN
54	50363	Rajneesh Kumar Singh	Junior Technician	Electronics Engineering	06.11.2023 FN
55	50377	Bhawesh Prasad	Junior Technician	Computer Science & Engg.	10.11.2023 FN
56	50378	Rajesh Kumar	Junior Technician	Architecture, Planning & Design	17.11.2023 FN
57	50379	Sumeet Raman	Junior Technician	School of Biomedical Engg.	22.11.2023 FN
58	50381	Vijay Kumar Yadav	Junior Technician	Central Instrument Facility	28.11.2023 FN
59	50407	Ashutosh Yadaw	Junior Technician	Biochemical Engg.	06.12.2023 FN
60	50402	Shi Lakshmi N Dhara	Junior Technician	Pharmaceutical Engg. & Tech.	18.12.2023 FN
61	50406	Pradeep Kumar Patel	Junior Technician	Electrical Engg.	26.12.2023 FN
62	50405	Priyanka	Junior Technician	Biomedical Engg.	26.12.2023 FN
63	50403	Sajjan Kambli	Junior Technician	Civil Engineering	28.12.2023 FN
64	50410	Shiv Kumar Singh	Junior Technician	Electronics Engineering	16.01.2024 AN
65	50409	Niraj Kumar	Junior Technician	Mathematical Science	19.01.2024 AN
66	50414	Sandeep Pathak	Junior Technician	Mechanical Engineering	06.02.2024 FN
67	50421	Gaurav Shivpratap Singh	Junior Technician	Metallurgical Engineering	26.03.2024 AN
68	50404	Siraparapu Murali	Junior Engineer (Electrical)	Institute Works Department	29.12.2023 FN
69	50413	Utkarsh Mishra	Junior Engineer (Civil)	Institute Works Department	18.01.2024 AN
70	50411	Samyak Narayan Chaturvedi	Junior Engineer (Electrical)	Institute Works Department	23.01.2024 FN

Sl. No	EID	Name	Designation	Department/School/Unit	DOJ
71	50412	Sandeep Kumar Yadav	Junior Engineer (Civil)	Institute Works Department	23.01.2024 FN
72	50088	Rakhi Mukherji	Assistant Registrar	Audit, NFRC	05.01.2024 AN
73	50415	Pradeep Kumar Dubey	Assistant Registrar	Accounts-III	05.02.2024 FN
74	50416	Anita Kodap	Assistant Registrar	SB & P, LTC & IP Cell	09.02.2024 FN

Staff members who resigned/were relieved

S.No	EID	Name	Designation	Department	Date of Resignation
1	50347	Sawan Kumar Prasad	Junior Library Assistant	Sreenivas Deshpande Library	18.12.2023
2	50346	Amarjeet Kumar	Junior Library Assistant	Sreenivas Deshpande Library	18.12.2023
3	50379	Sumeet Raman	Junior Technician	Biomedical Engg.	22.12.2023
4	50150	Sanjeev K Singh	Superintendent	Electronics Engg.	29.12.2023
5	50088	Rakhi Mukherji	Senior Assistant	R&D	05.01.2024
6	50362	Anand Kumar Sahu	Junior Technician	Mathematical Science	11.01.2024
7	50188	Dheeraj Kumar	Senior Assistant	Scholarship Section	31.01.2024
8	50403	Sajjan Kambli	Junior Technician	Civil Engineering	20.03.2024

Staff members who retired

Sl. No.	Name	EID	Designation	Department	DoB	Date of Superannuation
1	Rama Shanker Singh	14020	Technical Superintendent	Biochemical Engineering	30.04.1963	30.04.2023
2	Hriday Narayan	14227	Junior Technical Superintendent	Salary Section	01.05.1963	30.04.2023
3	Bhola Nath	11561	Technical Superintendent	Main Workshop	01.07.1963	30.06.2023
4	Ram Sewak Singh	14091	Technical Superintendent	Mining Engineering	12.06.1963	30.06.2023
5	Raj Kumar Sharma	16662	Senior Technical Superintendent (Gr.-II)	Ceramic Engineering	18.07.1963	31.07.2023
6	Mahendra Narain Mishra	18639	Junior Technical Superintendent	Metallurgical Engineering	31.07.1963	31.07.2023
7	Arun Kumar	18624	Junior Technical Superintendent	Pharmaceutical Engg. & Tech.	08.07.1963	31.07.2023
8	Sharda Prasad	13997	Senior Technical Superintendent (Gr.-II)	Civil Engineering	15.09.1963	30.09.2023
9	D.P. Sharma	13984	Technical Superintendent	Mechanical Engineering	04.09.1963	30.09.2023
10	Setu Prasad	14222	Technical Superintendent	Metallurgical Engineering	01.12.1963	30.11.2023
11	D.R.S. Singh	13967	Senior Technical Superintendent	Mechanical Engineering	31.12.1963	31.12.2023
12	Dr. Arun Kumar Singh	18987	Senior Scientific Officer	Mining Engineering	16.03.1962	31.03.2024

Officers/staff members on long leave

S. No.	ID No.	Name of Staff	Designation	Department	From	To	Details	Remarks
1	18671	Dheleep Kumar B	Junior Technical Superintendnet	Main Workshop	April 2022	Till date		Absent from duty w.e.f. April 2022

5. Academic Programmes and Award of Degrees

The Institute offers Ph.D. programmes in 17 departments (Department of Humanistic Studies established in 2015-16), M.Tech. programme in 13 streams/specializations, M.Pharm. programme in one stream/specialization (M.Tech. was programme started in Decision Sciences and Engineering instead of Industrial Management from the session 2020-21), B.Tech. programmes in 10 engineering departments, Dual Degree (B.Tech. and M.Tech.) programmes in 14 engineering departments/schools/science departments, B.Arch. programme in 1 department (Department of Architecture, Planning and Design, established in 2019-20), besides a preparatory course for SC/ST/PwD students during the year under report.

The Institute developed online registration portal, fee deposition portal as well as declaration of results portal etc. through the online mode. The registration portal started from the session 2014-15 and onwards in the Institute to facilitate the students. The fee deposition portal has been designed and institute fees is being continuously and successfully deposited in online mode by the students from even semester 2019-20 and onwards. After COVID-19 all academic activities related to admission, verifications, registration, teaching etc. have been done through the online as well as physical mode. From the session 2023-24, an online fee remission portal has been designed and implemented at the undergraduate level to receive the application for fee remission from UG students and approve it online every odd semester before collection of fees at the fee portal.

The academic section, examination unit and scholarship section function under the Leadership of Dean (Academic Affairs) of the Institute. There are three smart lecture theatre complexes equipped with LCD projector in each class rooms alongwith the backup of the electricity. The classes for the Institute core courses, HULM and Institute Open elective are being held centrally in the lecture theaters of the Institute. The Examination unit processes the online application forms for the admission to PG programmes annually and for Ph.D. Programmes biannually every year. Online profile registration, add/drop courses, department-wise/subject-wise students list, grade submission, declaration of results, transcripts has keen automated and managed by the examination unit. The Scholarship section administers the fellowships (Institute or other) of the students. Academic Section administers the works related to Ordinances, admissions process for B.Tech./B.Pharm./IDD through JEE(Advanced) and M.Sc. through JAM jointly conducted by the IITs, students leave, conducting semester examinations, preparation of academic calendar, class time-tables under the supervision of Dean (Academic Affairs)/Associate Dean (Academic Affairs), UG/Core Courses. The office of the Dean (Academic Affairs) has totally automated the Ph.D. submission process as well as the submission of grades on the portal, overload, physical registration etc.

Admissions 2023–2024

Candidates for admission to the 4-Year B.Tech., 5-Year B.Arch. and 5-Year Dual Degree programmes were selected through JEE(Advanced) on the basis of the All India Rank. 2-Year M.Sc. programmes started from the session 2019-20 and onwards in the Department of Physics and Chemistry, the candidates were selected through JAM, jointly conducted by the IITs. 2-Year M.Tech./M.Pharm. programmes, candidates get admitted on the basis of GATE/GPAT score. Quite a few candidates were also selected for the M.Tech. programme under the Sponsored and Q.I.P. programmes through interviews and/or written tests. Selection for the Ph.D. programmes was done through tests/interviews, who qualify the GATE or GPAT or UGC/CSIR-NET. To attract the foreign national students for studies in India, the Institute has also taken admission in PG and Ph.D. Programmes through the Study in India Portal as well as ASEAN Fellowship programmes conducted by the Govt. of India. The Institute also takes admission of foreign nationals for the PG and Ph.D. programs from the session 2021-22 onwards through the newly started A2A Scholarship Scheme under ICCR, Govt of India.

The number of students and scholars admitted to the various programmes in July 2023 and in January 2024 are listed in Table below.

Table: Fresh admissions

Sl. No.	Department/School	B.Tech.	Dual Degree (B.Tech. & M.Tech.)	B.Arch.	M.Sc.	M.Tech.	M.Pharm.	Ph.D.	Total
1	Architecture Planning and Design			10				11	21
2	Biochemical Engineering		19			12		15	46
3	Biomedical Engineering		18			12		22	52

Sl. No.	Department/School	B.Tech.	Dual Degree (B.Tech. & M.Tech.)	B.Arch.	M.Sc.	M.Tech.	M.Pharm.	Ph.D.	Total
4	Ceramic Engineering	69	17			12		8	106
5	Chemical Engineering	151				56		24	231
6	Chemistry		18		24			30	72
7	Civil Engineering	118	30			64		28	240
8	Computer Science and Engineering	98	34			24		18	174
9	Electrical Engineering	111	30			46		11	198
10	Electronics Engineering	128				34		13	175
11	Humanistic Studies							8	8
12	Decision Science and Engineering					8			8
13	Industrial Management							3	3
14	Materials Science and Technology		28			19		12	59
15	Mathematical Sciences		52					33	85
16	Mechanical Engineering	145	32			47		27	251
17	Metallurgical Engineering	101	27			15		8	151
18	Mining Engineering	127	24			36		8	195
19	Pharmaceutical Engineering and Technology	74	18				48	10	150
20	Physics		26		24			34	84
21	Systems Engineering					4		1	5
	Total	**1122**	**373**	**10**	**48**	**389**	**48**	**324**	**2314**

In addition, 14 students (SC – 0; ST – 8; GEPD – 1; OBCPD – 1; EWPD – 3 and SCPD - 1) joined the preparatory course at IIT Kanpur.

Category/Gender-wise students among fresh admissions

Sl. No.	Programme	General		OBC		EWS		SC		ST		PD		Total		
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
1	B.Tech.	354	88	245	58	91	23	139	33	70	16	5		**904**	**218**	**1122**
2	Dual Degree (B.Tech. & M.Tech.)	120	31	82	17	30	8	47	9	23	4	2		**304**	**69**	**373**
3	B.Arch.	2	2	1		1		3	1					**7**	**3**	**10**
4	M.Sc.	14	6	10	4	4	1	3	3	1	2			**32**	**16**	**48**
5	M.Tech.	92	25	115	19	41	4	58	9	19		4	3	**329**	**60**	**389**
6	M.Pharm.	5	4	13	4	6	3	3	4	3	1	2		**32**	**16**	**48**
7	Ph.D.	63	33	91	26	37	20	30	11	4	2	4	3	**229**	**95**	**324**
Total		**650**	**189**	**557**	**128**	**210**	**59**	**283**	**70**	**120**	**25**	**17**	**6**	**1837**	**477**	**2314**

The students admitted during the year included the following:

Foreign national	06
OBC	685
Scheduled Castes	353
Scheduled Tribes	145
Physically handicapped	23
Women Students	477

EWS		269
Sponsored	M.Tech.	04
	Ph.D.	02
Q.I.P.		08
Project		09
External registration	Ph.D.	01

Enrolment of Students/Scholars

The total numbers of students on roll in various programmes in the academic year 2023–2024 are provided in Table.

Table: Students on roll

Sl. No.	Department/School	B.Tech.	Dual Degree (B.Tech. & M.Tech.)	B.Arch.	M.Sc.	M.Tech.	M.Pharm.	Ph.D.	Total
1	Architecture Planning and Design			90				11	**101**
2	Biochemical Engineering		118			20		50	**188**
3	Biomedical Engineering		98			21		61	**180**
4	Ceramic Engineering	290	88			25		20	**423**
5	Chemical Engineering	609				115		74	**798**
6	Chemistry		99		48			85	**232**
7	Civil Engineering	472	148			111		75	**806**
8	Computer Science and Engineering	399	178			45		67	**689**
9	Electrical Engineering	453	153			92		64	**762**
10	Electronics Engineering	525				68		47	**640**
11	Humanistic Studies							67	**67**
12	Decision Sciences and Engineering					17			**17**
13	Industrial Management							10	**10**
14	Materials Science and Technology		139			40		69	**248**
15	Mathematical Sciences		267					102	**369**
16	Mechanical Engineering	586	164			81		99	**930**
17	Metallurgical Engineering	411	142			22		52	**627**
18	Mining Engineering	517	144			62		34	**757**
19	Pharmaceutical Engineering and Technology	298	100				95	62	**555**
20	Physics		135		48			141	**324**
21	Systems Engineering					6		6	**12**
	Total	**4560**	**1973**	**90**	**96**	**725**	**95**	**1196**	**8735**

Category/Gender-wise students on roll

Sl. No.	Programme	General		OBC		EWS		SC		ST		PD		Total		
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Total
1	B.Tech.	1397	356	985	237	425	99	554	131	273	71	29	3	3663	897	**4560**
2	Dual Degree (B.Tech. & M.Tech.)	674	197	397	78	168	39	218	49	119	22	11	1	1587	386	**1973**
3	B.Arch.	33	8	17	2	5		12	5	7	1			74	16	**90**
4	M.Sc.	28	12	20	8	8	2	6	6	2	4			64	32	**96**
5	M.Tech.	194	39	195	32	86	9	101	16	43	1	6	3	625	100	**725**
6	M.Pharm.	10	12	22	9	9	7	6	8	6	2	4		57	38	**95**
7	Ph.D.	273	176	311	93	102	41	114	37	24	9	12	4	836	360	**1196**
Total		**2609**	**800**	**1947**	**459**	**803**	**197**	**1011**	**252**	**474**	**110**	**62**	**11**	**6906**	**1829**	**8735**

The students on roll including the following:

Foreign national	21
OBC	2406
Scheduled Castes	1263
Scheduled Tribes	585
Physically handicapped	73
Women Students	1829

EWS		1000
Sponsored	M.Tech. Ph.D.	8 9
Q.I.P.		26
Project		13
External registration	Ph.D.	41

The branch-/discipline-wise and year-wise details of students enrolled in the 4-Year B.Tech., 5-Year Dual Degree B.Tech.-M.Tech. programmes are provided here:

4-Year B.Tech. students on roll

Sl. No.	Branch	Year 2023	Year 2022	Year 2021	2020 and earlier batches	Total
1	Ceramic Engineering	69	77	71	73	**290**
2	Chemical Engineering	151	152	155	151	**609**
3	Civil Engineering	118	117	118	119	**472**
4	Computer Science and Engineering	98	98	101	102	**399**
5	Electrical Engineering	111	113	114	115	**453**
6	Electronics Engineering	128	131	135	131	**525**
7	Mechanical Engineering	145	146	147	148	**586**
8	Metallurgical Engineering	101	111	101	98	**411**
9	Mining Engineering	127	139	128	123	**517**
10	Pharmaceutical Engineering and Technology	74	83	74	67	**298**
	Total	**1122**	**1167**	**1144**	**1127**	**4560**

5-Year B.Arch. students on roll

Sl. No.	Branch	Year 2023	Year 2022	Year 2021	Year 2020	2019 and earlier batches	Total
	Architecture Planning and Design	10	21	20	20	19	**90**

5-Year Dual Degree (B.Tech. and M.Tech.) students on roll

Sl. No.	Branch	Year 2023	Year 2022	Year 2021	Year 2020	2019 and earlier batches	Total
1	Biochemical Engineering	19	25	20	26	28	**118**
2	Biomedical Engineering	18	20	19	20	21	**98**
3	Ceramic Engineering	17	16	17	20	18	**88**
4	Chemistry	18	20	22	19	20	**99**
5	Civil Engineering	30	29	33	33	23	**148**
6	Computer Science and Engineering	34	38	37	37	32	**178**
7	Electrical Engineering	30	33	33	34	23	**153**
8	Materials Science and Technology	28	23	32	27	29	**139**
9	Mathematical Sciences	52	56	57	57	45	**267**
10	Mechanical Engineering	32	35	35	35	27	**164**
11	Metallurgical Engineering	27	26	29	31	29	**142**
12	Mining Engineering	24	29	30	31	30	**144**
13	Pharmaceutical Engineering and Technology	18	19	21	21	21	**100**
14	Physics	26	31	27	26	25	**135**
	Total	**373**	**400**	**412**	**417**	**371**	**1973**

2-Years M.Tech. students on roll

Sl. No.	Branch	Year 2023	Year 2022	Total
1	Biochemical Engineering	12	8	**20**
2	Biomedical Engineering	12	9	**21**
3	Ceramic Engineering	12	13	**25**
4	Chemical Engineering	56	59	**115**
5	Civil Engineering	64	47	**111**
6	Computer Science and Engineering	24	21	**45**
7	Electrical Engineering	46	46	**92**

Sl. No.	Branch	Year 2023	Year 2022	Total
8	Electronics Engineering	34	34	**68**
9	Decision Sciences and Engineering	8	9	**17**
10	Materials Science and Technology	19	21	**40**
11	Mechanical Engineering	47	34	**81**
12	Metallurgical Engineering	15	7	**22**
13	Mining Engineering	36	26	**62**
14	Systems Engineering	4	2	**6**
Total		**389**	**336**	**725**

2-Years M.Pharm. students on roll

Sl. No.	Branch	Year 2023	Year 2022	Total
1	Pharmaceutical Engineering and Technology	48	47	**95**

2-Years M.Sc. students on roll

Sl. No.	Branch	Year 2023	Year 2022	Total
1	Chemistry	24	24	**48**
2	Physics	24	24	**48**
	Total	**48**	**48**	**96**

Ph.D. scholars on roll

Sl. No.	Branch	Year 2023	Year 2022	Year 2021	Year 2020	2019 and earlier batches	Total
1	Architecture Planning and Design	11					**11**
2	Biochemical Engineering	15	5	10	9	11	**50**
3	Biomedical Engineering	22	13	9	5	12	**61**
4	Ceramic Engineering	8	1	5	4	2	**20**
5	Chemical Engineering	24	9	11	14	16	**74**
6	Chemistry	30	13	14	8	20	**85**
7	Civil Engineering	28	12	11	10	14	**75**
8	Computer Science and Engineering	18	12	19	8	10	**67**
9	Electrical Engineering	11	7	18	13	15	**64**
10	Electronics Engineering	13	12	6	7	9	**47**
11	Humanistic Studies	8	17	16	11	15	**67**
12	Industrial Management	3		3	2	2	**10**
13	Materials Science and Technology	12	4	16	18	19	**69**
14	Mathematical Sciences	33	11	17	20	21	**102**
15	Mechanical Engineering	27	12	25	15	20	**99**
16	Metallurgical Engineering	8	9	10	12	13	**52**
17	Mining Engineering	8	2	8	6	10	**34**
18	Pharmaceutical Engineering and Technology	10	5	16	13	18	**62**
19	Physics	34	31	23	25	28	**141**
20	Systems Engineering	1		2	1	2	**6**
	Total	**324**	**175**	**239**	**201**	**257**	**1196**

Students Intake in different programmes

The Department/School-wise intake of students in different academic programmes is given below:

Department/Programme-wise Intake capacity of Session 2023-24

COURSES	Students Intake										
	GE	OBC	EWS	SC	ST	PwD					Total
						GE	OBC	EWS	SC	ST	
Four-Years B.Tech. Programmes											
1. Ceramic Engineering	29	19	7	11	5	2	1	0	1	0	**75**
2. Chemical Engineering	60	40	15	22	11	3	2	1	1	1	**156**
3. Civil Engineering	46	31	11	17	9	2	2	1	1	0	**120**
4. Computer Science & Engg.	39	25	9	14	7	2	1	0	1	1	**99**
5. Electrical Engineering	44	30	11	16	8	2	2	0	1	1	**115**
6. Electronics Engineering	51	34	13	19	9	3	2	1	0	1	**133**
7. Mechanical Engineering	57	38	14	21	11	3	2	1	1	0	**148**
8. Metallurgical Engineering	41	27	10	15	8	2	1	1	1	0	**106**
9. Mining Engineering	53	36	13	20	9	0	0	0	0	0	**131**
10. Pharmaceutical Engineering and Technology	31	20	8	11	6	2	1	0	1	0	**80**
Total	**451**	**300**	**111**	**166**	**83**	**21**	**14**	**5**	**8**	**4**	**1163**
Five-Years Integrated M.Tech. Dual Degree Programmes											
11. Biochemical Engineering with M.Tech. in Biochemical Engineering and Biotechnology	9	6	2	4	2	1	1	0	0	0	**25**
12. Bioengineering with M.Tech. in Biomedical Technology	8	5	2	3	1	1	0	0	1	0	**21**
13. Ceramic Engineering	8	5	2	3	1	0	1	0	0	0	**20**
14. Civil Engineering	12	8	3	4	2	0	0	0	1	0	**30**
15. Computer Science & Engineering	13	9	3	5	3	0	1	0	0	0	**34**
16. Electrical Engineering with M.Tech. in Power Electronics	12	8	3	5	2	0	0	0	0	0	**30**
17. Engineering Physics	11	7	3	4	2	1	0	0	0	0	**28**
18. Industrial Chemistry	8	5	2	3	2	1	0	0	0	0	**21**
19. Materials Science & Technology	11	7	3	4	1	1	0	0	1	0	**28**
20. Mathematics & Computing	20	13	5	7	4	1	1	1	0	0	**52**
21. Mechanical Engineering	12	8	3	4	2	1	1	0	0	1	**32**
22. Metallurgical Engineering	11	7	3	4	2	0	0	1	0	0	**28**
23. Mining Engineering	13	8	2	5	2	0	0	0	0	0	**30**
24. Pharmaceutical Engineering and Technology	8	5	2	3	2	1	0	0	0	0	**21**
Total	**156**	**101**	**38**	**58**	**28**	**8**	**5**	**2**	**3**	**1**	**400**
Five-Years B.Arch. Degree Programme											
25. Architecture	10	7	2	4	2	1	0	0	0	0	**26**
Two-Years M.Sc. Programmes											
26. Chemistry	9	6	2	4	2	1	1	0	0	0	**25**
27. Physics	10	7	3	3	1	0	0	0	0	1	**25**
Total	**19**	**13**	**5**	**7**	**3**	**1**	**1**	**0**	**0**	**1**	**50**

COURSES	Students Intake						
	GE	OBC	EWS	SC	ST	PC#	Total
Two-Years M.Tech. Programmes							
28. Biochemical Engineering	5	3	1	2	1	(1)	**12**
29. Biomedical Engineering	5	3	1	2	1	(1)	**12**
30. Ceramic Engineering	10	6	2	4	2	(1)	**24**
31. Chemical Engineering	25	15	6	9	4	(3)	**59**
32. Civil Engineering	33	21	8	11	6	(4)	**79**
33. Electrical Engineering	25	15	6	9	4	(3)	**59**
34. Electronics Engineering	25	15	6	9	4	(3)	**59**
35. Decision Sciences and Engineering	5	3	1	2	1	(1)	**12**
36. Materials Science & Technology	10	6	2	4	2	(1)	**24**
37. Mechanical Engineering	25	15	6	9	4	(3)	**59**
38. Metallurgical Engineering	25	15	6	9	4	(3)	**59**
39. Mining Engineering	15	9	4	5	3	(2)	**36**
40. Systems Engineering	5	3	1	2	1	(1)	**12**
Two-Years M.Pharm. Programme							
41. Pharmaceutical Engineering and Technology	20	13	5	7	4	(2)	**49**
Grand Total of 2-Years M.Tech. Courses	**233**	**142**	**55**	**84**	**41**	**(29)**	**555**

Student intake numbers for PC (5%) category has not been added in calculating total number of seats, as provision for the physically challenged candidate will be made from within the respective category.

Convocation

The 12th Convocation was held on October 06, 2023. Dr. Samir V. Kamat, Secretary, Department of Defence R&D and Chairman, DRDO delivered the convocation address. A total of 1908 various degrees were awarded in 12th Convocation of the Institute. During 12th Convocation, approximately 1342 candidates received their degrees in person. The department-wise details of the degrees awarded are provided in Table below.

Degrees awarded

Branch	Ph.D.	M.Tech.	M.Pharm.	M.Sc.	Dual Degree		B.Tech.	Total
					B.Tech.	M.Tech.		
Biochemical Engineering	5	7	0	0	13	13	0	**38**
Biomedical Engineering	8	4	0	0	13	13	0	**38**
Ceramic Engineering	7	3	0	0	10	10	39	**69**
Chemical Engineering	6	37	0	0	0	0	145	**188**
Chemistry	18	0	0	22	10	10	0	**60**
Civil Engineering	14	39	0	0	25	25	109	**212**
Computer Science & Engg.	13	20	0	0	22	22	92	**169**
Decision Sciences & Engg.	0	8	0	0	0	0	0	**8**
Electrical Engineering	8	15	0	0	24	24	106	**177**
Electronics Engineering	11	22	0	0	0	0	122	**155**
Humanistic Studies	2	0	0	0	0	0	0	**2**
Industrial Management	4	0	0	0	0	0	0	**4**
Materials Science & Tech.	11	15	0	0	17	17	0	**60**
Mathematical Sciences	15	0	0	0	23	23	0	**61**
Mechanical Engineering	23	22	0	0	25	25	138	**233**
Metallurgical Engineering	11	9	0	0	16	16	75	**127**
Mining Engineering	7	2	0	0	12	12	93	**126**

Branch	Ph.D.	M.Tech.	M.Pharm.	M.Sc.	Dual Degree		B.Tech.	Total
					B.Tech.	M.Tech.		
Pharmaceutics	9	0	18	0	15	15	35	**92**
Physics	20	0	0	22	22	22	0	**86**
Systems Engineering	1	2	0	0	0	0	0	**3**
TOTAL	**193**	**205**	**18**	**44**	**247**	**247**	**954**	**1908**

With this convocation, the total number of degrees awarded so far by the Institute is 48,115. Total 19,452 degrees awarded by IIT(BHU) and before conversion of IT-BHU into IIT(BHU), the IT-BHU awarded total 28,663:

Sl. No.	Programme	No. of degrees awarded		
		After conversion	Before conversion	Total
1	Ph.D.	1260	854	**2114**
2	M.Tech.	3256	3119	**6375**
3	M.Pharm.	500	653	**1153**
4	M.Sc.	122	0	**122**
5	I.M.D.	266	0	**266**
6	Dual Degree B.Tech.	2242	0	**2242**
	M.Tech.	2242	0	**2242**
7	Dual Degree B.Pharm.	76	0	**76**
	M.Pharm.	76	0	**76**
8	B.Tech.	9288	22947	**32235**
9	B.Pharm.	124	1090	**1214**
Total		**19452**	**28663**	**48115**

Award of Medals and Prizes to Students

Convocation prizes

Medals and Prizes awarded to students at the 12th Convocation:

1. **Ms. Akanksha Gupta**

   She was awarded P.S. Narayana Gold Medal for Outstanding Doctoral Thesis Research in the Mining/Metallurgical/ Ceramic/Materials Science for the year 2023**.**

2. **Shri Khan Sahil Khan Naim Khan**

   He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Biochemical Engineering Examination, 2023.

3. **Shri Praveen Kumar G**

   He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Biomedical Engineering Examination, 2023.

4. **Shri Brijesh Bharti**

   He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Ceramic Engineering Examination, 2023.

5. **Shri Shivam Kumar**

   He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Chemical Engineering Examination, 2023.

6. **Shri Ashish Kumar Agnihotri**

   He was awarded:-

   a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Civil Engineering Examination, 2023.

   b) R.P. Singh, IRSE (Retired) Gold Medal for securing highest marks at the M.Tech. in Civil Engineering Examination, 2023.

7 Shri Vijay Kumar

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Civil Engineering Examination, 2023.

b) R.P. Singh, IRSE (Retired) Gold Medal for securing highest marks at the M.Tech. in Civil Engineering Examination, 2023.

8. Shri Binit Singh

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Computer Science and Engineering Examination, 2023.

9. Shri Mathuri Mani Deep

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Decision Sciences and Engineering Examination, 2023.

10. Shri Abhay Janardan Singh

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Electrical Engineering Examination, 2023.

11. Shri Harsh Niketan Dixit

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Electronics Engineering Examination, 2023.

12. Shri Harsh Kashyap

He was awarded Sanjeev Memorial Gold Medal for securing First position at the M.Tech. in Electronics Engineering (Digital Technology and Instrumentation) Examination, 2023.

13. Shri Arkaprava Mondal

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Materials Science and Technology Examination, 2023.

14. Shri Gaurav Kumar Nagarwal

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Materials Science and Technology Examination, 2023.

15. Shri Rohit Kumar Singh

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Mechanical Engineering Examination, 2023.

b) Prof. (Dr.) Mahendra Kumar Jain Nyayacharya Gold Medal for securing highest CPI at the M.Tech. in Mechanical Engineering Examination, 2023.

16. Shri Siddharth Pundir

He was awarded S.K. Memorial Gold Medal for standing First position at the M.Tech. in Mechanical Engineering (Machine Design) Examination, 2023.

17. Shri Vikas

He was awarded:-

a) BENCO-64 Gold Medal for best thesis at the M.Tech. in Mechanical Engineering Examination, 2023.

b) BENCO-64 Cash Prize Rs. 25000/- for best thesis at the M.Tech. in Mechanical Engineering Examination, 2023.

18. Shri Kushagra Tyagi

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Metallurgical Engineering Examination, 2023.

19. Shri Mehul Sharma

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Mining Engg. Exam., 2023.

b) D.N. Bhargava Medal for standing First at the M.Tech. in Mining Engg. Examination, 2023.

c) D.N. Bhargava Best Project Award Rs. 5000/- for best project at the M.Tech. in Mining Engineering Examination, 2023

20. Shri Rajesh H

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Systems Engineering Examination, 2023.

21. Ms. Ritika Srivastava

She was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Pharm. Examination, 2023.

b) Shri J.N. Kapoor Gold Medal for securing First Position at the M.Pharm. Examination, 2023.

22. Ms. Soumya Mehta

She was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Pharm. Examination, 2023.

b) Shri J.N. Kapoor Gold Medal for securing First Position at the M.Pharm. Examination, 2023**.**

23. Shri Abhishek Jaiswal

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Sc. in Chemistry Examination, 2023.

24. Ms. Riya Gulati

She was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Sc. in Physics Examination, 2023.

25. Ms. Sarvanshi Swaroop

She was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Biochemical Engineering (Biochemical Engineering and Biotechnology) Examination, 2023.

26. Shri Vaibhav Jain

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Bioengineering (Biomedical Technology) Examination, 2023.

27. Shri Mayank Vashishtha

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Ceramic Engineering Examination, 2023.

28. Ms. Sangeeta Mishra

She was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Industrial Chemistry Examination, 2023.

b) Shri Taj Ahmad Quraishi Gold Medal for securing First position at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Industrial Chemistry Examination, 2023.

29. Shri Abhigyan Srivastava

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Civil Engineering Examination, 2023.

30. Shri Harshit Agrawal

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Computer Science & Engineering Examination, 2023.

31. Shri Akash Agrawal

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Electrical Engineering (Power Electronics) Examination, 2023.

32. Shri Siddhant Jaiswal

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Materials Science & Technology Examination, 2023.

33. Shri Smit Lunagariya

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Mathematics and Computing Examination, 2023.

34. Shri Amit Kumar

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Mechanical Engineering Examination, 2023.

35. Ms. Saumya Sanjay Shukla

She was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Metallurgical Engineering Examination, 2023.

36. Ms. Gunjan Singh

She was awarded

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Mining Engineering Examination, 2023.

b) D.N. Bhargava Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Mining Engineering Examination, 2023.

37. Shri M Nagaraju

He was awarded D.N. Bhargava Best Project Award Rs. 5000/- for best project at the 5-Yr. I.D.D. (B.Tech.-M.Tech.) in Mining Engineering Examination, 2023

38. Shri Himanshu Verma

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Pharmaceutical Engineering and Technology Examination, 2023.

39. Shri Anshu Kumar Mishra

He was awarded I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Engineering Physics Examination, 2023.

40. Ms. Sree Chakravarthy

She was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Ceramic Engineering Examination, 2023.

b) Omprakash Bhandari Endowment Medal for First Rank holder among the graduating student at the B.Tech. in Ceramic Engineering Examination, 2023.

c) Omprakash Bhandari Endowment Cash Prize Rs. 15000/= for First Rank holder among the graduating student at the B.Tech. in Ceramic Engineering Examination, 2023.

41. Shri Aryan Jamwal

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Chemical Engineering Examination, 2023.

b) The R.B.G. Modi Medal for standing First at the B.Tech. in Chemical Engineering Examination, 2023.

c) Manishi Sharma Memorial Gold Medal for securing First position at B.Tech. Chemical Engineering Examination, 2023.

d) Mrs. Gargi Devi Trivedi Memorial Gold Medal for securing highest marks in B.Tech. Chemical Engineering Examination, 2023.

e) Prof. Y.D. Upadhya Memorial Gold Medal for securing highest CPI at B.Tech. Chemical Engineering Examination, 2023.

f) Shri Ram Kumar Gupta Gold Medal for standing First at the B.Tech. in Chemical Engineering Examination, 2023.

g) Dr. R.J. Rathi Financial Award Rs. 1000/= cash for standing First at the B.Tech. in Chemical Engineering Examination, 2023.

h) Manishi Sharma Memorial Cash Prize Rs. 2000/= for securing First position at the B.Tech. in Chemical Engineering Examination, 2023.

42. Ms. Bhimavarapu Rajasree Reddy

She was awarded Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Chemical Engineering Examination, 2023.

43. Shri Aryan Singh

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Civil Engineering Examination, 2023.

b) CRS Iyengar Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Civil Engineering Examination, 2023.

c) Rai Bahadur Taracharan Gue Memorial Award Rs. 500/= cash for standing First at the B.Tech. in Civil Engineering Examination, 2023.

d) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in B.Tech. in Civil Engineering Examination, 2023.

44. Ms. Adyasha Mohapatra

She was awarded Meenakshamma Shankaranaramappa Prize Rs. 500/= cash for securing highest marks in Environmental Engineering (Theory) at the B.Tech. Civil Engineering Examination, 2023.

45. Shri Bhawak Anand

He was awarded:-

a) Smt. Bimla Aggrawal Medal for securing $\geq$ 8.00 CPI and having lowest family income out of the top 4 students at the B.Tech. in Civil Engineering Examination, 2023.

b) Smt. Bimla Aggrawal Cash Prize Rs. 15000/= for securing $\geq$ 8.00 CPI and having lowest family income out of the top 4 students at the B.Tech. in Civil Engineering Examination, 2023.

46. Ms. Tanya Tripti

She was awarded Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Civil Engineering Examination, 2023.

47. Shri Evuri Harish

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Computer Science & Engineering Examination, 2023.

b) Late Shri Shyam Sunder Lal Razdan Memorial Gold Medal for securing highest percentage of marks in B.Tech. Examination, 2023.

c) Prof. Gopal Tripathi Memorial Gold Medal for securing highest marks at the B.Tech. Examination, 2023.

d) Smt. Arati Paul and Prof. Binod Bihari Paul Gold Medal for securing highest marks in IV Year Examination among all the students of B.Tech. Examination, 2023.

e) Umesh Pratap Singh Gold Medal for First Rank at the B.Tech. Examination, 2023 among all the branches.

f) C. Raja Gopal Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Computer Science & Engineering Examination, 2023.

g) Shri Raj Kishore Kapoor Silver Medal for securing highest marks at the B.Tech. Examination, 2023.

h) Dr. Annie Besant Prize (in the forms of books by Dr. Annie Besant including copy of the 'Bhagavadgita') for standing First position among all the branches of B.Tech. Examination, 2023.

48. Shri Anant Saxena

He was awarded Prof. V.V. Chalam Prize (The Prize shall be in the form of books by Mr. J. Krishnamurti) for standing Second position among all the branches of B.Tech. Examination, 2023.

49. Ms. Anushka Gupta

She was awarded:-

a) Prof. B.B. Bansal Memorial Gold Medal for being involved in Social Services/Co-curricular activities and having highest CPI at the undergraduate engineering Examination, 2023 among such students.

b) Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Computer Science & Engineering Examination, 2023.

50. Shri Shashwat Kumar Mohanty

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Electrical Engineering Examination, 2023.

b) The R.B.G. Modi Medal for standing First at the B.Tech. in Electrical Engineering Examination, 2023.

c) Lala Balak Ramji Kohinoor Memorial Gold Medal for securing highest marks at the B.Tech. Examination, 2023 among the branches of Civil, Mechanical, Electrical and Electronics Engineering.

d) Himmat Narayan Singh Memorial Gold Medal for securing the First position and First Division in B.Tech. Electrical Engineering Examination, 2023.

e) CRS Iyengar Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Electrical Engineering Examination, 2023.

f) N.V.R. Nageshwar Iyer (Prize Rs. 100/= in the form of books) for standing First in B.Tech. in Electrical Engineering Examination, 2023.

g) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in the B.Tech. in Electrical Engineering Examination, 2023.

51. Shri Ashutosh Pandey

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Electrical Engineering Examination, 2023.

b) The R.B.G. Modi Medal for standing First at the B.Tech. in Electrical Engineering Examination, 2023.

c) Lala Balak Ramji Kohinoor Memorial Gold Medal for securing highest marks at the B.Tech. Examination, 2023 among the branches of Civil, Mechanical, Electrical and Electronics Engineering.

d) Himmat Narayan Singh Memorial Gold Medal for securing the First position and First Division in B.Tech. Electrical Engineering Examination, 2023.

e) CRS Iyengar Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Electrical Engineering Examination, 2023.

f) N.V.R. Nageshwar Iyer (Prize Rs. 100/= in the form of books) for standing First in B.Tech. in Electrical Engineering Examination, 2023.

g) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in the B.Tech. in Electrical Engineering Examination, 2023.

52. Shri Piyush Kumar Dubey

He was awarded:-

a) Shri Om Prakash Aggrawal Medal for securing $\geq$ 8.00 CPI and having lowest family income out of the top 4 students at the B.Tech. in Electrical Engineering Examination, 2023.

b) Shri Om Prakash Aggrawal Cash Prize Rs. 15000/= for securing $\geq$ 8.00 CPI and having lowest family income out of the top 4 students at the B.Tech. in Electrical Engineering Examination, 2023.

53. Ms. Kumkum Singhal

She was awarded:-

a) Late Dr. R.N. Singh and Mrs. Uma Singh Medal for securing highest CPI among the girl students at the B.Tech. Examination, 2023.

b) Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Electrical Engineering Examination, 2023.

54. Shri Apoorv Jain

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023.

b) Late Prof. Nagesh Chandra Vaidya Gold Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023.

c) Dr. (Late) Nandita Saha Roy Memorial Gold Medal for securing First position in B.Tech. Electronics Engineering Examination, 2023.

d) C. Raja Gopal Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Electronics Engineering Examination, 2023.

e) Dr. Ayyagari Sambasiva Rao Prize Rs. 1000/= cash for standing First at the B.Tech. in Electronics Engineering Examination, 2023.

f) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in B.Tech. in Electronics Engineering Examination, 2023.

55. Shri Divyansh Chandra Roy

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023.

b) President's Gold Medal for outstanding performance in academics among all disciplines of B.Tech. Examination 2023.

c) Late Prof. Nagesh Chandra Vaidya Gold Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023.

d) Dr. (Late) Nandita Saha Roy Memorial Gold Medal for securing First position in B.Tech. Electronics Engineering Examination, 2023.

e) C. Raja Gopal Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Electronics Engineering Examination, 2023.

f) Dr. Ayyagari Sambasiva Rao Prize Rs. 1000/= cash for standing First at the B.Tech. in Electronics Engineering Examination, 2023.

g) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in B.Tech. in Electronics Engineering Examination, 2023.

56. Shri Aadi Shukla

He was awarded Prof. A.K. Ghosh Silver Medal for standing Second Position in B.Tech. in Electronics Engineering Examination, 2023.

57. Shri Raghav Soni

He was awarded Director's Gold Medal for outstanding all-round performance and excellent organizational abilities and leadership qualities among all B.Tech. graduates of 2023.

58. Shri Deshmukh Shubham Hemchandra

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Mechanical Engineering Examination, 2023.

b) The Prince of Wales Medal for standing First at the B.Tech. in Mechanical Engineering Examination, 2023.

c) Sudhir Kumar Sharma Memorial Gold Medal for securing highest marks in B.Tech. Mechanical Engineering Examination, 2023.

d) CRS Iyengar Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Mechanical Engineering Examination, 2023.

e) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in B.Tech. in Mechanical Engineering Examination, 2023.

59. **Ms. Akanksha Verma**

She was awarded Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Mechanical Engineering Examination, 2023.

60. Shri Swarnendu Das

He was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Metallurgical Engineering Examination, 2023.

b) The Bishan Das Basil Medal for securing First position among B.Tech. in Mining and Metallurgical Engineering Examination 2023.

c) Swarnamma Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Metallurgical Engineering Examination, 2023.

d) Shri Aditya Kumar Awasthi Endowment Award Rs. 1.0 lakh for securing First position at the B.Tech. in Metallurgical Engineering Examination, 2023.

61. Ms. Vippagunta Lahari

She was awarded Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Metallurgical Engineering Examination, 2023.

62. Ms. Vysyaraju Riya

She was awarded Ms. Indira Ananthachari Endowment Fund Prize Rs. 10,000/= cash for securing highest CPI more than 7.50 and family income is less than Rs. 5 lacs per annum at the B.Tech. Metallurgical Engineering Examination, 2023.

63. Ms. Ishika Bansal

She was awarded Ms. Indira Ananthachari Endowment Fund Prize Rs. 10,000/= cash for securing highest CPI more than 7.50 and family income is less than Rs. 5 lacs per annum at the B.Tech. Metallurgical Engineering Examination, 2023.

64. Shri Chennuru Krishna Mohan

He was awarded Ms. Indira Ananthachari Endowment Fund Prize Rs. 10,000/= cash for securing highest CPI more than 7.50 and family income is less than Rs. 5 lacs per annum at the B.Tech. Metallurgical Engineering Examination, 2023.

65. Ms. Harshita Kumari -

She was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Mining Engineering Examination, 2023.

b) Dr. B.S. Verma Memorial Gold Medal for securing highest marks in B.Tech. Mining Engineering Examination, 2023.

c) D.N. Bhargava Medal for securing First position at the B.Tech. in Mining Engineering Examination, 2023.

66. Ms. Sachi Gupta

She was awarded D.N. Bhargava Best Project Award Rs. 5000/- for best project at the B.Tech. in Mining Engineering Examination, 2023.

67. Ms. Pragya Agarwal

She was awarded:-

a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023.

b) Aruna and Malviya Medal for standing First at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023.

c) Late Sundari Devi Gold Medal for securing highest CPI > 8.50 as a girl student in Pharmaceutical Engineering and Technology at the B.Tech. Examination, 2023.

d) Shri J.N. Kapoor Gold Medal for securing First position at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023.

e) Late Prof. G.P. Srivastava (Prize Rs. 200/= in the form of books) for standing First at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023.

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6. Department of Architecture, Planning and Design

Complete Name of Department: Architecture, Planning and Design

Year of Establishment: 2019

Head of the Department: Dr. Harsimran Kaur

Brief Introduction of the Department:

The Department of Architecture, Planning, and Design was established in 2019, which was also the institution's centenary year. The Department is recognized by the Council of Architecture (COA) and is dedicated to fostering the next generation of architects, planners, and designers. The Department of Architecture, Planning, and Design at IIT (BHU) Varanasi has a well-established reputation for excellence in heritage conservation and has been designated as a National Expert Heritage Body (NEHB) by the National Monuments Authority (NMA) of the Ministry of Culture, Government of India. The Department has collaborated with local authorities such as Varanasi Smart City Limited (VSCL), the Varanasi Development Authority (VDA), the National Institute of Urban Affairs (NIUA), Indian Knowledge System (IKS-AICTE), National Monuments Authority (NMA), Archaeological Survey of India (ASI), and heritage organizations such as ICOMOS India. "Creating Humane Architecture with Cultural Heritage and Innovative Technology" is the philosophy upon which the Department operates.

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	B. Arch	10	20	18	17	14
2	Ph. D (Under Institute Fellowship)	8	-	-	-	-
3	Ph. D (Under Project Fellowship)	2	-	-	-	-
4	Ph. D (Under Sponsored Category)	1	-	-	-	-

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Ms. Gomati Goswami	19218006	1. National Conference GSW - 2024; Geosciences for Sustainable World (GSW), Department of Geophysics, Institute of Science (I.Sc.), Banaras Hindu University (B.H.U.), Varanasi 2. First in-person Write-shopwith the 17 selected students of STC 4.	1. 06-07 Mar 2024, Department of Geophysics, Institute of Science (ISc), Banaras Hindu University (BHU), Varanasi. 2. 13 - 15 Mar 2024 at India Habitat Center, New Delhi.	Self
2	Mr. Anshveer Singh Bhatia	21218003	Youth 20 (Y20) Summit 2023	17-20 August 2023 Varanasi, India	-
3	Mr. Aditya Kaushik	22218001	1. Sthapatya Shilp-Samagam 2. Sculpture Workshop 3. BIM lecture by Dr K V Ganga 4. Climate Risk Assessment	1. 9-10 Sep 23 (Hotel Taj Ganges, Varanasi) 2. 05-09 June, Studio 2 3. 28 Feb 24 4. 1 Mar 24, Studio 2	-
4	Mr. Galileo Prashant Maidase	22218003	1. Sculpture Workshop; 2. Sthapatya Shilp-Samagam; 3. Climate Risk Assessment; 4. BIM lecture by Dr K V Ganga	1. 5-9 Jun 24, Studio 2; 2. 9-10 Sep 23, Hotel Taj Ganges, Varanasi; 3. 1-3 March, Studio 2; 4. 28 Feb 24	-

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
5	Mr. Harshit Mishra	22218004	1. Sthapatya Shilp-Samagam 2. Sculpture Workshop 3. BIM lecture by Dr K V Ganga 4. Climate Risk Assessment	1. 9-10 Sep 23, Hotel Taj Ganges, Varanasi 2. 05-09 Jun 24, Studio 2 3. 28 Feb 24 4. 1st March , studio 2	-
6	Mr. Kumar Soham	22218006	Sthapatya Shilp-Samagam	9 -10 Sep 23, Hotel Taj Ganges, Varanasi	Self
7	Mr. Nishan Agarwal	22218010	1. Interior design workshop; 2. Sculpture Workshop; 3. Sthapatya Shilp-Samagam; 4. Climate Risk Assessment; 5. BIM lecture by Dr K V Ganga	1. 4-8 Oct 23, NIT Patna 2. 5-9 Jun 24, Studio 2 3. 9-10 Sep 23, Hotel Taj Ganges, Varanasi 4. 1-3 Mar 23, Studio 2 5. 28 Feb 24	Self; Dept.; Dept.; Dept.; Dept.
8	Mr. Pallam Dheeraja	22218011	1. Sculpture Workshop 2. BIM lecture by Dr K V Ganga 3. Climate Risk Assessment	1. 5-9 Jun 24, Studio 2 2. 28 Feb 24 3. 1-3 Mar 24, Studio 2	Dept.
9	Mr. Parveen	22218012	1. Sculpture Workshop 2. Climate Risk Assessment	1. 5-9 Jun 24, Studio-2 2. 1-3 Mar 24, Studio-2	-
10	Mr. Ramavath Venkata Shiva Sai Tharun	22218014	1. Sculpture Workshop 2. BIM lecture by Dr K V Ganga 3. Climate Risk Assessment	1. 5-9 Jun 24, Studio 2 2. 28 Feb 24 3. 1-3 Mar 24, Studio 2	-
11	Mr. Sambhav Gupta	22218015	1. Sthapatya Shilp-Samagam 2. Sculpture Workshop 3. BIM lecture by Dr K V Ganga 4. Climate Risk Assessment	1. 9-10 Sep 23, Hotel Taj Ganges, Varanasi 2. 5-9 Jun 23, Studio 2 3. Feb 28, 2024 4. 1 Mar 24, Studio 2	-
12	Mr. Suraj Kaushik	22218017	1. Sculpture Workshop 2. Climate Risk Assessment	1. 5-9 Jun 24, Studio-2 2. 1-3 Mar 24, Studio-2	Dept.; Dept.
13	Mr. Vibhushit Yadav	22218018	1. Sculpture Workshop 2. Climate Risk Assessment	1. 5-9 Jun 24, Studio-2 2. 1-3 Mar 24, Studio-2	Dept.; Dept.
14	Mr. Vivek Nayaka P J	22218019	1. Sculpture Workshop 2. Climate Risk Assessment	1. 5-9 Jun 24, Studio-2 2. 1-3 Mar 24, Studio-2	- -
15	Mr. Yashaswi Sarkar	22218020	1. Sculpture Workshop 2. Climate Risk Assessment	1. 5-9 Jun 24, Studio-2 2. 1-3 Mar 24, Studio-2	Dept.
16	Mr. Avinash Yadav	23211003	1. 3-day National Training Program on "Water Urbanism For Resilient Development: Case Studies from Varanasi India" 2. One-day awareness workshop program on "Advances in Geospatial Technique for Disaster Mitigation" 3. International Conference on Climate Change, Cultural Heritage & Sustainable Habitat" 4. One day Workshop on "Socio-economic Impact of PMAY(U) project in Varanasi District"	1. 4 - 6 Sep 23 IIT BHU Varanasi 2. 31 Oct 23, MNNIT Prayagraj 3. 17-18 Feb 24, Patna 4. 29 Feb 24, IIT BHU Varanasi	- --
17	Ms. Pooja Kumari	23211005	7 Conference of Transportation Research Group of India, (CTRG-2023) organized by SVNIT, Surat	17-20 December, 2023, Dream Festiva Hotel, Surat	IIT-BHU

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
18	Mr. Santosh Kumar	23211006	1. 16th Urban Mobility India Conference & Expo 2023 Integrated and Resilient Urban Transport and organized by UMI. 2. One day Workshop on "Socio-economic Impact of PMAY (U) project in Varanasi District" sponsored by ICSSR and organized by Dept. of APD.	1. 27 – 29 Oct 23, Manekshaw Centre, New Delhi. 2. 29 Feb 2024. IIT BHU Varanasi.	- -
19	Ms. Suman Maurya	23211007	One day Workshop on "Socio-economic Impact of PMAY(U) project in Varanasi District" sponsored by ICSSR and organized by Dept. of APD, IIT BHU Varanasi	29 Feb 24, IIT BHU Varanasi	-
20	Mr. Kundan Shwetank	23211503	Participated in One day Workshop on "Socio-economic Impact of PMAY(U) in Varanasi District" sponsored by ICSSR and organised by DAPD, IIT BHU Varanasi	29 Feb 24, IIT BHU Varanasi	-

Names of students/scholars who got prizes and awards outside the Institute

Sl. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1.	Gomati Goswami	19218006	Sponsored 'Student Thesis Competition' (STC) on 'Re-imagining the Urban Rivers,' Season-4 (2023-24)	January 2024, National Institute of Urban Affairs (NIUA), New Delhi, Delhi 110003	National Institute of Urban Affairs (NIUA) & National Mission of Clean Ganga (NMCG)
2.	Galileo Prashant Maidase	22218003	Winners IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
3.	Kumar Soham	22218006	Winners IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
4.	Nishan Agarwal	22218010	Winners IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
5.	PallamDheeraja	22218011	Winners IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
6.	Ramavath Venkata Shiva Sai Tharun	22218014	Notable participants, IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
7.	Sambhav Gupta	22218015	Notable participants, IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
8.	Suraj Kaushik	22218017	Notable participants, IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
9.	Vibhushit Yadav	22218018	Winners IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India
10.	Vivek Nayaka P J	22218019	Winners IIT BOMBAY FOSSEE MAPATHON	Apr-May'23 Online	IIT BOMBAY, Ministry of Education, Government of India

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
ASSOCIATE PROFESSORS			
1	Ar. Indra Kumar Singh (B.Arch, M.Arch) FAC-VF28	Pursuing	Architecture, Industrial & Product Design, Indoor Air Quality
ASSISTANT PROFESSORS			
1	Dr. Aaditya Pratap Sanyal (B.Arch, M.Tech, Ph.D.) 50240	June 2019	Construction Management, Green Building, Climatology
2	Dr. Rabi Narayan Mohanty (B.Arch, M.Arch, Ph.D.) 50269	October 2020	Urban Design, Heritage Conservation and Travel Behaviour
3	Dr. Harsimran Kaur (B.Arch, M.Arch, Ph.D.) 50285	June 2020	Urban Sustainability, Heritage Conservation, Spatial Data Analytics, XR in Architecture
4	Dr. Kumar Abhishek (B.Arch, M.Plan, Ph.D.) 50329	May 2020	Urban & Rural Planning, Industrial Ecology, Social Sustainability
5	Dr. Rewati Raman (B.Arch, M.Plan, Ph.D.) VF-29	April 2020	Sustainable Architecture, Urban and Rural Planning, Intelligent Buildings
6	Dr. Sneha (B.Arch, M.Plan, Ph.D.) 50326	September 2022	Urban Land development and Management, Housing and Real estate, Urban economics and Governance
7	Dr. Vishal Chettry (B.Arch, M.Plan, Ph.D.) 50334	December 2021	Urban and Regional Planning
8	Ar. Akhil Nawani (B.Arch, M.Plan, Ph.D.) VF-23	Pursuing	Contemporary Architecture, Architectural History, Urban Climate Studies

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Mr. Ravi Kumar Sonkar, MBA, B.Tech	Senior Assistant, 50090	05.12.2019
2	Mr. Suman Kumar Sharma, B.A.	Junior Assistant, 50368	15.11.2023
3	Mr. Rajesh Kumar, B.Tech.	Junior Technician, 50378	01.12.2023
4	Mr. Shubham Gupta, B.Tech	Junior Technician, 50350	15.11.2023

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

Sl. No.	Coordinator	Title	Period
1	Dr. Kumar Abhishek and Dr. R. Raman	Joint Studio Collaborative with National Institute of Technology (NIT), Calicut	2 - 4 March 2024
2	Dr. R. Raman and Dr. Kumar Abhishek	5-day Workshop titled "Forming the Future: Developing Architectural Shapes through Sculpture"	5 – 9 June 2023
3	Dr. Sneha	Tackling Climate Change Through Urban Planning with Smart Sensing: A Case Study of Japanese Policies	4 January 2024
4	Dr. Sneha, Dr. Vishal Chettry	Sacred Landscape geometry in north India: Visioning the IKS, by Prof. P B Rana Singh	29 January 2024
5	Dr. Sneha, Dr. Vishal Chettry	Importance of Housing policy and Real estate for young architects, by Prof. PSN Rao	29 January 2024
6	Dr. Rabi Narayan Mohanty, Dr. Sneha, and Dr. Kumar Abhishek	5-day Workshop on Indian Art and Architecture under the aegis of IKS Centre-IIT(BHU) Varanasi	4 - 8 Nov 2023.

Sl. No.	Coordinator	Title	Period
7	Dr. Vishal Chettry and Dr. Harsimran Kaur	03-day national training program on "Water Urbanism for Resilient Urban Development: Case studies from Varanasi, India" in collaboration with NIDM, New Delhi	04 - 06 Sep 2023
8	Dr. Vishal Chettry and Dr. Sneha	Guest Lecture and Interaction Session on Hospital Design	31 August - 01 September 2023
9	Dr. Vishal Chettry	Guest lecture on "Design process in Landscape Architecture"	05 October 2023
10	Dr. Vishal Chettry	05-day national online training program on "Sustainable Horizons: Methodological Innovations in Architecture and Urbanism aligned with SDGs"	20 - 24 November 2023
11	Dr. Vishal Chettry, Dr. Harsimran Kaur and Ar. Akhil Nawani	Workshop on "Urban Climate Risk Assessment"	1 - 3 March 2024
12	Dr. Aaditya Pratap Sanyal	Expert Lecture on Traditional Indian Architectural Knowledge Systems	03 November, 2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Dr. Aaditya Pratap Sanyal	Global Cleaner Production Conference 2023	9-12 November 2023 at Shanghai, China
2	Dr. Aaditya Pratap Sanyal	Sustainable Indoor Lighting Design: Towards Optimization and Energy Efficiency organised by UltraTech Cement Ltd.	7 October 2023 (online)
3	Dr. Aaditya Pratap Sanyal	One Week Online Faculty Development Programme to Develop Skill Panorama on Research Methodology-Based Data Analysis Using R organised by Bhau Rao-Devras Shodh Peeth, Lucknow	21-27 August, 2023 (online)
4	Dr. Aaditya Pratap Sanyal	7th International Conference on Construction, Real Estate, Infrastructure and Project Management (ICCRIP) 2023 organised by NICMAR University, Pune	11-12 August, 2023 at NICMAR University, Pune
5	Dr. Aaditya Pratap Sanyal	Short Term Training Program Five-Days Workshop on "Learn: Green Building Compliance and Energy Simulation Software" organised by Sardar Vallabhbhai National Institute of Technology, Surat	29 May - 02 June 2023 (online)
6	Dr. Kumar Abhishek	Karmayogi Prarambha Module organised under Mission Karmayogi by Government of India (GOI)	May 2023 at IGOT portal on Karmayogi Bharat Platform (self-paced)
7	Dr. Vishal Chettry	How Bridge Monitoring and Inspection Works	16 Jun 2023 (Online)
8	Dr. Vishal Chettry	5-day workshop on GIS-based Disaster Responsive Humanitarian Logistics (DREHL 2023)	29 June - 03 Jul 2023, Online mode, organized by NIT Calicut.
9	Dr. Vishal Chettry	One-day webinar on "How to publish Scholarly books in Remote Sensing and Photogrammetry"	25 July 2023, Online mode, organized by Taylor and Francis Group
10	Dr. Vishal Chettry	Five-Day STTP on "Modeling and Simulation of Urban Systems"	19-23 June 2023, Online mode, organized by at VNIT Nagpur
11	Dr. Vishal Chettry	12th Sense N Sensibility Lecture	October 2023
12	Dr. Vishal Chettry	Training program on "Bhuvan Overview"	2 - 4 May 2023, Online mode, organized by NRSC Hyderabad
13	Dr. Vishal Chettry	Presented a conference paper titled "Examining the Influence of Land Cover Change on Urban Heat Island of Varanasi Development Area Using Geoinformatics" in the 2nd Conference on Future Challenges in Sustainable Urban Planning & Territorial Management"	29 - 31 January 2024, Online mode, organized by Universidad Politécnica de Cartagena, Spain
14	Dr. Vishal Chettry	NEP 2020 Orientation & Sensitization Programme	05 - 14 February, 2024, Online mode, organized by IIT (BHU) Varanasi

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of Faculty Member	Topic of Lecture	Institution	Date
1	Dr. Kumar Abhishek	Towards Resilient Future: Symbiotic Approaches in Urban Planning	MCGAN's School of Architecture, Tamil Nadu, India	07 Oct 2023
2	Dr. Sneha	Urban Governance and Institutional Analysis, Navigating Challenges and Building Sustainable Cities	DAPD, IITBHU and MSAP MAHE Manipal	24 Nov 2023
3	Dr. Sneha	Transforming Urban Planning through Artificial Intelligence	BMS School of Architecture, Yelahanka, Benagaluru	20 Jan 2024
4	Dr. Vishal Chettry	Alternative Building Materials	Amity School of Architecture and Planning, Amity University Chhattisgarh, Raipur	28 Apr 2023
5	Dr. Rabi Narayan Mohanty	Indian Knowledge System	Online Training Program on NEP Orientation & Sensitization Supported by Malaviya Mission Teacher Training Program (MM-TTP) Ministry of Education, Govt. of India	25 Jan 2024
6	Dr. Rabi Narayan Mohanty	Student Diversity and Inclusive Education	Online Training Program on NEP Orientation & Sensitization Supported by Malaviya Mission Teacher Training Program (MM-TTP) Ministry of Education, Govt. of India	01 Feb 2024
7	Dr. Rabi Narayan Mohanty	Finding and Selecting the Right Journals and research ethics	COA's online training program "Application of PLS-SEM in Research" in collaboration with University Institute of Architecture, Chandigarh University, Mohali.	21 Mar 2024

Honours and awards

Sl. No.	Name of Faculty Member	Details of Award
1	Dr. Harsimran Kaur	International Travel Grant Support by SERB for the participation in "16th World Conference on Transport Research, Canada".
2	Dr. Harsimran Kaur	Shortlisted for IIA National Awards for Excellence in Architecture, 2021 under Research Papers Category, The Indian Institute of Architects (IIA)
3	Dr. Harsimran Kaur	Received mentorship certificate from IIT Bombay FOSSEE Mapathon 2023.
4	Dr. Vishal Chettry	Received mentorship certificate from IIT Bombay FOSSEE Mapathon 2023.
5	Dr. Kumar Abhishek	Invited Guest Expert on "Science Festival 2024, under the aegis of Innovation and Research Organisation (IRO), Vigyan Parisar Network, Department of Science & Technology, Govt. of India

Research and Consultancy

Sponsored research projects *(Ongoing only)*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	Applications of Sthapatya Veda and Vedic Architecture in Creating Healthy Indoor Environment – Study area Varanasi	August 2023 - March 2025	Indian Knowledge Systems Division of AICTE	10 Lakhs	Dr. Aaditya Pratap Sanyal
2	Preparation of Comprehensive action plan for the revival of Assi River (Major Project), Planning and design of Assi River front (Sub Project 3)	Ongoing	Varanasi Development Authority	1.2 Cr	Dr. Sneha (PI) for Sub project 3
3	Socioeconomic Impact Assessment of PM Awas Yojana in Varanasi District	September 2023 to February 2024	ICSSR	15	Dr. Vishal Chettry (PI) & Dr. Harsimran Kaur (Co-PI)
4	03-day national training program on "Water Urbanism for Resilient Urban Development: Case studies from Varanasi, India"	04th to 06th September 2023	NIDM New Delhi and IIT(BHU)	3.24	Dr. Vishal Chettry and Dr. Harsimran Kaur

Industrial consultancy projects *(Ongoing only)*

Sl. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
	Dr. Harsimran Kaur and All faculty members	Heritage Impact Assessment (HIA) of Kashi Station Redevelopment Project	Northern Railways, GOI	14.57 Lakhs (including GPR survey 36.99 Lakhs)
	Dr. Harsimran Kaur, Dr. Rabi Narayan Mohanty, Ar. Akhil Nawani	Heritage Impact Assessment (HIA) of Khandagiri Commercial Project, Bhubaneswar	Ashirbad construction group (Private firm)	13.03 Lakhs
7	Dr. Harsimran Kaur, Ar. Akhil Nawani	Architectural Consultancy Services for Design, Engineering, Procurement and Construction Upgradation of District Hospital and Construction of New Government Medical College on EPC Bases at five sites – Lucknow, Kanpur, Lalitpur, Kushinagar, Auraiya	PSP Project Limited	2.41 Lakhs
	Dr. Harsimran Kaur, Ar. Akhil Nawani	Preparation of Heritage Bye-laws for the Gujri Mahal, Hisar	National Monument Authority, Ministry of Culture, GoI	2.95 Lakhs
	Dr. Harsimran Kaur, Ar. Akhil Nawani	Preparation of Heritage Bye-laws for the Sanghol & Jalandhar	National Monument Authority, Ministry of Culture, GoI	5.42 Lakhs
6.	Dr. Harsimran Kaur, Dr. Vishal Chettry, Ar. Indra Kumar Singh, Ar. Akhil Nawani	Preparation of Heritage Bye-laws for the Kacheri Cemetery, Kanpur & Emperor Aurangzeb's Pavilion	National Monument Authority, Ministry of Culture, GoI	4.60 Lakhs
7.	Dr. Harsimran Kaur, Ar. Akhil Nawani	Preparation of Heritage Bye-laws for Karbala and Imambara	National Monument Authority, Ministry of Culture, GoI	4.21 Lakhs
8.	Dr. Harsimran Kaur, Dr. Vishal Chettry, Ar. Indra Kumar Singh, Ar. Akhil Nawani	Preparation of Heritage Bye-laws for Lucknow Circle – Neil's Gate and Southern Wall	National Monument Authority, Ministry of Culture, GoI	3.83 Lakh
9.	Dr. Harsimran Kaur, Ar. Akhil Nawani	Vetting of 13 Draft HBLs	National Monument Authority, Ministry of Culture, GoI	11.80 Lakhs
10.	Dr. Harsimran Kaur, Dr. Vishal Chettry, Ar. Indra Kumar Singh, Ar. Akhil Nawani	Preparation of Heritage Bye-laws for The Jhansi Circle	National Monument Authority, Ministry of Culture, GoI	6.51 Lakhs
11.	Dr. Sneha, Prof. R Kumar, Dr. Mahendra Pal	Auditing and Material testing by Third-party quality assurance for Multi-Speciality Hospital AIIMS Rishikesh	CPWD, Uttarakhand Projects	46.9 Lakhs
12.	Dr. Sneha, Prof. S Mandal, Prof. R Kumar	Vetting of structural Drawings/Designs/ Design Reports of Jageshwar Dham's Master Plan Subpart: Temple Illumination and Parking Facilities & Streetscape Development	PwD Almora, UK	50 Lakhs
13.	Dr. Sneha, Prof. R kumar	Third-party Site visit to resolve NCRs for Bhopal Metro project at various locations	Dilip Buildcon Limited, Bhopal	7 Lakhs
14.	Dr. Sneha, Prof. R Kumar	Site visit and Compliance validation of suggestions	Dilip Buildcon Limited, Bhopal	2 Lakhs
15.	Dr. Sneha, Prof. R Kumar	Site visit and Assessment of environment exposure condition of Connectivity to Krishnapatam Post, Nellore, AP	NHAI, Nellore	8 Lakhs
16	Dr. Sneha, Prof. R Kumar	Architectural and structural Design for Hotel cum convention centre, Maharajgunj UP	Anurag Architects and Associates, Varanasi	10 Lakhs
17.	Dr. Sneha, Prof. R Kumar	Architectural and Structural Vetting of Proposed Tertiary Cancer Care Centre Hospital Building, Goa	Comit Constructions Pvt. Ltd., Gurugram	4.86 Lakhs

Sl. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
18.	Dr. Sneha, Prof. R Kumar	Architectural and Structural Vetting of Proposed Buildings at IIT, Indore, MP	Structure Design Studio, Faridabad	5.93 Lakhs
19.	Dr. Sneha, Prof. R Kumar	Architectural and Structural Vetting of Proposed EWS residential units at IIT, Indore, MP	Structure Design Studio, Faridabad	1 Lakh
20.	Dr. Sneha, Prof. R Kumar	Third-Party Quality Assessment	Numerous Projects at different locations across India – Approx - 25 Projects Since 30-12-23	25 Lakhs

Research Publications

Sl. No.		No.
1.	Total Number of Papers Published in Refereed International Journals	8
2.	Total Number of Papers Presented in International Conferences	8

Refereed International Journals

1. Singh, S.D., Shree, V., and Kaur, H. (2024). Sustainable Practices in Keylong's Vernacular Architecture: A detailed study of construction and thermal efficiency in the Himalayas. Visions of Sustainability 21: 1-30.
2. Prashar, N., Lakra, H.S., Kaur, H., and Shaw R. (2023). Urban flood resilience: A comprehensive review of assessment methods, tools, and techniques to manage disaster. Progress in Disaster Science 20.
3. Prashar, N., Lakra, H.S., Kaur, H., and Shaw R. (2023). Urban Flood Resilience: Mapping knowledge, trends and Structure through bibliometric Analysis. Environment, Development and Sustainability.
4. Chettry V. (2024) Dynamics of urban growth in mid-sized cities using census data. International Journal of Human Capital in Urban Management, 9(3): 521–536.
5. Manisha, K., Singh, I. and Chettry V. (2023). Investigating and analyzing the causality amid tourism, environment, economy, energy consumption, and carbon emissions using Toda–Yamamoto approach for Himachal Pradesh, India. Environment, Development and Sustainability.
6. Sen, A S D. and Chettry V. (2023). Investigation of bioclimatic design features in vernacular architecture of Northeast India: Case studies of Assam-type houses and stilt houses (Chang Ghar) in Assam, India. Indian Journal of Traditional Knowledge, 22(03), 659–668.
7. Chettry V. (2023). A Critical Review of Urban Sprawl Studies. Journal of Geovisualization and Spatial Analysis, 7(28).
8. Mohanty, R.N. and Mohanta, A. (2023), "Assessment of stakeholders' perspectives on infill buildings in the historical settings of an eastern India state – Odisha", Journal of Cultural Heritage Management and Sustainable Development.

Proceedings of International Conferences

1. Nawani, A., Verma, R., Nawani, A., Rehal, P., Dwivedi, A. and Kaur, H. (2024) Sustainable Utopias: A Comprehensive Exploration of Eco-Village Planning for the Indian Context. INCORBE 2024, held from 6th March to 8th March 2023, Mizoram University, Mizoram.
2. Rehal, P., Chani, P.S., Atreya, S. and Kaur, H. (2024). Urban Neighbourhood Outdoor Environments and Age-friendliness: A Study of Jaipur City, India. INCORBE 2024, held from 6th March to 8th March 2023, Mizoram University, Mizoram.
3. Pawar, M., Rathee, C., and Kaur, H. (2023). District-wise rainfall trend analysis by using the non-parametric approach: A case of the State of Haryana, India. CISCE 2023, held from 11th August to 12th August 2023, MNIT, Jaipur, Rajasthan.
4. Nawani, A., Nawani, A., and Kaur, H. (2023). Effect of Safety Perception on Mode Choice on First and Last Mile Connectivity: A Study of Lucknow Metro.WCTR 2023, held from 17th July 2023 to 21 July 2023, Montreal Canada.
5. Bharti, S., Bhandari, S., Kaur, H. and S. Mahalakshmi (2023). A new paradigm in conservation and management of the historic and sacred integrity of Mahakuta Group of temples. ACLA 2023, held from 16th June 2023. China.
6. Yadav A, Chettry V., (2024) Dynamics of Land Surface Temperature in Patna Municipal Corporation based on Temporal Changes in LULC, International Conference on Climate Change, Cultural Heritage & Sustainable Habitat 2024, held from 17th to 18th February 2024, NIT Patna

7. Kumar A., Chettry V., (2024) Examining the Influence of Land Cover Change on Urban Heat Island of Varanasi Development Area Using Geoinformatics, 2nd Conference on Future Challenges in Sustainable Urban Planning & Territorial Management, held from 29th - 31st January 2024, Universidad Politécnica de Cartagena, Paseo Alfonso XIII 30202 Cartagena (Spain).

8. Jain. A, Saraswat. S, and Mohanty. R.N. (2023) Investigating the System(s) of Making in Hindu Temples of Jajpur Town, Odisha erstwhile Kalinga Region (India). AMPS Proceedings Series 35 Czech Technical University & AMPS. 28-30 June, 2023

Distinguished Visitors

Sl. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	Ar. Gita Balakrishnan, Founder ETHOS	24 March 2023	One day workshop
2	Pankaj Dhayal, Architect	18 April 2023	Guest Lecture
3	Ar Sandal Kapoor, Architect	01 September 2023	Guest Lecture
4	Ar. Shruti Hippalgaonkar, Architect	05 October 2023	Guest Lecture
5	Prof. Joy Sen, Professor IIT Kharagpur	02 November 2023	Guest Lecture
6	Prof. Suresh Chandra Jangid, Visual Artist	04-08 November 2023	Workshop
7	Prof. Jit Kumar Gupta	25-26 November 2023	External reviewer
8	Ar. C. P. Chawla	25-26 November /2023	External reviewer
9	Prof. PSN Rao, Professor SPA Delhi	29 January 2024	Expert Lecture and Interactive Session
10	Prof. P B Rana Singh, BHU	29 January 2024	Expert Lecture and Interactive Session
11.	Ar. Amarnath Sharma, Architect	01-03 March 2024	Three Day Workshop
12.	Ar. Kshitij Kacker, Architect	01-03 March 2024	Three Day Workshop
13	Ar Sakshi Goyal, Architect	01-03 March 2024	Three Day Workshop
14.	Prof. Anil Deewna, SPA New Delhi	09-10 May 2024	External reviewer
15.	Ar. Kavi Jain	09-10 May 2024	External reviewer
16.	Prof. Gavrav Raheja, HoD Architecture, IIT Roorkee	09-10 May 2024	External reviewer
17.	Ar. Manoj Jain, New Delhi	09-10 May 2024	External reviewer

7. Department of Ceramic Engineering

Complete Name of Department: Department of Ceramic Engineering

Year of Establishment: 1924

Head of the Department: Dr. Ashutosh Kumar Dubey (w.e.f. 01.09.2023)

Brief Introduction of the Department

The Department of Ceramic Engineering is celebrating its Centenary in the year of 2024 by organizing seminars, symposia, alumni meets and conferences. The founder of Banaras Hindu University, Bharat Ratna Mahamana Pandit Mandan Mohan Malviya Ji instituted courses in Glass and Ceramic Technology exactly 100 years ago with the noble objective of advancing glass and ceramic technology in India. In the year 1956, these departments amalgamated to form the Department of Silicate Technology, offering a 4-Year degree course by injecting into its curriculum balanced engineering and scientific contents. However, again the Department of Silicate Technology renamed as the Department of Ceramic Engineering under Institute of Technology, Banaras Hindu University (IT-BHU) in the year of 1968. The first-ever department was established in pre-Independent-India and Asia to develop skilled human resources for various ceramic industries in the country. Then IT-BHU transformed into Indian Institute of Technology (IIT (BHU)), Varanasi in the year 2012 and currently, the Department of Ceramic Engineering belongs to IIT (BHU), Varanasi. In the IIT system, this is the only department that is offering degree courses in Ceramic Science and Engineering. The department remarkably leads to the nation building with a vast contribution towards academic excellence, innovative research, and industrial collaborations.

Teaching Programs

1. 4 year B. Tech. Degree in Ceramic Engineering
2. 5 year Integrated Dual Degree (IDD) in Ceramic Engineering
3. 2 year M. Tech. Degree in Ceramic Engineering
4. Ph. D. in Ceramic Engineering

Major Research Areas

- Semiconductors, optoelectronic and quantum devices
- Dielectrics and insulators
- Functional materials and thin films
- Composites and high temperature materials
- Advanced solid-state materials
- Biomedical and healthcare materials
- Magnetic, plasmonics and spintronic materials
- Nanostructured materials
- Advanced glass and glass-ceramic materials

Major Infrastructure

Area of the Department (in square meters): ~5000 m^2

S. No.	Particulars	Number
1.	No. of Classrooms	2
2.	No. of Lecture Halls	2
3.	No. of Laboratory	8
4.	No. of Computers available for students in the Department	2

Students on Roll

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1.	B. Tech.	69	66	55	33	-
2.	Integrated Dual Degree (IDD)	17	16	13	14	10
3.	M. Tech.	11	11	-	-	-
4.	Ph. D (Under Institute Fellowship)	7	1	3	0	9
5.	Ph. D (Under Sponsored Category)	-	-	-	1	-

Names of students/scholars who attended conferences/ workshops/ seminars and symposia abroad or in India

S. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1.	Vivek Kumar Saroj	22031001	ICEECG 2023	19 – 21Dec, 2023 & Kolkata	STGS and RSGF
2.	Prakhar Bajpai	22032009	ICEECG 2023	19 – 21 Dec, 2023 & Kolkata	STGS

Names of students/scholars who got prizes and awards outsidethe Institute

S. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1.	Ms. Ummiya Qamar	21031501	Best Oral Presentation Award	June 2023 & Madurai Kamaraj University, Madurai	Sponsored

Names of scholars/students who won Convocation/Institute Day prizes

S. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1.	Dr. Akanksha Gupta	18031007	P.S. Narayana Gold Medal	Sponsored
2.	Mr. Brijesh Bharti	21032001	IIT (BHU) Varanasi Medal	Institute

Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
PROFESSORS			
1.	Prof. Vinay Kumar Singh (Ph.D.) 17365	1994	Metal-ceramic composites, Dental materials and Ultra high temperature ceramics
ASSOCIATE PROFESSORS			
2.	Dr. M. R. Majhi, (Ph.D.) 18295	2012	Refractory Technology, Bio glass Ceramics, Composite Materials and Waste Management
3.	Dr. P. K. Roy (Ph.D.) 19780	2009	Magnetic & Ferroelectric Materials, Nanomaterials, High- Temperature Ceramics, and Waste Management
4.	Dr. Ashutosh Kumar Dubey (Ph.D.) 50037	2012	Bioelectronics, Piezoelectric Biomaterials, Functionally Graded Materials, Nanoporous Bioceramics, Nanomaterials, Dielectric Materials, Analytical Computation
5.	Dr. Preetam Singh (Ph.D.) 50042	2010	Energy Materials, Rechargeable Battery, Fuel Cells and Renewable Energy, Solar-Thermal Energy, Thermochemical water splitting and thermoelectric
ASSISTANT PROFESSORS			
7.	Dr. Santanu Das (Ph.D.) 50055	2012	Synthesis and characterizations of various functional nanostructures, including, 2D graphene and transition metal di-chalcogenides (TMDC), CNT, ferrite-nanoparticles, quantum dots etc for applications in the field of transistors, hydrogen energy, light sensor diode, energy storage, sensors, energy generations, and other optoelectronic device applications

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
6.	Dr. Md. Imteyaz Ahmad (Ph.D.) 50043	2009	Inorganic photovoltaic materials (CIGS and Perovskite), Transparent conducting oxides, Entropy stabilized oxides, Flash assisted processing and densification
8.	Dr. Subrata Panda (Ph.D.) 50252	2018	Advanced materials processing, Glass & glass-ceramics, Advanced ceramics, and Solid-state hydrogen storage etc.
9.	Dr. Kundan Kumar (Ph.D.) 50300	2020	High-temperature ceramics, Structural ceramic materials, Materials chemistry, Nanomaterials synthesis, Processing and characterization
10.	Dr. Kaushik Sarkar (Ph.D.) 50338	2020	Biomaterials, Porous ceramics, Structural ceramics etc.
11.	Dr. Pavan Pujar (Ph.D.) 50339	2019	Low power electronic devices, solution processed electronics, advanced displays, ultrathin ferroelectrics, defects in complex electronic oxides, functional oxide ceramics, oxide semiconductors and devices, flexible electronics and unconventional ferroelectrics
SENIOR SCIENTIFIC OFFICERS			
1.	Dr. Sudama Singh (Ph.D.) 18991	1992	Pollution Control and Refractory
2.	Dr. R. K. Chaturvedi (Ph.D.) 18989	1991	Corrosion and Glass Nutrients

Technical and Non-Teaching Staff

S. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the Department
1	Shri Madan Kumar, Intermediate	Senior Technical Superintendent 13710	22.02.1985
2	Shri Pankaj Kumar Singh, Intermediate	Senior Technical Superintendent 18750	15.12.2008
3	Shri Subash Singh, Intermediate	Technical Superintendent 13723	15.10.1998
4	Shri Barun Kumar Singh Intermediate	Junior Technical Superintendent 13722	15.10.1998
5	Shri Shiv Jatan,Intermediate	Junior Technical Superintendent 14203	12.08.1991
6	Shri Gopal Yadav, Intermediate	Junior Technical Superintendent 16213	20.04.1995
7	Shri Raj Kumar Mishra, Intermediate	Senior Technician,18656	05.08.2008
8	Shri Ashish Tripathi,Graduation	Senior Technician,19607	21.07.2012
9	Shri Vinod Kumar,High School	Junior Technical Superintendent 13707	16.05.1997
10	Shri Anil Kumar, Post-graduation	Junior Technician, 50355	14.11.2023
11	Shri Rajeev Ranjan, Graduation	Superintendent,50163	24.11.2023
12	Shri Shailendra Kumar, Post-graduation	Senior Assistant, 50093	08.05.2017
13	Shri Zishan Ahmed,Graduation	Senior Assistant, 50104	18.05.2023

Short-term courses/ workshops/ seminars/ symposia/ conferences organised by faculty members

S. No.	Coordinator	Title	Period
1.	Dr. Santanu Das	Three Day international workshop/ summer school & Course preparation on “Solar Water splitting and artificial Photosynthesis”	05-07 June 2023, Madurai Kamaraj University

Short-term courses/ workshops/ seminars/ symposia/ conferences/ training program

S. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conference			
1	Dr. Ashutosh Kumar Dubey	Ceramics for Frontier Sectors: Emerging Advances and Prospects (CerAP2024)	Mar 11-12, 2024 and IIT Roorkee
2	Dr. Ashutosh Kumar Dubey	International Conference on Translational Materials for Sustainable Technology (TransMat-2k24)	Feb 01-04, 2024 and IIT (BHU) Varanasi
3	Dr. Ashutosh Kumar Dubey	Workshop on Advancement in Tissue fabrication Technology	Dec 18-19, 2023 and IIT (BHU) Varanasi
4	Dr. Ashutosh Kumar Dubey	International Conference on Biomaterials and Healthcare Technologies (BioTEx-2023)	Nov 29 - Dec 1, 2023 and IIT Delhi
5	Dr. Ashutosh Kumar Dubey	International Conference on Advanced Materials for Better Tomorrow-II (ABMT-2023)	Oct. 10-13, 2023 and Institute of Science, BHU, Varanasi
6	Dr. Ashutosh Kumar Dubey	Translational Research Discussion Forum: Meet 12	April 16, 2023 (online)
7	Dr. Preetam Singh	India Asia Ceramics Expo & Conference (Indian Ceramics Asia-2024)	6-8th March 2024, Helipad Exhibition Center, Ahmadabad, Gujarat
8	Dr. Preetam Singh	Fifteenth National Conference on Solid State Ionics (NCSSI-15)	December 02-04, 2023, Department of Physics, Banaras University Varanasi
9	Dr. Preetam Singh	"Waste-To-Energy 2023" conference	19-20th October 2023, NDMC Convention Centre, New Delhi
10	Dr. Santanu Das	International Conference on Functional Materials	IIT Kharagpur, 9-11 January 2024
11	Dr. Santanu Das	IIChE-CHEMCON 2023	December 27- 30, 2023, Heritage Institute of Technology, Kolkata
12	Dr. Santanu Das	International Conference on Exploring the Emerging World of Ceramics and Glass (ICEECG)	Dec 19-21, 2023 and CGCRI, Indian Ceramic society, Kolkata
13	Dr. Santanu Das	34th Annual General Meeting of Materials Research Society of India 5th Indian Materials Conclave	Dec 12-15, 2023, and IIT(BHU), Varanasi
14	Dr. Santanu Das	Solar Water splitting and artificial Photosynthesis (SWAP) 2023	05 - 07 June, 2023 and Madurai Kamaraj University, Madurai
15	Dr. Subrata Panda	10th International Hydrogen & Fuel Cell Conference (IHFC 2023)	Dec 3-5, 2023 and Ramada Plaza, Varanasi

Special lectures delivered by faculty members in other institutions

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1.	Dr. Ashutosh Kumar Dubey	Synergistic influence of electrostatic and dynamic electrical stimulation towards improving osteogenic and antibacterial response	IIT Roorkee	March 11-12, 2024
2.	Dr. Ashutosh Kumar Dubey	Piezoelectrically Induced Neural, Osteogenic and Antibacterial Response	IIT Delhi	Nov 29 – Dec 1, 2023
3.	Dr. Ashutosh Kumar Dubey	Spark Plasma Sintering: An Innovative Technique to Develop Novel Orthopedic Biomaterials	M. S. Ramaiah University of Applied Sciences, Peenya, Bengaluru	April 30, 2023
4.	Dr. Ashutosh Kumar Dubey	Piezo-biomaterials as new generation materials for orthopedic applications	Translational Research Discussion Forum: Meet 12	April 16, 2023
5.	Dr. Ashutosh Kumar Dubey	Combined effect of electrostatic and dynamic electrical stimulation towards cellular and antibacterial response on electroactive substrates	Institute of Science, BHU, Varanasi	October 10-13, 2023
6.	Dr. Santanu Das	Atomic-scale hybrid nanostructures: A new archetypes of electronics and energy devices	Shiv Nadar University, Delhi NCR, India	March 21, 2024
7.	Dr. Santanu Das	Two-dimensional functional nanostructures for electronics and energy applications: New archetypes of nano-scale engineering	Materials Research Center, IIT Kharagpur,	10 Jan, 2024

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
8.	Dr. Santanu Das	Emerging 2D nanostructures and nano-eterostructures for electronic, optoelectronic and energy applications	Department of Chemical Engineering, Heritage Institute of Technology	Dec 27, 2023
9.	Dr. Santanu Das	Functional Nano-hybrids for Electronic and Energy Devices	CGCRI, Kolkata	Dec 20, 2023
10.	Dr. Santanu Das	Large-area Seamless 2D van der Waals superlattice-based Multi- junction Devices for Electronic and Optoelectronic Sensor	MRSI, IIT(BHU)	Dec 12-15, 2023
11.	Dr. Santanu Das	Atomic-scale nano-archetypes: A new paradigm of water electrolysis and quantum devices	Madurai Kamaraj University, Madurai	07th June, 2023
12.	Dr. Subrata Panda	Solid State Hydrogen Storage Materials: Effects of Noble Metal Additives	IHFC 2023, Varanasi	Dec 3-5, 2023

Honours and awards

S. No.	Name of Faculty Member	Details of Award
1.	Dr. Ashutosh Kumar Dubey	Bridge Fellowship – 2024
2.	Dr. Ashutosh Kumar Dubey	Secretary of Bioceramic Division of American Ceramic Society

Fellowships of academic and professional societies

S. No.	Name of Faculty Member	Details of Fellowship
1.	Dr. Santanu Das	Life Member, The Indian Science Congress Association, Kolkata, India
2.	Dr. Santanu Das	Life Member, Indian Institute of Chemical Engineers, Kolkata, India
3.	Dr. Kaushik Sarkar	Life Member, Indian Ceramic Society, Kolkata, India

Editorial boards of journals

S. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1.	Dr. Ashutosh Kumar Dubey	Associate Editor	International Journal of Applied Ceramic Technology

Patents filed

S. No.	Name of Faculty Member	Title of Patent
1.	Dr. Preetam Singh	High-Performance Aqueous Asymmetric Supercapacitor Device Using ABO2-type Pseudocapacitor Electrodes
2.	Dr. Santanu Das	A Method Of Synthesizing 2D In-Situ Functionalized SO3H/SO3-MoS2 Nanosheets for Photocatalytic Dye Degradation

Research and Consultancy

Sponsored research projects *(Ongoing only)*

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1.	Development of nano bonded magnesium borate refractory castable application for petrochemical industry	2023-2026	SERB	~ 44.3	Dr. Manas Ranjan Majhi
2.	Cell laden 3-D bioprinted 2- dimensional (2-D) hydroxyapatite nanocrystals/alginate/collagen piezo-biocomposite scaffold for bone tissue engineering application	2023-2026	SERB	~ 36.5	Dr. Ashutosh Kumar Dubey
3.	Biodegradable Mg doped Ca silicate-based bioelectrets for bone tissue engineering applications	2023-2026	CST, Govt. of UP	~ 14.6	Dr. Ashutosh Kumar Dubey
4.	Animal studies to establish the efficacy of surface polarized sodium potassium niobates for orthopedic implant applications	2022-2025	CST, Govt. of UP	~ 10.9	Dr. Ashutosh Kumar Dubey
5.	Wafer-scale integration and interfacial engineering of 2D van der Walls superlattice for next-generation nano-scale devices	2023-2026	SERB	~ 40.0	Dr. Santanu Das

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
6.	Demonstration and Reproduction with Scientific Validation of some Ceramic Materials Knowledge System of Ancient-India	2022-2024	IKS, AICTE	~ 14.0	Dr. Santanu Das
7.	Development of mesoporous hybrid carbonaceous support catalysts for high- performance electrocatalytic electrodes for PEM electrolyzers	2024-2027	DRDO	~ 46.0	Dr. Santanu Das
8.	Pressure Assisted Flash Joining of Ceramic Materials	2022-2025	SERB	~ 46.0	Dr. M. Imteyaz Ahmad
9.	Solution spray processed SnO2-based electron transport layer (ETL) for perovskite solar cells	2022-2024	CSIR	~ 16.0	Dr. M. Imteyaz Ahmad
10.	Development of Aluminosilicate based Glass-ceramics for Radome Applications	2024-2027	DRDO	~ 77.5	Dr. Subrata Panda
11.	Development of Zirconia-based Dental Ceramic Implant with Minimum Fibrosis	2024-2026	DBT	~ 23.1	Dr. Kundan Kumar
12.	To establish the synthesis route for the development of high purity α-Si_3N_4 powder	2024-2027	DRDO	~ 105.0	Dr. Kundan Kumar

Industrial consultancy projects *(Ongoing only)*

S. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
1.	Dr. M. Imteyaz Ahmad	Developing perovskite solar cells on flexible and opaque substrates	Ms. Dhruv Energy Pvt. Ltd.	18.00

Research Publications

S. No.		No.
1.	Total Number of Papers Published in Refereed International Journals	64
2.	Total Number of Papers Presented in National Conferences	7
3.	Total Number of Papers Presented in International Conferences	6

Refereed International Journals

1. Singh P. and Dubey A.K. (2024) Electret-induced antibacterial response of Mg1-xCaxSi1-xZrxO3 (x = 0–0.4) bioceramics. Journal of the American Ceramic Society. 107: 4263–4281.
2. Rani S., Bandyopadhyay-Ghosh S., Ghosh S.B., Singh P., Dubey A.K. and Liu G. (2024) Thermally exfoliated graphene oxide doped microporous bio-nanocomposite hydrogel: A promising substrate for biomedical application. Journal of Reinforced Plastics and Composites. 07316844241228614.
3. Kesarwani U., Basu B. and Dubey A.K. (2024) 1- and 2- dimensional (1 D/2 D) hydroxyapatite nanocrystals: A deep insight into synthesis strategies and multidimensional applications. Applied Materials Today. 36: 102062.
4. Khare D., Nakayama K., Shiina N., Kakimoto K. and Dubey A.K. (2024) Piezoelectrically induced augmented functionality of primary cultured hippocampal neurons on electrospun PVDF-(Na, K) NbO3 composite fibers. Next Materials. 2: 100070.
5. Yadav A.K., Tripathi H., Rajput S., Singh P., Dubey A.K., Kumar K., Chawla R. and Rath C. (2024) Drug kinetics and antimicrobial properties of quaternary bioactive glasses 81S(81SiO2-(16-x)CaO-2P2O5-1Na2O-xMgO); an in-vitro study. Biomaterials Advances. 157: 213729.
6. Vyas A., Mondal S., Kumawat V.S., Ghosh S.B., Mishra D., Sen J., Khare D., Dubey A.K., Nandi S.K. and Bandyopadhyay-Ghosh S. (2024) Biomineralized fluorocanasite-reinforced biocomposite scaffolds demonstrate expedited osteointegration of critical-sized bone defects. Journal of Biomedical Materials Research Part B: Applied Biomaterials. 112(1): e35352.
7. Singh S.K., Mahapatra D., Singh P., Dubey A.K., Pyare R. and Roy P. K. (2024) Influence of bioactive glass addition on the machinability, mechanical and biological response of Mg-PSZ-based biocomposites. Ceramics International. 50(11): 18238-18257.
8. Singh S.K., Kumar J., Singh P., Rajput S.K., Dubey A. K., Pyare R. and Roy P. K. (2024) Impact of 13-93 bio-glass inclusion on the machinability, in-vitro degradation, and biological behavior of Y-TZP-based bioceramic composite. Ceramics International. 50(1): 1087-1106.

9. Sarkar T., Naskar M.K., Roy P.K. and Chakraborty S. (2024) Preparation of high-strength waste-derived eco-friendly ceramic foam as face brick and its estimation of building energy consumption for thermal insulation. Journal of Building Engineering. 88: 109043.
10. Verma P., Suthar M., Singh P. and Roy P.K. (2024) Synthesis and characterization of (1- x)Bi0.9Sm0.1FeO3-(x) BaZr0.15Ti0.85O3 based solid solution: Temperature-dependent dielectric and impedance properties. Inorganic Chemistry Communications. 160: 111882.
11. Suthar M. and Roy P.K. (2024) Mixed Ba-hexaferrite: An experimental investigation of thermal, structural, morphological, and magnetic properties of hexa-phasic magnetocomposite and its constituting phases. Materials Chemistry and Physics. 316: 129140.
12. Kumar M., Majhi M.R. aand Chaturvedi R.K. (2024) Wear and friction behaviour of Cu-Gr-B4C composites and correlating to the topographical characteristics. Surface Topography: Metrology and Properties. 12: 015012.
13. Gautam A., Das S. and Ahmad M.I. (2024) Band gap engineering through calcium addition in (Mg, Co,Ni, Cu, Zn)O high entropy oxide for efficient photocatalysis. Surfaces and Interfaces. 46: 104054.
14. Pradeepkumar M.S., Kumar A., Das S., Basu J. and Ahmad M.I. (2024) Wurtzite nanoparticle ink spray processing for chalcopyrite CuIn(S,Se)2 photovoltaic absorber layer. Materials Science in Semiconductor Processing. 169: 107940.
15. Wang Y., Ou R., Yang J., Xin Y., Singh P., Wu F., Yumin Qian Y. and Gao H. (2024) The safety aspect of sodium-ion batteries for practical applications. Journal of Energy Chemistry. 95: 407-427.
16. Soni V., Jaiswal S., Singh P. and Gupta A. (2024) Aluminum-Doped Lithium-Vacant Layered Li1–xCr1-xAlxO2: A Potentially Active Electrocatalyst for the Oxygen Evolution Reaction. ACS Applied Energy Materials. 7(8): 3175–3186.
17. Kushwaha V., Mandal K.D., Gupta A. and Singh P. (2024) Ni0.5Co0.5S nano-chains: a high-performing intercalating pseudocapacitive electrode in asymmetric supercapacitor (ASC) mode for the development of large-scale energy storage devices. Dalton Transaction RSC. 53: 5435-5452.
18. Singh A., Goswami P., Koch B., Singh P. and Pyare R. (2024) Study of Human Osteosarcoma Cell Line Growth, Hemocompatibility, In-vitro Analysis and Physical Properties of V2O5 Substituted Borosilicate Glass. Silicon. 16: 2577-2591.
19. Roy S., Qamar U., Devi A.A.S. and Das S. (2024) Recent progresses on Janus electrocatalysts for water electrolysis: a critical review. Applied Physics Letters Energy. 2(1): 011504.
20. Qamar U., Roy, S., Kumar S., Mukherjee B., Devi A.A.S., Goswami, A., Maiti P. and Das S. (2024) Plasmonic Au3Cu ordered nanocrystals induced phase transformation in 2D-MoS2 for efficient hydrogen evolution. Advanced Functional Materials. 2311943.
21. Qamar U., Hazra S., Kant C., Ghosh U. U., Pal B.N. and Das S. (2024) Two- dimensional silver nanonetwork on Ag4Ti5O12 film as highly efficient SERS substrate. Microchemical Journal. 196: 109686.
22. Lu C., Panda S., Zhu W., Ma Y. and Zou J. (2024) Enhanced hydrogen sorption properties of uniformly dispersed Pd-decorated three-dimensional (3D) Mg@Pd architecture. International Journal of Hydrogen Energy. 50: 979-989.
23. Gangopadhyay B., Roy A., Paul D., Panda S., Das B., Karmakar S., Dutta K., Chattopadhyay S. and Chattopadhyay D. (2024) 3-Polythiophene Acetic Acid Nanosphere Anchored Few-Layer Graphene Nanocomposites for Label-Free Electrochemical Immunosensing of Liver Cancer Biomarker. ACS Applied Bio Materials. 7(1): 485-97.
24. Bukke R.N., Shukla A., Anil C.A. and Pujar P. (2024) Advancements in Metal Oxide Thin Film Quality in Solution-Processed High-κ Dielectrics for High-Performance Transistors. ACS Applied Electronic Materials.
25. Naqi M., Kim. T., Cho Y., Pujar P., Park J. and Kim S. (2024) Large scale integrated IGZO crossbar memristor array based artificial neural architecture for scalable in-memory computing. Materials Today Nano. 25: 100441.
26. Jyoti, Tiwari M., Singh A. and Singh V.K. (2023) Effect of SiC on ablation mechanism and morphological evolution of in situ synthesized ZrB2–SiC composites. Materials Chemistry and Physics. 297: 127439.
27. Singh R., Singh A.K., Chaurashiya P., Rai A. and Singh V.K. (2023) Investigation of Mechanical and Tribological Properties of Al–7 Wt.% Si alloy Metal Matrix Composites Reinforced with SiC. Silicon. 15(10): 4365-74.
28. Singh A., Singh V.K., Chaturvedi R.K., Jyoti and Debnath N.K. (2023) Fabrication, Microstructural, and Mechanical Behavior of SiC Composite with Insitu Formation of BN and Si3N4. Silicon. 15(12): 5271-81
29. Pandey V., Yadav M.K., Panda S.K. and Singh V.K. (2023) An economic and sustainable approach to transform aluminosilicate-rich solid waste to functionally graded composite foam for high-temperature applications. Chemosphere. 338: 39588.

30. Pandey V., Yadav M.K., Gupta A., Mohanta K., Panda S.K. and Singh V.K. (2023) Synthesis, morphological and thermomechanical characterization of light weight silica foam via reaction generated thermo-foaming process. Journal of the European Ceramic Society. 42(14): 6671-83.

31. Pandey V., Panda S.K. and Singh V.K. (2023) Alumina dissolution process to fabricate bimodal pore architecture alumina with superior green and sintered properties. Journal of the American Ceramic Society. 106(11): 6425-40.

32. Jyoti, Tiwari M., Singh A., Kumar H. and Singh V.K. (2023) Effect of Different Carbon and Silicon Source for the Preparation of ZrB2-SiC Composite Powder: A Comparative Study. Silicon. 15(16): 6833-41.

33. Jyoti, Tiwari M., Singh A. and Singh V.K. (2023) The microstructural and mechanical behavior of in-situ synthesized ZrB2–ZrC and ZrB2–SiC–ZrC composites: A comparative study. Vacuum. 214: 112199.

34. Singh P. and Dubey A.K. (2023) Accelerated Osteogenic Response of Electrodynamically Stimulated Mg 1– x Ca x Si 1– x Zr x O 3 (x = 0–0.4) Bioelectrets. ACS Biomaterial Science and Engineering. 9(11): 6293-6308.

35. Das K.K., Basu B., Maiti P. and Dubey A.K. (2023) Piezoelectric nanogenerators for self-powered wearable and implantable bioelectronic devices. Acta Biomaterialia. 171: 85-113.

36. Yadav A.K., Tripathi H., Bastia A., Singh P., Dubey A.K., Anuraag N.S., Prasad N.K. and Rath C. (2023) Synergistic effect of CoFe2O4–85S nano bio-glass composites for hyperthermia and controlled drug delivery. Materialia. 32: 101884.

37. Gupta A. and Roy P.K. (2023) Effect of Zn^{2+} ion substitution in Al3+ substituted rare-earth free Sr-hexaferrite for different permanent magnet applications. Inorganic Chemistry Communications. 155: 111114.

38. Hossain S.K.S., Shekhawat D. and Roy P. K. (2023) Synthesis and characterization of LTC x(Ni0.90Mg0.10)Fe2O4-(1-x)(Ba0.88Sr0.10Ca0.02)(Ti0.95Zr0.05)O3 ceramic composites for antenna application. Transactions on Electrical and Electronic Materials. 24: 528–537.

39. Shekhawat D. and Roy P.K. (2023) Investigate the effect of synthesis method on the magnetic dynamic properties of SrAl4Fe8O19 hexaferrite. Materials Science & Engineering B. 293: 116461.

40. Gorai D.K., Kuila S.K., Oraon A., Kumar A., Suthar M., Mitra R., Biswas K., Roy P.K., Ahmad M.I. and Kundu T.K. (2023) A facile and green synthesis of Mn and P functionalized graphitic carbon nitride nanosheets for spintronics devices and enhanced photocatalytic performances under visible-light. Journal of Colloid and Interface Science. 644: 397–414.

41. Suthar M. and Roy P.K. (2023) Evaluation of magnetic & humidity-dielectric response of tungsten substituted Y-type barium hexaferrite (Ba2Co2WxFe12-xO22, $0.0 \leq x \leq 2.0$) synthesized by solid-state reaction route. Inorganic Chemistry Communications. 150: 110554.

42. Pal N., Chakraborty R., Sharma A., Pandey U., Acharya V., Prajapati K., Gupta A., Suman S., Swaminathan P., Singh A.K., Roy P.K. and Pal B.N. (2023) Solution-Processed Li-Al2O3/LiNbO3/Li-Al2O3 Stacked Gate Dielectric for a Non-volatile Ferroelectric Thin Film Transistor. Journal of Alloys and Compounds. 960: 170691.

43. Suthar M., De .K., Indra A., Sinha I. and Roy P.K. (2023) Synthesis and characterization of titanium substituted nanocrystalline Co2-Y hexaferrite: magnetically retrievable photocatalyst for treatment of methyl orange contaminated wastewater. Environmental Science and Pollution Research. 30: 44457–44479.

44. Chakraborty R., Pal N., Pandey U., Pramanik S., Paliwal S., Suman S., Gupta A., Singh A.K., Swaminathan P., Roy P.K. and Pal B.N. (2023) Fabrication of non-volatile memory transistor by charge compensation of interfacial ionic polarization of a ferroelectric gate dielectric. Applied Materials Today. 33: 101862.

45. Acharya V., Pal N., Sharma A., Pandey U., Suthar M., Roy P.K., Biring S. and Pal B.N. (2023) Solution processed low operating voltage SnO2 thin film transistor by using Li2SnO3/TiO2 stacked gate dielectric. Materials Science & Engineering B. 289: 116270.

46. Gupta A., Kar M. and Roy P.K. (2023) Fabrication and elucidation of electromagnetic characteristics in Cr-Zn co-substituted strontium hexaferrite for high-frequency device applications. Journal of Materials Science: Materials in Electronics. 34(18):1429.

47. Singh V., Pandey V., Singh V.K. and Majhi M.R. (2023) Synthesis and characterization of single-phase magnesium borate nanorod via solution reaction cum sintering process. Ceramics International. 49: 27086-27093.

48. Singh A.K., Paandey N., Singh N. and Majhi M.R. (2023) Fabrication and characterization of ZrO2 reinforced Fe-20 Cr alloy composite. Physics Scripta. 98: 045910.

49. Singh N., Kumar M. and Singh P. (2023) Evolution of Relaxor-Type High-k Dielectric in Bulk Pristine Cu2+ and Li+ Co-Substituted Wurtzite ZnO. ChemistrySelect. 8(40): e202204955.

50. Singh A.N., Yadav A.K., Gupta A., Rath C. and Singh P. (2023) Fabrication and electrochemical performance of pseudocapacitive ABO2-type AgFeO2@C||K0.4MnO2. xH2O battery-type supercapacitive asymmetric cell for large-scale energy storage applications. Journal of Energy Storage. 74: 109276.

51. Kushwaha V., Mondal R., Mandal K.D., Gupta A. and Singh P. (2023) H2S Mediated One-Pot Synthesis of Single Phase Hexagonal CoS Nano-Spheres: A Pseudocapacitive Electrode for Hybrid Supercapacitors, ChemsitrySelect. 8(34): e202301349.

52. Singh N., Kumar K. and Singh P. (2023) Synthesis of single phase Ti4+ substituted Trirutile CoNb2O6 Ceramic: evolution of Relaxor type ferroelectricity and high k dielectricity. Journal of Electroceramics. 51: 133-145.

53. Jaiswal S., Mondal R., Kushwaha V., Gupta A. and Singh P. (2023) Tuning of Redox Energy of Transition-Metal Ions through the Utilization of Interlayer Potentials in Layered Perovskites: Development of a Titanium-Based Superior HER Catalyst in an Acidic Medium, ACS Applied Energy Materials. 6: 7323–7334.

54. Wasnik K., Gupta P.S., Mukherjee S., Oviya A., Prakash R., Pareek D., Patra S., Maity S., Rai V., Singh M., Singh G., Yadav D., Das S., Maiti P. and Paik P. (2023) Poly(N-acryloylglycine-acrylamide) hydrogel mimics the cellular microenvironment and promotes neurite growth with protection from oxidative stress, ACS Applied Bio Materials. 6(12): 5644–5661.

55. Shivaji K., Sridharan K., Kirubakaran D.D., Velusamy J., Emadian S.S., Krishnamurthy S., Devadoss A., Nagarajan S., Das S. and Pitchaimuthu S. (2023) Biofunctionalized CdS Quantum Dots: A Case Study on Nanomaterial Toxicity in the Photocatalytic Wastewater Treatment Process. ACS Omega 8(22): 19413–19424.

56. Rana, J.S., Das S. and Jit S. (2023) High Responsive Al/PTB7/Si/Al Vertical Structure Based White Light Photodetector using FTM Method. IEEE Photonics Technology Letters. 35(14): 765 – 768.

57. Tiwari S., Dubey D.K., Prakash O., Das S. and Maiti P. (2023) Effect of functionalization on electrospun PVDF nanohybrid for piezoelectric energy harvesting applications. Energy. 275: 127492.

58. Mahapatra D., Panda S., Singh S.K., Singh P., Kumar A. and Majhi M.R. (2023) Optical, Mechanical, and Physicochemical Properties of Na_2O-P_2O_5-SiO_2 Based Tint Glass for Building Construction Applications. Silicon. 15: 6851–6865.

59. Khan D., Zou J., Muhammad S., Khan N.A., Saud S. and Panda S. (2023) The adaptable effect of Ru on hydrogen sorption characteristics of the MgH_2 system. Materials Chemistry and Physics. 301: 127583.

60. Gangopadhyay B., Mallik A., Ali M.S., Halder A., Layek R., Karmakar D., Karmakar S., Dutta K., Das T.D., Panda S. and Kumbhakar P. (2023) Thermal Effects on Electrochemical Performance of Copper Oxide Nanoparticles Decorated Amine-Functionalized Graphene Oxide for Ultrahigh Energy Density Supercapacitor with Real-Life Application. Journal of Physical Chemistry C. 127(45): 21940-21953.

61. Mallik A., Ali M.S., Karmkar S., Dutta K., Gangopadhyay B., Ali M.S., Das T.D., Panda S., Bhattacharya S., Chamuah A. and Chakraborty A. (2023) Single step synthesis of amine functionalized graphene oxide/Cu-Ni bimetallic nanocomposite and tuning its electrical properties. Materials Science and Engineering: B. 296: 116627.

62. Ali M.S., Layek R., Ali M.S., Tudu S., Dutta K., Gangopadhyay B., Karmakar D., Mallik A., Panda S., Maiti A. and Ghoshal D. (2023) Ultrahigh energy density solid state supercapacitor based on metal halide perovskite nanocrystal electrodes: Real-life applications. Journal of Energy Storage. 65: 107215.

63. Jeong U., Rho H.Y., Cho H., Naqi M., Oh J.O., Cho Y., Pujar P. and Kim S. (2023) Ferroelectric La-doped HfO_2 deposited via chemical solution on silicon for tellurium field-effect phototransistors. Journal of Alloys and Compounds. 968:172082.

64. Moon C., Pujar P., Gandla S., So B., Lee S., Kim D., Kwon K.W. and Kim S. (2023) Anticounterfeiting tags based on randomly oriented MoSx clusters enabled by capillary and Marangoni flow. Communications Materials. 4(1): 98.

Key Instruments

Photograph of XRD (Miniflex 600, Rigaku)

Photograph of FTIR (Alpha II, Bruker)

8. Department of Chemical Engineering and Technology

Complete Name of Department: Department of Chemical Engineering & Technology

Year of Establishment: 1921

Head of the Department: Prof. Monoj Kumar Mondal w.e.f. 01.01.2023

Brief Introduction of the Department:

Department of Chemical Engineering and Technology (ChE) at IIT (BHU) Varanasi with a long-standing reputation for excellence, began its journey in 1921 as the Department of Industrial Chemistry. We offer an exceptional educational experience, cutting-edge research opportunities, diverse degree options, and a strong alumni network. We have evolved into the Department of Chemical Engineering and Technology, constantly updating our programs to deliver education in the latest areas of chemical engineering.

At ChE@IIT (BHU) Varanasi, we are committed in providing the highest quality education and fostering an environment that stimulates the growth of our students. We strive for excellence in chemical engineering education, research, and socioeconomic impact. With dedicated faculty members and an ambitious student body, we are proud of the contributions our graduates make both within India and on the international stage, excelling in academia and industry.

Our department is equipped with world-class experimental research facilities, supported by the esteemed ParamShivay Supercomputer, which ranks among the best in the country. This advanced infrastructure enables our students and faculty to pursue impactful research, attracting extramural funding, forging industry collaborations, and achieving high-impact publications and patents.

To strengthen our expertise in emerging areas, we have expanded our faculty while maintaining our core strengths in fluid mechanics, reaction engineering, process design and intensification, thermodynamics, and molecular simulations. Additionally, we actively foster entrepreneurial activities among our students, resulting in numerous successful ventures supported by the department.

As a member of ChE@IIT (BHU) Varanasi, one will have the opportunity to shape the future of chemical engineering education and research. In all of our programmes, B.Tech., M.Tech., or Ph.D., we offer a wide range of courses. Our department encompasses state-of-the-art research facilities, a well-equipped workshop, smart classrooms, an auditorium, and a library, making it one of the largest in the country. Moreover, as a DST-FIST Sponsored Department, we have established strong ties with industrial organizations, engaging in consultancy projects and industry-funded research. A vibrant and thriving ChE@ IIT (BHU) Varanasi community is synonymous to IIT (BHU) Varanasi.

Major areas of Research

Currently major areas of research in the department are Advanced Energy Solutions, Bioscience & Technology, Catalysis and Reaction Engineering, Pollution Control Technology, Nanoscience & Technology, Renewable Energy, Soft and Active Matters, and theory and Computation. The department has identified five major thrust areas for future research as Advanced Materials, Catalysis and Reactor Engineering, Energy, Environmental Sustainability, Multiscale Transport processes with emphasis on developing affordable solutions for the problems in the country such as drinking water, energy (harvesting, production and storage) and healthcare.

Area of the Department (in square meters): 4002 sq m.

Infrastructure

Sl. No.	Particulars	Number
1	No. of Classrooms	07
2	No. of Lecture Halls	03
3	No. of Laboratory	29
4	No. of Computers available for students in the Department	44

Unique Achievement / Preposition of the Department:

i. Development of proton exchange membrane (PEM) based electrolyzer stack for production of ultra-pure Hydrogen and also a device for on-site production of ultra-pure Hydrogen.

ii. World ranking of top 2% scientists from India in the field of Chemical Engineering as per the latest data and statistics released by Elsevier and Stanford University USA, 2022

Academic Programmes offered

New Courses Introduced

Sl. No.	Course Code	Course name	Course credit
1.	CHE-531	Fundamentals of Microfluidics	9
2.	CHE-532	Molecular Simulations	9
3.	CHE-533	Multiphase Flows	9

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1.	B. Tech.	172	172	172	172	Nil
2.	M. Tech.	48	48	Nil	Nil	Nil
3.	Ph.D. (Under Institute Fellowship)	08	03	03	01	10
4.	Ph.D. (Under Project Fellowship)	Nil	Nil	02	Nil	Nil

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Yogesh Kumar Vishwakarma	18041501	4th International Sustainability Conference on Health Safety, Fire and Environmental Advances	30.10.2023 to 31.10.2023	UGC
2	Ashish Gautam	19041007	CHEM-TECHNOVA 2023	26.05.2023 to 27.05.2023 HBTU Kanpur	Self-Financed
3	Ashish Gautam	19041007	TISD-2023	27.10.2023 to 29.10.2023 MNNIT Allahabad	Self-Financed
4	Ashish Gautam	19041007	ICPHD 2023	03.11.2023 to 05.11.2023 IIT Guwahati	IIT (BHU)
5	Brijesh Kumar Yadav	19041010	CHEMCON 2023	27.12.2023 to 30.12.2023 HIT Kolkata	IIT (BHU)
6	Brijesh Kumar Yadav	19041010	CHEMFERENCE 2023	30.09.2023 to 02.10.2023 BITS Pilani, Goa Campus	IIT (BHU)
7	Devendra Kumar Gond	19041011	CHEMCON 2023	27.12.2023 to 30.12.2023 HIT Kolkata	IIT (BHU)
8	Devendra Kumar Gond	19041011	CHEMFERENCE 2023	30.09.2023 to 02.10.2023 BITS Pilani, Goa Campus	IIT (BHU)
9	Aditya Kumar	21041001	IIChe-CHEMCON 2023	27.12023 to 30.12.2023 Kolkata	IIT (BHU)
10	Vandna	21041010	CHEMCON 2023	27.12.2023 to 30.12.2023 HIT Kolkata	IIT (BHU)
11	Vandna	21041010	CHEM-TECHNOVA 2024	21.03.2024 to 23.03.2024 HBTU, Kanpur	N/A
12	Vandna	21041010	Workshop: Training Programme on Water Urbanism for Resilient Development: Case Studies from Varanasi	04.09.2023 to 06.09.2033 IIT (BHU)	N/A

Names of students/scholars who got prizes and awards outsidethe Institute

Sl. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Yogesh Kumar Vishwakarma	18041501	Best oral award	30.10.2023 to 31.10.2023	UPES Dehradun
2	Ashish Gautam	19041007	Best presentation award	27.10.2023 to 29.10.2023 MNNIT Allahabad	MNNIT Allahabad
3	Devendra Kumar Gond	19041011	Best paper Award	27.12.2023 to 30.12.2023 HIT, Kolkata	Dr. Avijit Ghosh

Names of scholars/students who won Convocation/Institute Day prizes

Sl. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1	Mr. Shivam Kumar	22042051	I.I.T.(B.H.U.) Varanasi Medal for standing First in M.Tech	IIT(BHU)
2	Mr. Aryan Jamwal	19045025	I.I.T.(B.H.U.) Varanasi Medal for standing First in B.Tech.	IIT(BHU)
3	Mr. Aryan Jamwal	19045025	R.B.G. Modi Medal for standing First in B.Tech.	IIT(BHU)
4	Mr. Aryan Jamwal	19045025	Manishi Sharma Memorial Gold Medal for securing First position in B.Tech.	IIT(BHU)
5	Mr. Aryan Jamwal	19045025	Mrs. Gargi Devi Trivedi Memorial Gold Medal for securing highest marks in B.Tech.	IIT(BHU)
6	Mr. Aryan Jamwal	19045025	Prof. Y.D. Upadhya Memorial Gold Medal for securing highest CPI in B.Tech.	IIT(BHU)
7	Mr. Aryan Jamwal	19045025	Shri Ram Kumar Gupta Gold Medal for standing First in B.Tech.	IIT(BHU)
8	Mr. Aryan Jamwal	19045025	Dr. R.J. Rathi Financial Award Rs. 1000/= cash for standing First in B.Tech.	IIT(BHU)
9	Mr. Aryan Jamwal	19045025	Manishi Sharma Memorial Cash Prize Rs. 2000/= for securing First position in B.Tech.	IIT(BHU)
10	Ms. Bhimavarapu Rajasree Reddy	19045039	Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students in B.Tech.	IIT(BHU)

Names of Students/Scholars who went for foreign Internship

Sl. No.	Name of Student	Roll No.	Name of the Organization	Place of Internship	Country	Duration
1.	Mr. Ayush Jha	20045027	TU Darmstadt	Darmstadt	Germany	90 days

Faculty & their Activity

Faculty and their areas of specialisation

Sl. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
PROFESSORS			
1	Dr. Pradeep Kumar Mishra Ph.D. 13747	20.11.1995	Bioenergy, Wastewater Treatment, Biopolymer
2	Dr. Pradeep Ahuja Ph.D. 13748	05.06.1996	Modelling and Simulation, Thermodynamics and Kinetics, and Numerical Methods
3	Prof Vijay Laxmi Yadav Ph.D. 13745	05.06.2002	Mass Transfer, Separation processes, Polymer composites
4	Prof. Monoj Kumar Mondal Ph.D. 13749	21.06.2004	Carbon dioxide capture and utilisation, Nano-adsorbents/composites for Wastewater Treatment, Biomass Waste to Energy and Chemicals via pyrolysis, gasification and Anaerobic digestion
5	Dr. Ram Sharan Singh Ph.D. 16729	2007	Bioremediation of Organic Waste, Process Dynamics and Control, Aerosol and Bioaerosol

Sl. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
6	Dr. Satya Vir Singh Ph.D. 18210	01.03.2006	Adsorption, Photocatalysis, Post harvest processing
7	Dr. Hiralal Pramanik Ph.D. 17500	29.02.2008	Fuel Cell Technology, Hydrogen production and Storage, Energy Engineering, Pyrolysis of Plastics
8	Dr. Rajesh Kumar Upadhyay Ph.D. 50235	02.07.2010	Hydrogen Energy, Membrane Reformer, Multiphase Flow, CFD, Flow measurement Techniques
ASSOCIATE PROFESSORS			
1	Dr. Bhawna Verma Ph.D. 18152	07.10.2013	Heat Transfer In Narrow Tubes; Biodiesel; Catalysis; Carbon Materials/ Nanocomposites Materials For Enhanced Capacitance
2	Dr. Pradeep Kumar Ph.D. 18479	12.12.2007	Industrial Pollution Abatement
3	Dr. Manoj Kumar Ph.D. 50027	17.08.2009	Nano-Bio interface science and technology, Nanotherapeutics, Bio/ Chemi-sensors, Fluorescence Spectroscopy, Non-linear Luminescent Nanomaterials, and Environment
4	Dr. Sweta Ph.D. 19770	04.08.2012	Environmental Catalysis, Reaction Kinetics, Polymer Blends, Diesel Exhaust Treatment
5	Dr. Jyoti Prasad Chakraborty Ph.D. 19844	27.07.2011	Chemical Reaction Engineering; Pyrolysis of biomass, Gasification of biomass
6	Dr. Ravi P. Jaiswal Ph.D. 50025	01.12.2008	Photovoltaic cell fabrication, Solar energy, Semiconductor device fabrication processes, Industrial wastewater treatment, Nanotechnology, Bioremediation
7	Dr. Ankur Verma Ph.D. 50026	26.10.2011	Micro- and nano-fabrication, Colloids and interfacial science and environmental biotechnology
ASSISTANT PROFESSORS			
1	Durga Prasad A, Ph.D. 18151	19.12.2021	Process Dynamics and Control, Bioremediation, Microbial Fuel Cells
2	Dr. Vijay Shinde Ph.D. 50171	14.12.2013	Modeling and simulation, CMC fabrication, Joining of CMCs
3	Dr. Debdip Bhandary Ph.D. 50229	13.07.2016	Soft Matter, Molecular Simulation, Interfacial Science
4	Dr. Abir Ghosh Ph.D. 50261	02.09.2018	Complex Fluids, Thin Films, Li-ion Batteries
5	Dr. Sanjay Katheria Ph.D. 50265	28.06.2018	Heterogeneous catalysis and reaction engineering
6	Dr. Udita Uday Ghosh Ph.D. 50273	15.05.2018	Complex Fluids, Interfacial Phenomena,
7	Dr. Nitai Chandra Maji Ph.D. 50298	17.01.2020	Particle Engineering, Colloids, Interfacial catalysis
8	Dr. Bhagavatula NVSSR Dinesh Ph.D. 50301	15.03.2019	Multiphase flows in microfluidics and microgravity
9	Dr. Ravendra Gundlapalli Ph.D. 50304	16.12.2019	Energy Storage, CFD
10	Dr. Rohit Kumar Ph.D. 50317	13.11.2021	Heterogeneous catalysis, CO2 conversion, H2 production
11	Dr. Ganesh Madabattula Ph.D. 50383	15.03.2018	Modelling Performance, Safety and Degradation of Batteries and Supercapacitors
12	Dr. Satarupa Dutta Ph.D. 50417	09.09.2021	Micro/Nanofluidics, Energy, Biosensors

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Sri Arvind Kumar M.Sc. (Information Technology)	Sr. Technical Superintendent Grade II, 14069	22.03.1997
2	Sri Umesh Pratap Singh Intermediate	Sr. Technical Superintendent 17688	23.01.2006
3	Sri Ram Chandra Sachiv Intermediate, I.T.I.	Sr. Technical Superintendent Grade II, 14123	28.10.1985
4	Sri Arjun Prasad Gond M.A.	Technical Superintendent 14144	05.04.1990
5	Sri Sudhir Kumar Intermediate	Sr. Technical Superintendent 14145	21.12.1990
6	Sri Om Prakash Patel Intermediate	Technical Superintendent 14148	28.09.1993
7	Sri Surendra Kumar Verma Intermediate	Technical Superintendent 14147	02.06.1994
8	Shri. Murli Dhar Mishra B.Sc., Diploma in Electrical Engg.	Technical Superintendent 18024	15.01.2007
9	Sri Sudhir Kumar B.Sc.	Sr. Technical Superintendent 18094	20.02.2007
10	Sri Rajesh Kumar I.T.I., Diploma	Jr. Technical Superintended 18622	07.08.2008
11	Sri Vinay Kumar Intermediate, DMLT	Jr. Technical Superintended 18625	05.08.2008
12	Sri Ajay Kumar Pandey B.A., DTP	Jr. Technical Superintended 18623	05.08.2008
13	Sri Shailendra Kumar Upadhyay Intermediate	Jr. Technical Superintended 18629	05.08.2008
14	Sri Raj Kumar B.Sc., PGDCA	Jr. Technical Superintended 18626	05.08.2008
15	Sri Ankit Kumar M.Sc. (Information Technology), ACHNP	Jr. Technical Superintended 18627	05.08.2008
16	Sri Dhirendra Kumar Pandey B.A., I.T.I., Diploma in Mechanical Engineering	Jr. Technical Superintended 19272	10.02.2011
17	Sri Anand Prakash Upadhyay L.L.B.	Jr. Technical Superintended 11579	14.04.2012
18	Sri Lal Bahadur Ram B.Sc.	Sr. Technician 19602	11.07.2012
19	Sri Akash Mishra M.Com, UGC Net	Sr. Assistant 50079	08.05.2017
20	Sri Divya Jyoti Singh B.A.	Jr. Assistant 50375	26.10.2023
21	Sri Yaman Jaiswal B.Com.	Jr. Assistant 50401	01.01.2024

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

Sl. No.	Coordinator	Title	Period
1.	Prof. PK Mishra & Dr. Bhawna Verma	Sustainability in Water & Environment	26.02.2024 to 27.02.2024

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Prof. Hiralal Pramanik	Delivered Plenary Talk on the Topic Low cost PVA Based polymer matrix: Promising alternative of expensive Nafion membrane electrolyte for fuel cell application in International Hybrid conference on Nano Structured Materials and Polymers (ICNP-2023)	12.05.2023 to 14.05.2023Mahatma Gandhi University, Kerala
2	Dr. Manoj Kumar	Online Faculty Development Program on Current Development and Science in Nanobiotechnology Challenges in Nanotherapeutics and Nanotheranostics Design and Way forward-Concept to Design (Invited Talk)	29.12.2023 to 02.01.2024 CBIT Hyderabad
3	Dr. Debdip Bhandary	DAE-BRNS National Workshop on Atomistic Modelling of Molecules and Materials	11.12.2023 to 14.12.2023 BARC Mumbai
4	Dr. Abir Ghosh	Degradation of Ni-rich Positive Electrodes (NMC811) in Li-ion Batteries: A Continuum-scale Study (Oral Presentation)	13.06.2023 to 15.06.2023 10th Soft Matter Young Investigators Meet (SMYIM - 2023) ISR, Jim Corbett National Park, Uttarakhand
5	Dr. Abir Ghosh	APS 76th Annual Meeting of the Division of Fluid Dynamics (APSDFD) Electric-Field Induced Instabilities of a Thin Confined Viscoelastic-Porous Bilayer (Oral Presentation)	19.11.2023 to 21.11.2023 American Physical Society, Washington DC, USA
6	Dr. Abir Ghosh	8th International Conference on Advanced Nanomaterials and Nanotechnology (ICANN 2023) Decoding Positive Electrode and Electrode-Electrolyte Interface Degradations: Insights for Next-generation Batteries (Oral Presentation)	29.11.2023 to 01.12.2023 Centre for Nanotechnology, IIT Guwahati
7	Dr. Rohit Kumar	Catalysis, Chemical Engineering and Technology	22.05.2023 to 23.05.2023 Tokyo, Japan
Meetings			
1	Prof. Monoj Kumar Mondal	Subject Expert in Selection Committee Meeting for the Post of professor	26.02.2024 Thapar Institute of Engineering & Technology
2	Prof. Monoj Kumar Mondal	Subject Expert in Selection Committee Meeting for the Post of Assistant Professor and Associate Professor	04.09.2023 to 06.09.2023 NIT Surat
3	Prof. Monoj Kumar Mondal	PMRF Progress Evaluation meeting	2024 IIT Madras
4	Prof. Monoj Kumar Mondal	Expert member in NBA visit to Government Engineering College	08.09.2023 to 10.09.2023 Government Engineering College, West Hill PO, Kozhikode
5	Prof. Monoj Kumar Mondal	Expert member in NBA visit to Institute of Chemical Technology, Mumbai	27.10.2023 to 29.10.2023 ICT Mumbai
6	Prof. Hiralal Pramanik	As Director's Nominee Attended 49th National Coordination Board (NCB) Meeting of GATE and the 19th JAM-Advisory Board (AB) Meeting held on May 13, 2023 in IIT Madras	13.05.2023 IIT Madras
7	Prof. Hiralal Pramanik	Subject Expert in the Selection committee for recruitment	16.02.2024 Sardar Vallabhbhai Patel University of Agriculture and Technology, Meerut
8	Prof. Hiralal Pramanik	PMRF Progress Evaluation meeting	30.11.2023 IIT Kharagpur
9	Prof. Hiralal Pramanik	Meeting for JAM-2023 Admissions	10.04.2023 IIT Guwahati
10	Prof. Hiralal Pramanik	Follow up meeting related to COAP-2024	05.03.2024 IIT Kanpur
11	Prof. Hiralal Pramanik	First meeting of COAP-2024	13.02.2024 IIT Kanpur
12	Dr. Debdip Bhandary	Soft-matter Young Investigators Meeting 2023	11.06.2023 to 14.06.2023 Rampur, Uttar Pradesh
13	Dr. Udita U. Ghosh	Soft Matter Young Investigators Meeting (SMYIM)	14.06.2023 to 17.06.2023 Jim Corbett National Park Uttarakhand

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	Prof. Monoj Kumar Mondal	Chemical absorption of CO_2, SO_2 and NO_x: Opportunities, challenges and outcomes (workshop on 'Emission Control Strategies in Thermal Power Plants')	Jindal Power Limited, Tamnar and Institution Innovation Council & IEEE MP Section	31.10.2023
2	Prof. Monoj Kumar Mondal	Post combustion CO2 capture: Some important findings (a five-day workshop on advanced materials for CO2 Capture and Value Addition)	NIT Rourkela	06.02.2024
3	Prof. Monoj Kumar Mondal	Biomass based renewable energy technologies (short term course on emerging trends in Renewable energy technologies)	UPES, Dehradun	08.02.2024
4	Prof. R.S. Singh	Microbial Fuel Cell: An innovative Way to Reduce Waste along with Energy Production	UGC-HRDC, BHU, Varanasi	04.11.2023
5	Prof. R.S. Singh	Microbial Fuel Cell (MFC): Opportunities and Challenges	NHBT 2023 Trivandrum	27.11.2023
6	Prof. R.S. Singh	Microbial Fuel Cell (MFC): Opportunities and Challenges	NIT Jalandhar	01.06.2023
7	Prof. Hiralal Pramanik	Delivered Plenary Talk on the Topic Low cost PVA Based polymer matrix: Promising alternative of expensive Nafion membrane electrolyte for fuel cell application in International Hybrid conference on Nano Structured Materials and Polymers (ICNP-2023)	Mahatma Gandhi University, Kottayam, Kerala	12.05.2023
8	Dr. Bhawna Verma	Hybrid Supercapacitors-Storage device of future	NIT Rourkela	05.03.2024
9	Dr. Manoj Kumar	Highly efficient Polymeric Nanocarrier Loaded with Methotrexate for Triple Negative Breast Cancer, treatment	IIT(BHU)	04.02.2024
10	Dr. Manoj Kumar	Highly efficient polymeric nanocarrier loaded with methotrexate for triple negative breast cancer, treatment	NIT Srinagar	25.05.2023
11	Dr. Jyoti Prasad Chakraborty	Biomass to Biofuels through Torrefaction: A Clean and Sustainable Technology	Guru Ghasidas University, Bilaspur	03.11.2023
12	Dr. Rohit Kumar	Hydrotalcite-Derived Catalysts for Industrial Flue Gas Conversion	IIT (ISM) Dhanbad	17.12.2023
13	Dr. Rohit Kumar	Hydrotalcite-Derived Catalysts for Industrial Flue Gas Conversion	NIT Rourkela (online)	08.02.2024

Visits abroad by faculty members

Sl. No.	Name of Faculty Member	Country Visited	Date of Leaving India	Date of Returning India	Purpose of Visit	Funding from
1.	Dr. Abir Ghosh	USA	10.11.2023	28.11.2023	Visiting Scholar to Establish Research Collaboration	SERB and CPDA
2.	Dr. Rohit Kumar	Japan	20.05.2023	27.05.2023	To participate in an international conference	CPDA

Honours and awards

Sl. No.	Name of Faculty Member	Details of Award
1	Prof. Monoj Kumar Mondal	Expert Member, National Board Accreditation (NBA) Committee, India
2	Prof. Monoj Kumar Mondal	Expert Member, AICTE EVC Committee, Govt. of India, New Delhi
3	Prof. Monoj Kumar Mondal	Member, Board of Studies, Madan Mohan Malaviya University of Technology, Gorakhpur, 2023
4	Prof. Monoj Kumar Mondal	Member Advisory Committee, Guru Ghasidas University, India
5	Prof. Monoj Kumar Mondal	Member, Board of Governors. Rajkiya Engineering College, Azamgarh
6	Prof. Monoj Kumar Mondal	Scientific Advisory Board Member of 18th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES)-2023) Dubrovnik, 24-29th Sept 2023

Sl. No.	Name of Faculty Member	Details of Award
7	Prof. Monoj Kumar Mondal	Scientific Advisory Board Member of 4th Latin American Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES)-2024, Chile, Vinadelmar, 14-17th January 2024
8	Prof. Ram Sharan Singh	Chair Professor, Bureau of Indian Standard (BIS) Member, Senate, RGIPT, Raebareli Member Academic Council, IET Lucknow Member, Waste to Wealth, PSA of India, New Delhi Member, Selection Committee, RGIPT, 2024 Member, Selection Committee, NIT Patna, 2024 Member, Selection Committee, MNNIT Allahabad, 2023 Member, Selection Committee, IIT Patna, 2023
9	Prof. Hiralal Pramanik	Scientific Advisory Board Member of 18th Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES)-2023) Dubrovnik, 24-29th Sept 2023.
10	Prof. Hiralal Pramanik	Scientific Advisory Board Member of 4th Latin American Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES)-2024, Chile, Vinadelmar, 14-17th January 2024.
11	Prof. Hiralal Pramanik	Elected Life Fellow of Indian Institute of Chemical Engineers (IIChE) on 26th December 2023
12	Prof. Hiralal Pramanik	Scientific Advisory Board Member of 2nd Asia Pacific Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES)-2024, Gold Coast, Australia, 2-5th April 2024.
13	Prof. Hiralal Pramanik	Scientific Advisory Board Member of 1st North American conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES)-2024, Toronto, Canada, 16-20 June 2024.
14	Prof. Monoj Kumar Mondal	World ranking of top 2% scientists from India in the field Chemical Engineering as per the latest data and statistics released by Elsevier and Stanford University USA, 2023
15	Dr. R.P. Jaiswal,	Invited Article for Journal Cover in ACS Energy & Fuels, Air-Breathing Silicon PV Module Enabled by Internal Micro-Fluidic Channels for Direct Cooling Application: A Validated Design Concept. 10.1021/acs.energyfuels.3c03627- 2024
16	Dr. Dinesh Bhagavatula	Young Investigator Support Grant by (International Congress of Theoretical and Applied Mechanics) ICTAM 2024
17		

Fellowships of academic and professional societies

Sl. No.	Name of Faculty Member	Details of Fellowship
1	Prof. Monoj Kumar Mondal	Fellow, The Royal Society of Chemistry (London)
2	Prof. Monoj Kumar Mondal	Life Fellow, Indian Institute of Chemical Engineers
3	Prof. Hiralal Pramanik	Life Fellow of Indian Institute of Chemical Engineers (IIChE) on 26th December 2023; No. LF-21879
4	Prof. Satya Vir Singh	Fellow Indian Institute of Chemical Engineers (IIChE) (LF-73519)
5	Prof. Satya Vir Singh	Fellow The Institution of Engineers (India) (F-1286931)
6	Dr. Udita U. Ghosh	Associateship, Indian Academy of Sciences (2023)
7	Dr. Raveendra Gundlapalli	NSFMFP

Books, monographs authored/co-authored

Sl. No.	Name of Author/Co- Author	Title	Publisher
1	Gautam A., Mondal MK	Recent advances in Microalgae process for post combustion CO_2 capture, in: 'Microbial Niche Nexus Sustaining Environmental Biological Wastewater and Water-Energy- Environment Nexus'	Springer Nature 2023
2	Singh R.S.	Waste Management Sanitation and Society	Cambridge Scholars Publishing
3	Tiwari H., Singh, R.S.	Hybrid Aerogels, Energy and Environmental Applications	Degruyter Publisher
4	Srivastava N., Verma B., Mishra P.K.	Paddy straw waste for biorefinery applications (Clean Energy Production Technologies)	Springer 2024

Sl. No.	Name of Author/Co- Author	Title	Publisher
5	S. Verma, V. K. Pandey, R. K. Gupta, S. Verma & B. Verma	Pseudocapacitive materials-based metal-air batteries, Pseudocapacitors: Fundamentals to high performance energy storage devices	Springer Nature, Singapore, 2024
6	Verma S., Verma B.	Polymeric Nanocomposites for Flexible Supercapacitors. In Recent Advancements in Polymeric Materials for Electrochemical Energy Storage	Singapore: Springer Nature Singapore
7	Mehata A.K., Viswanadh M.K., Prasanna P., Kumar M., Muthu M.S.	Theranostic Applications of Up conversion Nanoparticle-Based Drug-Delivery Systems	Nature Springer 2023

Editorial boards of journals

Sl. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Prof. Monoj Kumar Mondal	Member Editorial board	Biomass Conversion and Biorefinery SPRINGER
2	Prof. Monoj Kumar Mondal	Associate Editor	Adsorption Science & Technology
3	Prof. Hiralal Pramanik	Editor	Journal of Polymer and Composites
4	Dr. Raveendra Gundlapalli	Guest Editor	Batteries (MDPI)

Design and Development Activities

New facilities added

Sl. No.	Details (Infrastructure, Equipments, etc.)	Value (in Lakhs of Rupees)
1	2, CPU-based Workstations 2, GPU-based workstations 5, Desktops	20.00
2	Vapour Phase Fixed Bed Reactor System	18.05
3	Tubular Reactor for Catalyst Testing	15.82
4	COMSOL Multiphysics Software	13.00
5	Microprocessor based Gas Chromatograph	8.26
6	Synthesis Reactor	5.90
7	PM1 Sampler	2.00
8	U V- VIS Spectrophotometer	4.50

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1	Prof. Monoj Kumar Mondal	An aqueous amine blend for post-combustion capture
2	Prof. Ram Sharan Singh	Methyl orange disintegration by layered double hydroxide (LDH) and its derivatives
3	Prof. Hiralal Pramanik	A direct borohydride fuel cell and a method of preparation thereof

Research and Consultancy

Sponsored research projects

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	VSSC, ISRO, Regional characterization of atmospheric aerosols at Varanasi region (2020-2025)	Continuing	VSSC, ISRO	80.00	Prof. R.S. Singh
2	Effect of Ceria Support Morphology for the Synthesis of Bimetallic Catalysts for NOx Reduction through H_2-SCR	2022-2025	SERB, Govt. of India	52.47	Dr. Sweta
3	Graphite Aerosol Studies in the High Temperature Aerosol Facility for Nuclear Applications		BRNS, BARC	40.50	Prof. R.S. Singh
4	Novel integrated engineering approach for effective tar decomposition and its last-minute removal to fuel gas reforming in biomass pyro-gasification	2020-2023	SERB, Govt. of India	35.63	Prof. Monoj Kumar Mondal

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
5	Thermo-catalytic conversion of carbon dioxide into ethanol and higher alcohols	September 2022 to August 2024	SERB, Govt. of India	33.00	Dr. Sanjay Katheria
6	Catalyst Development for Reforming of Biomass Tar model Compounds for Hydrogen and Syngas Production	23.11.2023 to 22.11.2024	SERB, Govt. of India	30.44	Dr. Rohit Kumar
7	Women Scientist project -Improved Biomass to Biohydrogen Production Technology Using Graphene as a Catalyst Prepared from Waste Biomass Synthesis, Characterization, Application"	3 years	DST	35.14	Dr. Bhawna Verma
8	Design and Development of Kinetically Stable Electrolytes for Next-gen Li-ion Batteries (ElectroLiion)	October 2022 to October 2024	SERB, Govt. of India	29.40	Dr. Abir Ghosh
9	Novel integrated engineering approach for effective carbon dioxide removal using biphasic amine blends for coal-based thermal power plant	2021-2024	SERB, Govt. of India	21.67	Prof. Monoj Kumar Mondal
10	TAP scheme for MSME's	2 years	TIFAC	20.00	Dr. Bhawna Verma

Research Publications

Sl. No.		No.
1.	Total Number of Papers Published in Refereed International Journals	102
2.	Total Number of Papers Published in Refereed National Journals	04

Refereed International Journals

1. Parashar C., Singh A., Ghosh A., Deshmukh O., Bandyopadhyay D. (2024) Recipes for Mixing Vortices in a Microchannel using Electric field. Phys. Fluids, 36 (3), 032022.
2. Vanarse V.B., Thakur S., Ghosh A., Parmar P., Mandal T.K., Bandyopadhyay, D. (2024) Coupled Instability Modes at a Solvent/non-Solvent Interface to Decorate Cellulose Acetate Flowers. Phys. Fluids, 36 (2), 022115.
3. Vishwakarma M. and Bhandary D. (2024) Micelle-mediated growth of gold nanocrystals on a surface. Computational Materials Science, 247, 113147.
4. Soni A. and Bhandary D. (2023) Solution Critical Temperature through Excess-entropy-Diffusivity Lens. Journal of Molecular Liquids, 394, 123785.
5. Chowdhury P., Jha A., Bhandary D. (2023) Influence of Temperature-Guided SAM Growth on Wetting and Its Mass Transfer Models. Journal of Physical Chemistry B, 127 (38): 8208–8215
6. Rao S.S. and Sharma S. (2023) MnO_x/CeO_2 catalysts for the low-temperature selective catalytic reduction of NO with NH_3 Canadian Journal of Chemical Engineering, 101(11): 6521-6531
7. Patel V.K., Rao S.S. Sharma S. (2023) Effect of (M = Co, Cu, Cr, and Mo) M/CeO2-MgO catalysts in selective catalytic reduction of NOx with hydrogen under excess oxygen condition, Journal of Environmental Chemical Engineering, 11(6): 111159-111170
8. Rao S.S., Sharma S. (2024) Effects of MnO_2 Crystal Phases in MnO_2/CeO_2 Catalyst for NO Reduction by NH_3-SCR, Catalysis Letters, 154:1768-1781
9. Rao S.S., Sharma S. (2024) Effect of Promoters (Co, Cr, Fe, Zr) on the Performance of MnO_2/CeO_2 Catalysts for NO Reduction at Low Temperatures Using NH_3-SCR, Catalysis Survey from Asia, 24:88-100
10. Beemanadhuni H., Bharti R., Parmar S. A., Ghosh U.U. (2024), Self-pinning colloids on rough surface, Colloids and Surfaces A, Vol. 690, pp.1-9, *corresponding author
11. Kotak D., Kamath P., Ghosh U.U. (2024), Polymer Imbibition Through Paper Strips, Langmuir, Vol. 40, pp.5306 - 5313. pp. 1-9, *corresponding author
12. Qamar U., Hazra S., Kant C., Ghosh U.U., Pal B.N., Das S. (2024) Two-dimensional silver nanonetwork on Ag4Ti5O12 film as highly efficient SERS substrate, Microchemical Journal, Vol. 196, pp.109686.
13. Rai R., Ranjan R., Kant C., Ghosh U.U., Dhar P. (2003) Environmentally Benign Partially Delignified and Microwave Processed Bamboo-Based Drinking Straws, Advanced Sustainable Systems, Vol. 7, pp. 2300057.

14. Dhara T., Aryanfar A., Ghosh A., Ghosh U.U., Mukherjee P.P., DasGupta S. (2023) The Role of Pulse Duty Cycle and Frequency on Dendritic Compression, The Journal of Physical Chemistry C, Vol. 127, pp.4407– 4415.

15. Kamal A., Shukla AK., Shinde V.M., Yadav S.D. (2024) Effect of Mo addition on interfacial microstructure and mechanical property of SiC joint brazed by an Ni–Si filler. Journal of the American Ceramic Society. 107:2861–76.

16. Akshayveer, Shinde V.M. (2024) CFD-DEM analysis of particle polydispersity on the performance of fluidised bed reactor during silane pyrolysis, Particuology 91: 72-87.

17. Yadav N.K., Pramanik H. (2024) Comprehensive investigation on sodium hypochlorite as oxidant in half cell and direct sodium borohydride fuel cell (DSBFC) for low-cost electrical power generation. Ionics. https://doi.org/10.1007/s11581-024-05565-7.

18. Sonkar S., Pramanik H. (2024) Electrochemical splitting of water on IrO2 based Nafion bonded composite anode for efficient production of low cost and clean hydrogen fuel, Indian J Chem Tech., 31 (3), 369-382; DOI: 10.56042/ijct.v31i3.6809.

19. Singh A.P., Pramanik H., (2024) Synthesis of low-cost cathode electrocatalyst Pt-Ni/CAB using DMSO as a solvent for low temperature proton exchange membrane fuel cell application Canadian J of Chemical Engineering.

20. Reddy P.B.T., Pramanik H., (2024) Process parameter optimization via RSM of a PEM based water electrolysis cell for the production of green hydrogen, J Electrochemical Science and Technology; (DOI: https://doi.org/10.33961/jecst.2023.01144).

21. Verma A., Pramanik H. (2024) Production of valuable chemicals via multiphase catalytic pyrolysis of hazardous waste expanded polystyrene using low cost CaCO3 solid base catalyst, Indian J Chemical Tech. 31 143-151.

22. Yadav N.K., Pramanik H., (2023) Performance enhancement of NaOH doped physically crosslinked alkaline membrane electrolyte by addition of TEOS to PVA solution for direct sodium borohydride fuel cell application Int J Hydrogen of Energy, https://doi.org/10.1016/j.ijhydene.2023.07.022.

23. Verma, A., Pramanik, H., (2023) Synthesis of Modified River Clay Catalyst for Valuable BTE Production via Catalytic Pyrolysis of Hazardous Plastic Waste. J Chemistry Select, https://doi.org/10.1002/slct.202301643.

24. Yadav N.K., Pramanik H., (2023) Quick synthesis of low-cost NaOH-doped pristine PVA-TEOS composite alkaline membrane electrolyte for power generation from direct sodium borohydride fuel cell at moderate temperature, Int J of Ionics, https://doi.org/10.1007/s11581-023-05114-8.

25. Verma A., Pramanik H., (2023) Production of gasoline octane booster aromatics benzene, toluene and ethylbenzene from multiphase catalytic pyrolysis of mixed waste expanded polystyrene and high-density polyethylene Progress in Rubber, Plastics and Recycling Technology, https://doi.org/10.1177/14777606231174919.

26. Verma A., Pramanik H. (2023) Multiphase pyrolysis of waste expanded polystyrene and in-situ hydrogenation of pyrolysis oil on silica-alumina supported nickel catalyst for the production of fuel range paraffinic and aromatic hydrocarbons Indian J Chemical Tech. 30 461-475.

27. Verma A., Sharma S., Pramanik H. (2023) Rapid identification of optimized process parameters via RSM for the production of valuable aromatic hydrocarbons using multiphase catalytic pyrolysis of mixed waste plastics, Arabian Journal for Science and Engineering, DOI: 10.1007/s13369-023-07630-1.

28. Verma V., Saroj S., Jaiswal V.K., Singh S.V., (2024)Remediation of methylene blue water solution with iodine doped TiO2 nanoparticles and their regeneration: For reuse and check phytotoxicity level of treated water Optical Materials 152, 115521

29. Neha, Singh H., Singh S.V. (2024)Insights into the interface of NiCo 2 O 4 Spinel /LaCoO 3 perovskite Nano-composite for CO and Soot oxidation journal of environmental sciences, 138, 339-349

30. Verma, Singh S.V. (2023) Augmentation of photocatalytic degradation of methylene blue dye using lanthanum and iodine Co-doped TiO2 nanoparticles, their regeneration and reuse; and preliminary phytotoxicity studies for potential use of treated water. Journal of Environmental Chemical Engineering 11 (6), 111339

31. Yadav B.K., Yadav V.L. (2024) Nano-clay treatment of jute fiber for reinforcement in polymer composites: Mechanical, morphological, and thermo-kinetic analysis, Journal of Reinforced Plastics and Composites.

32. Mishra R.K., Gariay B., Savvasere P., Dhir D., Kumar P., Mohanty K., (2024) Thermocatalytic Pyrolysis of Waste Areca Nut into Renewable Fuel and Value-Added, ACS Omega 9, 25779–25792.

33. Saini R., Pandey M., Mishra R.K., Kumar P. (2024) Adsorption potential of hydrochar derived from hydrothermal carbonization of waste biomass towards the removal of methylene blue dye from wastewater, Journal of Biomass Conversion and Biorefinery, 13399-024-05743-7

34. Saini R., Mishra R.K., Kumar P. (2024) Green Synthesis of Reduced Graphene Oxide Using the Tinospora cordifolia Plant Extract: Exploring Its Potential for Methylene Blue Dye Degradation and Antibacterial Activity, ACS Omega 9, 18, 20304–20321

35. Nawaz A., Razzak S.A., Kumar P. (2024) Pyrolysis parameter-based optimization study using response surface methodology and machine learning for potato stalk, Journal of the Taiwan Institute of Chemical Engineers 159,105476

36. Singh B., Mishra R.K., Kumar P., Arif Z. (2023) Comprehensive assessment of organic pollutants in petroleum refinery wastewater by LCMS analyzer, Water-Energy Nexus 6, 167–176

37. Saini R., Kumar P. (2023) Green synthesis of TiO_2 nanoparticles using Tinospora cordifolia plant extract & its potential application for photocatalysis and antibacterial activity, Inorganic Chemistry Communications 156, 111221

38. Mishra R.K., Saini R., Kumar D.J.P., Sankannavar R., Binnal P., Dwivedi N., Kumar P. (2023) Thermo-catalytic pyrolysis of Azadirachta indica seeds over CaO and CuO: Pyrolysis kinetics, impact of catalysts on yield, fuel properties and its chemical compositions, Journal of the Energy Institute 111, 101366

39. Nawaz A., Kumar P. (2023) A novel pseudo-multicomponent isoconversional approach for the estimation of kinetic and thermodynamics parameters of potato stalk thermal degradation Bioresource Technology 376, 128846

40. Nawaz A., Singh B., Mishra R.K., Kumar P. (2023) Pyrolysis of low-value waste Trapa natans peels: An exploration of thermal decomposition characteristics, kinetic behaviour, and pyrolytic liquid product, Sustainable Energy Technologies and Assessments 56, 103128

41. Nawaz A., Kumar P. (2023) Impact of temperature severity on hydrothermal carbonization: Fuel properties, kinetic and thermodynamic parameters, Fuel 336, 127166

42. Nawaz A., Kumar P. (2023) Thermocatalytic pyrolysis of Sesbania bispinosa biomass over Y-zeolite catalyst towards clean fuel and valuable chemicals, Energy 263,125684

43. Tiwari S.K., Kim K.H., Singh R.S., Lee J., Kim T., Mahlknecht J., Giri B.S. (2024) A critical review on CO2 sequestration using construction and demolition waste: Future scope and perspective, Environmental Engineering Research 29 (3)

44. Tiwari H., Sonwani R.K., Singh R.S. (2024) Biodegradation and detoxification study of triphenylmethane dye (Brilliant green) in a recirculating packed-bed bioreactor by bacterial consortium, Environmental Technology 45 (5), 959-971

45. Maurya P., Paul N., Prasad D.A., Singh R.S. (2024) Modified fractional order PID structure for non-integer model bioreactor control, Can. J. Chem. Eng. 2024;1–19, DOI: 10.1002/cjce.25254

46. Jaiswal V.K., Sonwani R.K., Singh R.S. (2024) Simultaneous removal of p-cresol and methylene blue dye through upward-flow packed bed biofilm reactor (UFPBBR): Kinetics, phytotoxicity and bacterial toxicity assessment, Journal of Water Process Engineering 58, 104868

47. Kushwaha R., Singh R.S., Mohan D. (2023) Arsenic resistance and accumulation by two bacteria isolated from Ratanpur Village of Varanasi District, Uttar Pradesh, Bioresource Technology Reports 24, 101639

48. Tripathi P., Tiwari S., Tiwari H., Sonwani R.K., Singh R.S. (2023) Techno-economic assessment of coupling ozonation and biodegradation process for the dye wastewater treatment, Journal of Water Process Engineering 56, 104286

49. Jaiswal V.K., Gupta A.D., Verma V., Singh R.S. (2023) Degradation of p-cresol in the presence of UV light driven in an integrated system containing photocatalytic and packed bed biofilm reactor, Bioresource Technology 387, 129706

50. Vishwakarma Y.K., Gogoi M.M, Babu S.N.S., Singh R.S. (2023) How dominant the load of bioaerosols in PM2.5 and PM10: a comprehensive study in the IGP during winter, Environmental Science and Pollution Research 30 (52), 112277-11228

51. Swain G., Maurya K.L., Kumar M., Sonwani R.K., Singh R.S., Jaiswal R.P. (2023) The Biodegradation of 4-Chlorophenol in a Moving Bed Biofilm Reactor Using Response Surface Methodology: Effect of Biogenic Substrate and Kinetic Evaluation, Applied Biochemistry and Biotechnology 195 (9), 5280-5298

52. Tiwari S., Tripathi P., Mohan D., Singh R.S. (2023) Bioremediation of Imidacloprid in a Stirred Tank Reactor Using Bacterial Consortium: Kinetic Analysis and Toxicity Assessment, Industrial & Engineering Chemistry Research 62 (31), 12073-12084

53. Tiwari S.K., Kim K.H., Singh R.S., Lee J., Kim T., Mahlknecht J., Giri B.S. (2023) A critical review on CO_2 sequestration using construction and demolition waste: Future scope and perspective, Environmental Engineering Research 29 (3), 1-16

54. Nawaz A., Singh R.S. (2023) Production of Bioelectricity Using Single Chamber Microbial Fuel Cell, American Journal of Environmental Sciences 2023, 19 (2): 54.59

55. Sharma D., Said P.P., Singh R.S., Rai B.N. (2023) Quantification of curcumin obtained from supercritical carbon dioxide extraction of Curcuma domestica valet. rhizomes, Asian Journal of Dairy and Food Research 42 (3), 361-365

56. Sonwani R.K., Patel D., Singh A., Singh R.S. (2023) Intensified biodegradation of Congo red dye by mixed culture in a sequential bioreactor: Kinetics and phytotoxicity studies, Indian Journal of Experimental Biology 61 (DOI: 10.56042/ijeb. v61i10.1686

57. Tiwari H., Sonwani R.K., Singh R.S. (2023) Bioremediation of dyes: a brief review of bioreactor performance, Environmental Technology Reviews, 12 (1), 83-128

58. Tripathi P., Tiwari S., Sonwani R.K., Singh R.S. (2023) Assessment of biodegradation kinetics and mass transfer aspects in attached growth bioreactor for effective treatment of Brilliant green dye from wastewater, Bioresource Technology, 381, 129111

59. Tiwari H., Tripathi P., Sonwani R.K., Singh R.S. (2023) A synergistic approach combining Adsorption and Biodegradation for effective treatment of Acid Blue 113 dye by Klebsiella grimontii entrapped Graphene Oxide-Calcium Alginate, Bioresource Technology, 129614

60. Tiwari S., Tripathi P., Mohan D., Singh R.S. (2023) Bioremediation of Imidacloprid in a Stirred Tank Reactor Using Bacterial Consortium: Kinetic Analysis and Toxicity Assessment, Industrial & Engineering Chemistry Research, 2023

61. Jaiswal V.K., Sonwani R.K., Singh R.S. (2023) Assessment of enhanced p-cresol biodegradation by encapsulating pre-immobilised Serratia marcescens strain HL 1 on tea waste biochar into polyvinyl alcohol/sodium alginate matrix, Biochemical Engineering Journal, 109046, 2023

62. Jaiswal V.K., Sonwani R.K., Singh R.S. (2023) Construction and performance assessment of Recirculating packed bed biofilm reactor (RPBBR) for effective biodegradation of p-cresol from wastewater Bioresource Technology, 129372, 2023

63. Mishra A., Singh D., Singh R.S., Singh D., Vinay (2023) Effect of noble bacteria Ochrobactrum intermedium (Alhpa-22) on decolorization of methyl orange dye in a bioreactor, Int. J. Chem. React. Eng., 2023

64. Jaiswal V.K., Maurya K.L., Sonwani R.K., Singh R.S. (2023) Biodegradation of p-cresol by Serratia marcescens strain HL 1 in batch system: Process optimization, growth kinetic study, phytotoxicity and chlorophyll assessment Bioresource Technology Reports 22, 101426, 2023

65. Kushwaha R., Singh R.S., Mohan D. (2023) Comparative study for sorption of arsenic on peanut shell biochar and modified peanut shell biochar, Bioresource Technology 375, 128831, 2023

66. Tiwari S., Tripathi P., Mohan D., Singh R.S. (2023) Imidacloprid biodegradation using novel bacteria Tepidibacillus decaturensis strain ST1 in batch and in situ microcosm study, Environmental Science and Pollution Research 30 (22), 61562-61572, 2023

67. Maurya K.L., Swain G., Kumar M., Sonwani R.K., Verma A., Singh R.S. (2023) Biodegradation of Congo Red Dye Using Lysinibacillus Species in a Moving Bed Biofilm Reactor: Continuous Study and Kinetic Evaluation, Applied Biochemistry and Biotechnology, 1-13, 2023

68. Kumar M., Prasad D.A., Singh R.S. (2023) Level Control in Conical Tank Using IMC-PID Controller, Journal of Engineering Science and Technology Review 16 (2), 71 – 81, 2023

69. Tripathi P., Tiwari S., Sonwani R.K., Singh R.S. (2023) A step towards enhancing the efficiency of biofilm mediated degradation of brilliant green dye in packed bed bioreactor: Statistical and toxicity analysis, Process Safety and Environmental Protection 170, 1228-1239

70. Gautam A., Mondal M.K. (2024) post-combustion CO2 absorption-desorption performance of novel aqueous binary amine blend of Hexamethylenediamine (HMDA) and 2-Dimethylaminoethanol (DMAE). Energy, 296: 130982.

71. Kumar R., Dubey P., Mondal M.K. (2024) Analysis of kinetics, mechanism, thermodynamic properties and product distribution for pyrolysis of Ni-Fe impregnated coconut husk. Renewable Energy, 222: 119972.

72. Gautam A., Mondal M.K. (2023) Novel aqueous amine blend of 2-(Butylamino) ethanol and 2-Dimethylaminoethanol for CO2 capture: Equilibrium CO2 loading, RSM optimization, desorption study, characterization and toxicity assessment. Separation and Purification Technology, 322: 124279.

73. Agnihotri N., Mondal M.K. (2023) Process parameter variation of Melia azedarach sawdust pyrolysis for fuel properties, physicochemical characterization, and indepth speciation analysis. Biomass Conversion and Biorefinery. https://doi.org/10.1007/s13399-023-04305-7.

74. Agnihotri N., Mondal M.K. (2023) Comparison of non-catalytic and in-situ catalytic pyrolysis of Melia azedarach sawdust. Journal of Analytical and Applied Pyrolysis, 172: 106006.

75. Agnihotri N., Mondal M.K. (2023) Thermal analysis, kinetic behavior, reaction modeling, and comprehensive pyrolysis index of soybean stalk pyrolysis. Biomass Conversion and Biorefinery. https://doi.org/10.1007/s13399-023-03807-8.

76. Kumar A., Upadhyay S.N., Mishra P.K., Mondal M.K. (2023) Excellent Cr(VI) adsorbent made from pyrolyzed green coconut trash with parametric modelling and optimization using RSM and experimental data. New Journal of Chemistry, 47: 10078 –10089.

77. Gautam A., Mondal M.K. (2023) Review of recent trends and various techniques for CO2 capture: Special emphasis on biphasic amine solvents. Fuel. 334: 126616.

78. Gautam A., Mondal M.K. (2023) Post-combustion capture of CO_2 using novel aqueous Triethylenetetramine and 2-Dimethylaminoethanol amine blend: Equilibrium CO_2 loading-empirical model and optimization, CO_2 desorption, absorption heat, and 13C NMR analysis. Fuel. 331: 125864.

79. Gupta A.K., Gautam A., Mondal M.K. (2023) Experimental, modeling and RSM optimization of CO_2 loading for an aqueous blend of diethylenetriamine and 3-dimethyl amino-1-propanol. Korean Journal of Chemical Engineering. 40(5): 1151-1167.

80. Mishra S., Verma A. (2024) Variable density wrinkling in polymer thin film by gradient stress induced in the elastomeric substrate. Bulletin of Materials Science. 47: 94.

81. Maurya K.L., Swain G., Kumar M., Sonwani R.K., Verma A. Singh R. S. (2023) Biodegradation of Congo Red Dye Using Lysinibacillus Species in a Moving Bed Biofilm Reactor: Continuous Study and Kinetic Evaluation. Applied Biochemistry and Biotechnology. 195: 5267–5279.

82. Maurya K.L., Kumar M., Sonwani R.K., Jaiswal V.K., Verma A. Singh R.S. (2023) Enhancement of azo dye bioremediation using chemically modified polypropylene biocarrier: Comparative analysis and kinetic modelling. Bioresource Technology Reports 21: 101375.

83. Shrivastava D.K., Singh A.K., Chakraborty J.P. (2023) Model-free isoconversional methods to determine the intrinsic kinetics and thermodynamic parameters during pyrolysis of boiled banana peel: influence of inorganic species, Bioresource Technology Reports, 24: 101676.

84. Rawat S., Singh A.K., Chakraborty J.P., Kumar S. (2023) Characterization and mechanism elucidation of high-quality bio-oil production from co-pyrolysis of waste low-rank coal fines and de-oiled microalgae biomass using bimetallic (Cu-Cr) ZSM-5 catalyst, Journal of Environmental Chemical Engineering, 12(3): 113046.

85. B. Dinesh, N. Brosius, T. Corbin and R. Narayanan (2024) Effect of a deep corrugated wall on the natural frequencies of a fluid interface, Physical Review Fluids.

86. I.B. Ignatius, B. Dinesh, G. Dietze, R. Narayanan (2024) Influence of parametric forcing on Marangoni instability, Journal of Fluid Mechanics, Volume 981, 16th February 2024, (https://doi.org/10.1017/jfm.2024.58).

87. Srivastava P., Sabbarwal S., Verma V.K., Kumar M. (2023) A novel approach for determination of nucleation rates and interfacial energy of metallic magnesium nanoclusters at high temperature using non-isothermal TGA models, Chemical Engineering Science, 265,118223 2023(IF 4.9)

88. Sahoo K., Varshney N., Das T., Mahto S.K., Kumar M., (2023) Copper oxide nanoparticle: Multiple functionalities in photothermal therapy and electrochemical energy storage, Applied Nanoscience, 2023, doi.org/10.1007/s13204-023-02768-8.

89. Verma R., Rani V., Kumar M. (2023) In-vivo Anticancer Efficacy of Self-targeted Methotrexate-loaded Polymeric Nanoparticles in Solid Tumor-bearing Rat, International Journal of ImmunoPharmacology,119,110147, 2023.

90. Verma R., Singh V., Koch B., Kumar M. (2023) Evaluation of Methotrexate Encapsulated Polymeric Nanocarrier for Breast Cancer Treatment, Colloids and Surfaces B: Biointerfaces,226,113308, 2023.

91. Sabbarwal S., Srivastava P., Verma V.K., Kumar M. (2023) A New Technique for Calculating Kinetic and Thermodynamic Barriers for Nucleation Rates and Interfacial Energy of CaCO3 Prenucleation Nanoclusters at High Temperature Using TGA Models and In-Situ Crystallization Crystal Research & Technology, 2023, https://doi.org/10.1002/crat.202300004-coverpage article.

92. Verma V.K., Sabbarwal S., Srivastav P., Kumar M. (2023) In-depth Insight of thermodynamic and kinetic barrier for computation of nucleation rate and interfacial energy of ultra-small Gd_2O_3 nanoclusters utilizing non-isothermal thermogravimeteric models, Physica Scripta,2023, https://doi.org/10.1088/1402-4896/acd08a.

93. Das S., Goswami P., Verma V.K., Indurthi H.K., Kumar M., Koch B., Sharma D.K., (2023) Rapid access to 7-substituted cycloalkylamino and alkylamino analogues of 4-methylcoumarin reveals surprising emitters, Dyes and Pigments, 217, 111407, 2023.

94. Mehata A.K., Singh V., Srivastava V.P., Koch B., Kumar B., Muthu M.S. (2024) Chitosan nanoplatform for the co-delivery of palbociclib and ultra-small magnesium nanoclusters: dual receptor targeting, therapy and imaging, Nanotheranostics,8(2),179-201, 2024

95. Srivastavam P., Sabbarwal S., Verma V.K., Kumar M. (2024) Reply on Comments on „A novel approach for determination of nucleation rates and interfacial energy of metallic magnesium nanoclusters at high temperature using non-isothermal TGA models" by the author Ashish Bhattacharjee, Chemical Engineering Science,293, 119989, 2024, DOI:10.1016/j.ces.2024.119989

96. Verma S., Verma B. (2024) Synergistic optimization of nanostructured graphene oxide based ternary composite for boosting the performance of supercapacitor electrode material via response surface methodology, Colloids and Surfaces A: Physicochemical and Engineering Aspects, 682 p. 132893, 2024.

97. Srivastava N., Singh R.S., Verma B., Rai A.K., Tripathi S.C., Bantun F., Faidah H., Singh R.P., Jalal N.A., Abdel-razik N.E., Haque S., (2023) Microbial cellulase production and stability investigations via graphene like carbon nanostructure derived from paddy straw, International Journal of Biological Macromolecules,237 p. 124033. 2023.

98. Khan P.A., Lal B., Singh P., Singh R., Syed A., Elgorban A.M., Verma M., Mishra P.K., Verma B., Srivastava N., Donovan A.O. (2023) Enhancement in Bacteria Cellulolytic Enzyme Production Using Acid-Pretreated Banana Peel Waste: A Comparative Evaluation, Molecular Biotechnology, doi.org/10.1007/s12033-023-00816-w,2023.

99. Jaiswal R.P. (2024) Air-Breathing Silicon PV Module Enabled by Internal Micro-Fluidic Channels for Direct Cooling Application: A Validated Design Concept, ACS Energy & Fuels, 10.1021/acs.energyfuels.3c03627 (2024).

100. Singh J., Sabinneni, M.A., Jaiswal, R. P. (2023) Internal Active Cooling of a Crystalline Silicon Photovoltaic Module: Development of a Modeling Framework, Solar Energy, vol. 264, 111980 (2023).

101. Chaturvedi A., Jaiswal R.P. (2023) Investigation of External Mass Transfer during Biodegradation of Congo Red Dye in a Recirculating Packed Bed Bioreactor, Water, Air, & Soil Pollution, 234, 360 (2023).

102. Suman S., Dahiya S., Jaiswal R.P., Swaminathan P., Pal B.N. (2023) Fabrication of a Red-Sensitive Heterojunction Photodetector by Using a Narrowband Organic Dye, J. Physical Chemistry C, doi/10.1021/acs.jpcc.3c04112 (2023).

Refereed National Journals

1. Verma A., Pramanik H. (2023) Multiphase pyrolysis of waste expanded polystyrene and in-situ hydrogenation of pyrolysis oil on silica-alumina supported nickel catalyst for the production of fuel range paraffinic and aromatic hydrocarbons, Indian J Chemical Tech.

2. Priyadarshan S., Gond D.K., Yadav V.L., (2023) Metal doping in graphitic carbon nitride and tuning of band gap for dye degradation using visible light, Ind J of Chemical Technology Vol. 30, May 2023.

3. Vandna, Gond D.K., Yadav B.K., Priyadarshan S., Yadav V.L., (2024) Characterization and Synthesis of Biocomposite Film with Coir and Polyvinyl Alcohol/Polyethylene Glycol, Journal of Scientific & Industrial Research 2024/83(2)/146-152.

4. Verma S., Verma S., Das T., Verma B., (2023) Graphene-based nanocomposites: An efficient detoxification agent for heavy metal removal from wastewater, Indian Journal of Chemical Technology, 30, pp 411-422. 2023.

Proceedings of International Conferences

1. Vishwakarma M., Bhandary D. (2022) Self-Assembly driven Ripening of Nanoparticles, Circular Economy on Sustainable Basis: The Role of Chemical Engineers, Kolkata organized by CUChEAA.

2. Varshney M., Bhagavatula D. (2022) The role of a soft-gel on the natural frequencies and in the evolution of Faraday waves at the free surface of a fluid layer. American Physical Society Division of Fluid Dynamics, Indianapolis, Indiana, USA 22rd November, 2022.

3. Bhagavatula D., Nevin B., Thomas C. and Ranga N. (2022) Effect of a deep corrugated wall on the natural frequencies of a fluid interface. Bifurcation In Fluid Dynamics in Groningen, Netherlands 16th-19th August, 2022.

4. Maji N.C., Kaisare N. S., Basavaraj M.G. (2022) Storage and Temperature Stability of Emulsified Biodiesel-Diesel Blends, CompFlu-2022 at IIT Kharagpur, Research Park, Kolkata, India, December 2022.

5. Agnihotri N., Mondal M.K. (2022) White fig sawdust as a genesis of bio-energy via pyrolysis, an elaborated study elucidating thermal degradation characteristics and thermo-kinetic analysis Advances in Biopolymers and Composites: Health, Environment and Energy (ABC-HEE, 2022), Held from 20/10/2022 to 22/10/2022, NIT Allahabad, Prayagraj.

6. Agnihotri N., Mondal M.K. (2022) Influence of process parameters on pyrolytic product distribution of Ficus virens Sawdust and comprehensive characterization of its products, CHEMCON-2022, Held from 27/12/2022 to 30/12/2022, HBTU, Kanpur.

7. Gautam A., Mondal M.K. (2022) 1,5-Diamino-2-methylpentane and 2-Dimethylaminoethanol aqueous amine blend for post-combustion CO_2 capture, Advances in Biopolymers and Composites: Health, Environment and Energy (ABC-HEE, 2022), Held from 20/10/2022 to 22/10/2022, NIT Allahabad, Prayagraj.
8. Gautam A., Mondal M.K., (2022) Aqueous Triethylenetetramine and 3-Dimethyl amino-1-propanol amine blend for post-combustion CO_2 capture, CHEMCON-2022, Held from 27/12/2022 to 30/12/2022, HBTU, Kanpur.

Proceedings of National Conferences

1. Divya D., Maji N.C. (2023) Study of Silica Nanoparticles Stabilized Glycerol-Benzaldehyde Pickering Emulsion. CHEMCON, Kolkata, West Bengal, India, December 2023.
2. Akhila B., Maji N.C. (2023) Synthesis of Silica Nanostructures for Stabilization of Pickering Emulsions. CHEMCON, Kolkata, West Bengal, India, December 2023.
3. Maji N.C. (2023) Nanomaterials & Colloids: From Research Laboratory to Large scale Industry. SMYIM, Jim Corbett National Park, Uttarakhand, India, June 2023.
4. Reddy P.B.T.R., Pramanik H. (2023) Review on production of ultrapure hydrogen via PEM based electrolyzer CHEMCON-2023, Held from 27th to 30th December 2023, Kolkata.
5. Yadav N.K., Pramanik H. (2023) Preparation and characterization of PVA-lignin composite membrane electrolyte by physical crosslinking method for fuel cell application CHEMCON-2023, Held from 27th to 30th December 2023, Kolkata.

Details of 5 Articles from the Department with maximum no. of Citations in last 5 years

1. Singh S., Chakraborty J.P., Mondal M.K. (2020) Intrinsic kinetics, thermodynamic parameters and reaction mechanism of non-isothermal degradation of torrefied Acacia nilotica using isoconversional methods. Fuel 2020; 259: 116263. Elsevier B.V. (Citation 157)
2. Prajapati A.K., Das S., Mondal M.K. (2020) Exhaustive studies on toxic Cr(VI) removal mechanism from aqueous solution using activated carbon of Aloe vera waste leaves. Journal of Molecular Liquids 2020; 307: 112956. Elsevier B.V. (Citation 129)
3. Gupta G.K., Mondal M.K. (2019) Kinetics and thermodynamic analysis of maize cob pyrolysis for its bioenergy potential using thermogravimetric analyzer. Journal of Thermal Analysis and Calorimetry, 2019; 137:1431–1441. Springer. (Citation 112)
4. Singh S., Chakraborty J.P., Mondal M.K. (2020) Torrefaction of woody biomass (Acacia nilotica): Investigation of fuel and flow properties to study its suitability as a good quality solid fuel, Renewable Energy 2020; 153:711-724. Elsevier B.V. (Citation 102)
5. Singh S., Chakraborty J.P., Mondal M.K. (2020) Pyrolysis of torrefied biomass: Optimization of process parameters using response surface methodology, characterization, and comparison of properties of pyrolysis oil from raw biomass, Journal of Cleaner Production 2020; 272: 122517. Elsevier B.V. (Citation 94)

Distinguished Visitors

Sl. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	Mr. Mohnish Verma	17.11.2023	1993 Batch Visit
2	Mr. Ravi Jha	17.11.2023	1993 Batch Visit
3	Mr. Sanjay Kumar Tiwari	17.11.2023	1993 Batch Visit
4	Mr. Ajay Asthana	17.11.2023	1993 Batch Visit
5	Mr. Hridayesh Dua	17.11.2023	1993 Batch Visit
6	Mr. Anurag Joshi	17.11.2023	1993 Batch Visit
7	Mr. Ashwani Kumar	17.11.2023	1993 Batch Visit
8	Mr. Rishi Maggon	17.11.2023	1993 Batch Visit
9	Mr. Rajeev Gupta	17.11.2023	1993 Batch Visit
10	Mr. Ramendra Verma	17.11.2023	1993 Batch Visit
11	Mr. Krishnamurthy P.	17.11.2023	1993 Batch Visit
12	Mr. Mohit Saini	17.11.2023	1993 Batch Visit
13	Mr. Sandeep Kumar Chaurasia	17.11.2023	1993 Batch Visit
14	Mr. Priyanka Sharma	13.02.2024	Old Alumni
15	Mr. Sushil Kumar	16.02.2024	1971 Batch Visit
16	Mr. Rathindra Nath Bandyopadhyaya	20.02.2024	Old Alumni
17	Mr. Rajdeep Bhatia	20.02.2024	Old Alumni

Other activities

Indian Faculty visits in the Department

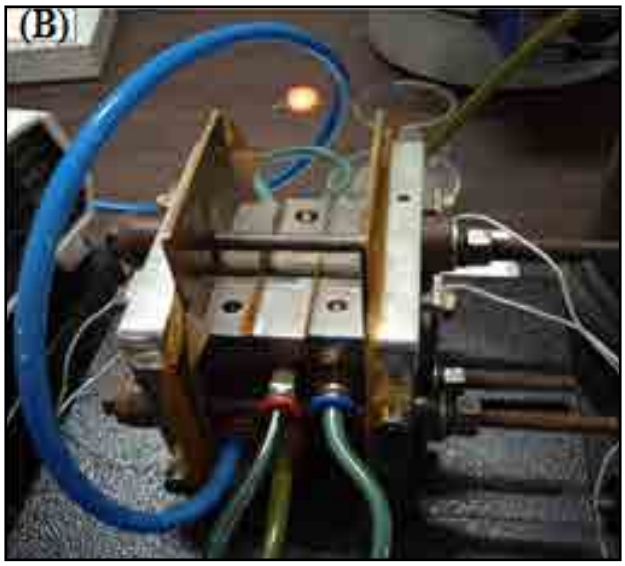
Sl. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1	Prof. D.P. Rao	Faculty Interaction	March 2024
2	Prof. Ashutosh Sharma	Faculty Interaction	October 11, 2023
3	Dr. Sayantan Majumdar	Invited Talk	October 11, 2023
4	Prof. Abhijit Majumdar	Invited Lecture	February 02, 2024

Foreign Faculty Visits in the Department

S. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1	Prof. Ranga Narayanan	Invited Lecture	December 13, 2023

Key Instruments

Membrane reformer for ultra-pure Hydrogen generation.



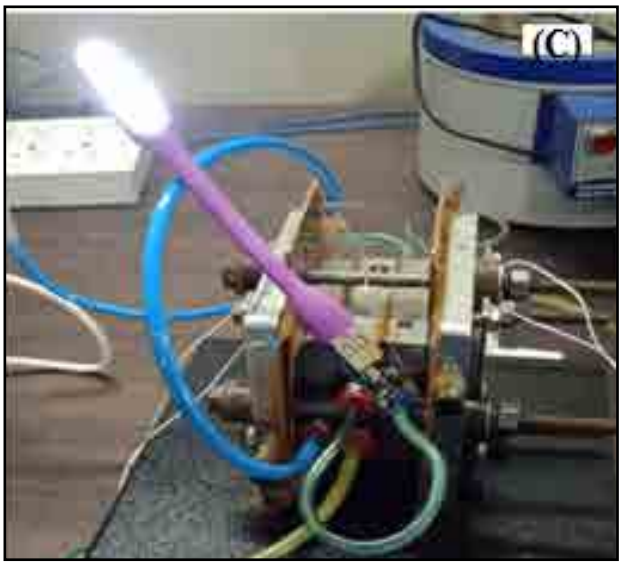


Fig. 1. Photographic view of (**A**) Unitized Regenerative Fuel Cell (URPEMFC) for the Production of ultrapure hydrogen (**B**) URPEMFC stack for hydrogen production in electrolysis mode and simultaneous power generation in Fuel cell mode showing LED light and (**C**) URPEMFC stack for hydrogen production in electrolysis mode and simultaneous power generation in Fuel cell mode showing array of LED light glowing with high intensity.

9. Department of Civil Engineering

Name of the Department: Department of Civil Engineering

Year of Establishment: 1949

Head of the Department: Prof. Sasankasekhar Mandal w.e.f. 01/01/2023

Brief Introduction of the Department:

The Civil Engineering Department was established in 1949 (then known as Civil and Municipal Engineering) in BENCO (Banaras Engineering College) which was a part of BHU. The formal sanction of the Visitor of the University to create this Dept. was received in 1956 and the B.Sc. Engineering (Civil & Municipal) Degree was recognized by the Govt. of India in 1958. The department was rechristened to the present name in the year 1975. Presently, it caters its student with seven specialized Post Graduate courses like Environmental Engineering, Engineering Geoscience, Geo-informatics, Hydraulics and water resources Engineering, Structural Engineering, and Transportation Engineering. The department has taken up various research programmes apart from regular teachings and the research activities, namely CSIR, UGC, SAP, HUDCO, DST and AICTE. It has a created cooperation with industries to work for the various tasks given by Govt., Semi-Govt. and other Private organisations. It is particularly dedicating in providing solutions to the people of the country with technical solutions and guidelines. It conducts short-term courses, training courses, seminars, workshops and conferences for enrichment in quality of students and entrepreneurs. The department has its own Civil Engineering Society which is dedicated in organising lectures by various experts in their respective field, group discussions, competitions, sports and various other extra-curricular and cultural activities so that there would be an holistic all round development of students. Also this society conducts a separate fest for the Civil Engineering Students, known as, Shilp.

Major areas of Research

Group A: Structural Engg., Geotechnical Engg., Transportation Engg. and Engineering Geoscience:

Thrust Areas: Development and characterization of Smart materials and Construction Technologies for sustainable infrastructure.

Group B: Hydraulics & Water Resources Engg., Environmental Engg., Geoinformatics Engg.

Thrust Areas: Water Resources Management, River Modelling, Water quality monitoring and treatment, River Health Restoration, Waste Management and Pollution Control

Infrastructure

S. No.	Particulars	Number
1	No. of Classrooms	10
2	No. of Laboratory	10
3	No. of Computers available for students in the Department	60

Academic Programmes offered

Students on Roll

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1.	B. Tech.	144	131	132	128	-
2.	Dual Degree (IDD)	31	29	34	37	33
3.	M. Tech	69	38	-	-	-
4.	PhD (Under Institute Fellowship)	26	4	4	4	9
5.	PhD (Under Project Fellowship)	1	2	2	2	2
6.	PhD (Under Sponsored Category)	-	2	4	1	1

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Shashi Bhushan Kumar	22061502	Structural Engineering Convention	VNIT Nagpur, 07-09 Dec 2023	IIT (BHU)
2	Ranveer Kumar	20061501	National seminar on Grand Challenges in Earth System Sciences	1 –3rd April 2023 IIT (BHU)	PMRF
			3rd International Conference on 'River Health: Assessment to Restoration' (RHAR 2023)	12 – 14th oct 2023(IITBHU)	NA
3	Ranveer Kumar	20061501	National seminar on Grand Challenges in Earth System Sciences	1 –3rd April 2023 (BHU)	PMRF
			3rd International Conference on 'River Health: Assessment to Restoration' (RHAR 2023)	12 – 14th oct 2023 (IIT BHU)	NA
4	Shreyansh Mishra	20061504	3rd International Conference on 'River Health: Assessment to Restoration' (RHAR 2023)	12 – 14th oct 2023 (IITBHU)	NA
5	Mohit Kumar Srivastava	19061006	National Conference on Sustainable Development of Smart Cities Infrastructure (SDSCI 2023)	27 – 28th May 2023 (NIT Kurukshetra)	RSGF
6	Vijay Kumar	21062003	13 th Structural Engineering Convention (SEC-2023)	07-09 Dec 2023 VNIT Nagpur	IIT BHU
7	Amarendra Nath Shandilya	19061001	13 th Structural Engineering Convention (SEC-2023)	07-09 Dec 2023 VNIT Nagpur	IIT BHU
8	Neeraj Sharma	22061005	Engineering Mechanics Institute Conference 2024 (EMI 2024)	University of Illinois Urbana-Champaign, Chicago, IL, USA	STGS (IIT BHU)
9	Ashwani Sharma	22062006	International Conference on Computational Mechanics and Simulation	Dec. 20-22, 2023, IIT Ghandinagar	Institute
10	Shubham Dixit	21061503	PMRF annual symposium 2024	3-4, March 2024, IIT Indore	PMRF Contigency Fund
11	Hari Prakash	23061003	Statistical tools for modelling big data in hydro-climatology (STAMBH)	17-23 March 2024, IIT Roorkee	IIT Roorkee
ABROAD					
1	Abhay Kumar Verma	17061503	17th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering 2023 (17ARC), Astana, Kazakhstan	14-8-2023 to 18-8-2023	Science & Engineering Research Board (SERB)
2	Ranveer Kumar	20061501	Research Visit to work on IRP entitled "Effects of River Aquifer Exchanges on Riverine Ecosystem Resilience to Global Change Comparative Approach of Ganga and Rhone River Basin Network"	5th June to 5th July 2023 (ENS Lyon, France)	PMRF
			Short term professional course on "Green and Circular Economy"	4th Sep to 26th Sep (university of copenhagen and city of Aarhus, Denmark)	Danida Fellowship Center, Denmark
3	Shreyansh Mishra	20061504	Research Visit to work on IRP entitled "Effects of River Aquifer Exchanges on Riverine Ecosystem Resilience to Global Change Comparative Approach of Ganga and Rhone River Basin Network"	5th June to 5th July 2023 (ENS Lyon, France)	IRP, ENS Lyon
			Short term professional course on "Sustainable and Inclusive Urban Development"	26th Feb to 22th March (University of Roskilde and city of Aarhus, Denmark)	Danida Fellowship Center, Denmark
4	Vivek Pratap Wagh	19061502	103rd Annual Meeting of Transportation Research Board	07-11 Jan. 2024 Washington DC, USA	Institute (Minor) Self (Major)
5	Vivek Pratap Wagh	19061502	14th ISAP International Conference on Asphalt Pavement	02-07 June, 2024, Montreal, Canada	SERB (major) Self (Minor)
6	Ankit Tewari (PhD Scholar)	17061501	Course on wastewater management	October, 02-22, 2023, Denmark Technical University (DTU) Denmark	Danida Fellowship Center

Names of students/scholars who got prizes and awards outsidethe Institute

S. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Saroj Kanta Behera	18061510	Best oral paper presentation award	Dec 15-16, 2023 (IIT Bhubaneswar, Odisha)	International Conference on Pollution Control and Clean Environment

Names of scholars/students who won Convocation/Institute Day prizes

S. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1	Vijay Kumar	21062003	a) IIT(BHU) Varanasi Medal for standing First at the M. Tech. in Civil Engineering Examination, 2023. b)R. P. Singh, IRSE (Retired) Gold Medal for securing highest marks at the M. Tech. in Civil Engineering Examination, 2023.	IIT Director

Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
PROFESSORS			
1	Dr. Gautam Banerjee	Nov 1994	Environmental Engineering (Water, Wastewater, EIA & EA)
2	Dr. Devendra Mohan	2004	Environmental Engineering
3	Dr. Prabhat Kumar Singh	2000	Environmental Engineering
4	Dr. Prabhat Kumar Singh Dikshit	2009	Hydraulics and Water Resources Engineering, R S and GIS
5	Dr. Sasankasekhar Mandal	2002	Structural Engineering
6	Dr. Rajesh Kumar	May, 2004	Structural Engineering, Soil-Structure Interaction under Earthquake Excitation, Finite Element Analysis, RCC Design of Buildings and Bridges, Concrete Material and Structural Optimization
7	Dr. Shyam Bihari Dwivedi	Dec,1992	Engineering Geosciences
8	Dr. Arun Prasad	2000	Geotechnical Engineering (Soil stabilization, Unsaturated soil mechanics, Slope stability)
9	Dr. Krishna Kant Pathak	2001	Structural Engineering
10	Dr. Brind Kumar	19.10.2001	Transportation Engineering
11	Dr. Anurag Ohri	04.01.2012	Geoinformatics Engineering, Municipal Solid Waste Management, Surveying
ASSOCIATE PROFESSORS			
1	Dr. Ankit Gupta	29 June, 2012	Transportation Engineering, Sustainable Pavement Materials, Traffic Engineering
2	Dr. Kamlesh Kumar Pandey	2015	Hydraulics & Water Resources Engineering
3	Dr. Medha Jha	December, 2003	Engineering Geosciences
4	Dr. P. Bala Ramudu	12.10.2007	Geotechnical Engineering- Environmental Geotechnics; Geopolymers; Remediation of Contaminated Sites; Electreo Osmotic consolidation
5	Dr. Pabitra Ranjan Maiti	2009	Structural Engineering
ASSISTANT PROFESSORS			
1	Dr. Kesheo Prasad	2012	Hydraulics & Water Resources Engineering
2	Dr. Abhisek Mudgal	2011	Transportation Engineering
3	Dr. Manash Chakraborty	31 July, 2015	Geotechnical Engineering, Finite Element Analysis
4	Dr. Agnivesh Pani	9, April, 2020	Transportation Planning, Freight Transportation, Travel Behaviour, City Logistics
5	Dr. Rosalin Sahoo	26-03-2015	Composite Plates/Shells, CNT/ Smart/FGM, Uncertainty Analysis
6	Dr. Shishir Gaur	July, 2010	Numerical Modelling, Optimization, GIS & Remote Sensing
7	Dr. Supriya Mohanty	18-Jun-2014	Geotechnical Earthquake Engineering, Liquefaction Potential Evaluation, Nonlinear Dynamic Response Analysis.
8	Dr. Suresh Kumar	2018	Geotechnical Engineering
9	Dr. Abhisek Mudgal	Dec. 2011	Geotechnical Engineering

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
10	Dr. Ayan Haldar	09.10.2019	Adaptive meta-materials, Origami and Krigami based adaptive structures, Mechanics of slender biological structures, Elastic instabilities in shells, Snap-through in multistable structures
11	Dr. Kshitij Kumar Yadav	20-07-2020	Stability of thin shell structures, Computational Mechanics, Stability of wind turbine towers and gas pipelines, Structural dynamics, Characterization of ground motions, Continuum mechanics
12	Dr. Mahendra Kumar Pal	Sep 25, 2015	Computational Solid Mechanics, Structural Dynamics and Disaster Mitigation and Planning
13	Dr. Samim Mustafa	22.03.2017	Structural health monitoring, Bayesian method and uncertainty quantification, Bridge weigh-in-motion
14	Dr. Vishwajit Anand	2021	Earthquake Engineering, Soil-Structure Interaction, Rupture-to-Rafters imulation, Dynamics of Offshore Wind Turbine Structures, Machine Learning Applications in Earthquake Engineering
15	Dr. Basuraj Bhowmik	2018	Structural Engineering
16	Dr. Pramod Soni	2018	Hydrological modelling, Climate Change, Machine Learning, GIS, remote sensing applications in water resources, Ground water hydrology, Atmospheric Modelling
17	Dr. Anshuman Sharma	2019	Intelligent Transportation Systems (including: connected and automated vehicles, and electric vehicles), Traffic Flow Theory, Human Factors
Guest Faculty			
1	Dr. KVG Prakhya	25 October – 13 November, 2023	
		26 February – 10 March, 2024	

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation	Date of Appointment in the department
1	Shri Kamlesh Kumar Yadav	Junior Superintendent	11/09/2023
2	Shri Rajesh Prasad	Junior Superintendent	07/03/2019
3	Shri Ajit Kumar	Skilled Clerical Staff (Ex-Cadre)	16/04/2015
4	Shri Basanta Prasad	Jr. Technical Superintendent	28/12/1990
5	Shri Vinod Kumar Singh	Senior Technician	14/10/1993
6	Shri A. K. Jaiswar	Senior Technician	22/02/2007
7	Shri Yashwant Singh	Senior Technician	06/06/2007
8	Shri Amit Kumar Singh	Senior Technician	11/11/2011
9	Shri Netrapal	Junior Technician	13/06/2012
10	Shri Jai Singh Yadav	MTS-Skilled Worker	01/01/2015
11	Shri Deepak Kharwar	Unskilled Worker	22/01/2015
12	Shri Mintoo Lal Srivastava	MTS-Skilled Worker	13/12/2016
13	Shri Suraj Kharwar	Daily Wager	-

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

S. No.	Cordinator	Title	Period
1	Dr. Basuraj Bhowmik	Special Session in the Engineering Mechanics Institute Conference Symposium, EMI 2022 Georgia Tech, Atlanta, USA. Advances in bridge health monitoring: Data-driven and machine learning methods, indirect monitoring, crowdsourced mobile sensing	June 06-09, 2023
		International conference on climaTE Resilient Infrastructures and Communities (INTERLINC), IIT-BHU	28-30 March, 2024
2	Dr. Medha Jha	3rd International Conference on RIVER HEALTH: ASSESSMENT TO RESTORATION (RHAR-2023), Department of Civil Engineering, Indian Institute of Technology (Banaras Hindu University), Varanasi.	October 12-14, 2023
3	Dr. Samim Mustafa	Bridge Weigh-In-Motion Systems and Applications to Structural Health Monitoring	July 2-5, 2023

S. No.	Cordinator	Title	Period
4	Dr. Agnivesh P.	Short-term course on Advanced Data Analytics and Cyber-Physical Systems for Urban Mobility, Funded by I-DAPT HUB Foundation, IIT (BHU)	April 14-18, 2023
5	Dr. Vishwajit Anand Dr. Kshitij Kumar Yadav, Dr. Pabitra Ranjan Maiti	SERB-Sponsored Karyashala (High End Workshop) on Laboratory Testing and Characterization of Construction Materials	22.05.2023 to 30.05.2023
6	Dr. Mahendra Kumar Pal, Dr. Vishwajit Anand	7-Day Training Program for Engineers and Officers of Tribal Development Bhopal	15.05.2023 to 21.05.2023
7	Dr. Vishwajit Annad Dr. Mahendra Kumar Pal	SERB-Sponsored Vritika (Training and Skill Internship) on Applications of Artificial Intelligence and Machine Learning in Structural Engineering Problems	15.05.2023 to 13.07.2023
8	Prof. Prabhat Kumar Singh, Dr. Shishir Gaur, Dr. Medha Jha, Dr. Anurag Ohri	3rd International Conference on 'River Health: Assessment to Restoration' (RHAR 2023)	12 - 14 Oct, 2023.
9	Prof. Sasankasekhar Mandal, Prof. Rajesh Kumar, Dr. Mahendra Kumar Pal, Dr. Vishwajit Anand	MP Commissioner Tribal Div. under CM Rise project	15th May – 21st May, 2023
10	Prof. Prabhat Kumar Singh	3rd International Conference on "River Health Assessment to Restoration (RHAR 2023)"	Oct, 12-14, 2023
11	Prof. Prabhat Kumar Singh	RHAR 2023 Pre-conference workshop at BBAU Lucknow	September 15, 2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes

S. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Dr. Basuraj Bhowmik	International Conference on Condition Assessment, Rehabilitation & Retrofitting of Structures – CARRS 2023	11-13 Dec, 2023
2	Dr. Basuraj Bhowmik	Keynote on "Online downtime detection of wind turbines A renewable real-time approach"	27-06-2023
3	Dr. Basuraj Bhowmik	Invited talk on "Basics of Structural Health Monitoring" at the Department of Civil Engineering, IIT(BHU) (CM Rise Program)	17-05-2023
4	Dr. Supriya Mohanty	Indian Geotechnical Conference: IGC 2023	Dec 14-16, 2023, Department of Civil Engineering, IIT Roorkee, India.
5	Dr. Medha Jha	One day workshop on Technology for Drought Mitigation& Drought Management. (Drought Mitigation & Drought Management)	4 March 24, Venue- Indira Gandhi Pratisthan, Vibhuti khand, Gomti Nagar, Lucknow, UP.
6	Dr. Samim Mustafa	Eighth International Symposium on Life-Cycle Civil Engineering (IALCCE 2023)	July 2-6, 2023, Milano, Italy
7	Dr. Agnivesh P.	Transportation Planning in the Era of Big Data Mining and Data-Driven Algorithms	November 6, 2023 at NIT Patna for the One-week Short Term Course on Resilient and Sustainable Transportation Engineering (RASTE)
8	Dr. Agnivesh P.	Bituminous material characterization using sophisticated techniques	May 26, 2023 at IIT BHU Varanasi for SERB-Karyashala conducted on civil engineering material characterization
9	Prof. S. Mandal	National Conference on Wind Engineering	15-16 March 2024, VIT Chennai
10	Dr. Mahendra Kumar Pal & Dr. Vishwajeet Anand	7-Day Training program for Engineers and Officials of Tribal Development Department, M.P. Government selected under CM Rise Yojna	15- 21st May 2023, IIT (BHU), Varanasi
11	Prof. Prabhat Kumar Singh	"Effects of Pharmaceutical Pollutants (PPs) on River Health: Assessment through a River Health Index (RHI)" (attended 6th International Eco Summit Congress 2023- "Building a Sustainable and Desirable Future: Adapting to a changing land and sea-scape" at Gold Coast, Australia)	June 13-17, 2023 Gold Coast, Australia

S. No.	Name of Faculty Member	Title	Period and Venue
Meetings			
1	Dr. Supriya Mohanty	Expert Member for the interview for the post of Assistant Engineer "Uttar Pradesh Power Corporation Limited"	Oct. 15-17, 2023, IIT Kanpur
2	Dr. Samim Mustafa	Site visit for installation of accelerometers on a concrete bridge under Indian railway	April 18, 2023, Gorakhpur, UP

Special lectures delivered by faculty members in other institutions

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1.	Prof. Rajesh Kumar	Job and Carrier opportunities for Civil Engineers	BIT Sindri, Dhanbad, Jharkhand	12 Jan 2024
2.	Prof. Devendra Mohan	Awareness workshop on Intellectual Property Rights	Rajkiya Engineering College Banda	17 Feb 2024
		(I) Water pollution (II) Air Pollution: Some Issues	UGC-HRDC, BPSMV Khanpur Kalan, Sonipat	10 Feb 2024
		Valmiki Ramayan: Aithehasik va Vaigyanik Punravalokan	Vedic Vigyan Kendra, BHU	27 Jan 2024
		Recent Advances in Hydraulic Modelling (RAHM-2023)	Rajkiya Engineering College, Sonbhadra	09 Dec 2023
		(I) Water Pollution and Control Measures (II) Air Pollution and Abatement Measures.	Faculty Induction Programme, HRDC, BHU	01 Dec 2023
		Sustainable Development in Context of Ancient & Modern Indian Knowledge System- Role of Science Engineering and Technology	Teerthanker Mahaveer University, Moradabad	03 Nov 2023
		E-waste management	BSACET, Mathura	18 Aug 2023
		National Technology Day, 2023	K.N. Govt. P.G. College Bhadohi – Online Lecture	11 May 2023
		ज्ञानोत्सव - 2023	IIIT Prayagraj	7-8 Apr 2023
3	Dr. Basuraj Bhowmik	Real-time Structural Health Monitoring of Built Infrastructures: Contemporary approaches and learnings	IIT Hyderabad	12 Dec 2023
4	Dr. Supriya Mohanty	"Study on Utilization of Municipal Solid Waste (MSW Fines) for Geotechnical Purposes"	Lecture Series - Pan IIT Lecture Series on Geotechnical Engineering, organized by IIT Kanpur & IIT(ISM) Dhanbad.	20 Sep 2023
5	Dr. Samim Mustafa	Vibration-based structural health monitoring and bridge weigh-in-motion	Ministry of Railway, Rail Bhawan, New Delhi	21 Aug 2023
6	Dr Manash Chakraborty	Upper bound Limit Analysis for unsaturated soils	IIT Gandhinagar	22 Dec 2023
7	Dr Manash Chakraborty	Insights on the consolidation analysis	IIT Ropar	10Mar 2024
8	Dr. Mahendra Kumar Pal	3-D Concrete Printing: Digitalization in Construction	MES Kolkata	10 Dec 2023
9	Dr. Mahendra Kumar Pal	Implementing integrated earthquake simulator for Indian cities	IIT Hyderabad	5 Jul 2023
10	Prof. P.K.S. Dikshit	Meandering of Rivers	NIT, Warangal	20 Dec 2023
11	Prof. Prabhat Kumar Singh	"Rivers of India - A Journey through Past, Present, and Future" (Exploring the Namami Gange Programme and Initiatives for a New India).	Amity University, Haryana	22 Sep 2023
12	Prof. Prabhat Kumar Singh	"Visions for Water Smart Cities in Bihar"	NIT Patna	25 May 2023
13	Prof. Prabhat Kumar Singh	Expending India Australia Collaboration on River Health to Restoration	Western Sydney University (WSU), Australia	19 Jun 2023

Visits abroad by faculty members

S. No.	Name of Faculty Member	Country Visited	Date of Leaving india	Date of Returning India	Purpose of Visit	Funding from
1	Prof. Rajesh Kumar	USA	14-05-2023	27-05-2023	To attend 2023World Environmental & Water Resources Congress at Hendertson, NV, USA, May 21-25, 2023	CPDA, IIT (BHU), Varanasi
2	Dr. Samim Mustafa	Italy	July 2, 2023	July 11, 2023	Organizing and attending conference	SERB, ITS
3	Dr Manash Chakraborty	Vietnam	12/12/23	16/12/23	Attending Conference	CPDA
4	Dr. Mahendra Kumar Pal	Japan	11th June 2023	25th June 2023	Collaborative research with University of Tokyo, Japan in the field of seismic risk assessment of Indian cities	JICA, Japan
5	Dr. Ankit Gupta	Poland	10th June, 2023	16th June, 2023	Conference	CPDA
6	Prof. Prabhat Kumar Singh	Australia	12th June 2023	22th June 2023	Conference and Interaction at Western Sydney University (WSU), Australia	CPDA

Honours and awards

S. No.	Name of Faculty Member	Details of Award
1	Prof. Devendra Mohan	Best Paper Award for 'Fluoride Removal Using Capacitive Deionization with Electrodes Coated on Both Sides' at International Conference on Environmental Sustainability and Climate Change (ICESCC) 2023 at NIT Meghalaya (Online)
2	Dr. Supriya Mohanty	Received "Outstanding Reviewer for 2023" for the Journal of Hazardous, Toxic, and Radioactive Waste, ASCE.
3	Dr. Supriya Mohanty	Received "Award for Outstanding Contribution by Professionals in the Field of Concrete (Female)-2023" during Annual Endowment Awards-2023, 19th January 2024 by Indian Concrete Institute (ICI)-Varanasi Centre in association with JK Cement Ltd.
4	Dr. Supriya Mohanty	Recognized as one of the top 75 Indian women leaders in the field of Geotechnical Engineering, By (IGS Women Forum) of the Indian Geotechnical Society. Book titled "Daughters of Indian Soil" released during IGC 2023 (14-16 Dec 2023) at IIT Roorkee.
5	Dr. Agnivesh P.	Received "Best Thesis Award" (2023 December) by Transportation Research Group (TRG) India for being recognized as the thesis with most notable societal impact during 2018-2023
6	Dr. Agnivesh P.	Received "Ansys Fellowship" for Guiding Master's students (2023 August) - One-time research grant of 1,50,000 INR and 1 year of fellowship for guiding a Master's student in the thesis topic of emissions modelling from Indian roadways.
7	Dr. Agnivesh P.	Selected for "Equimobility Champions" program by World Resources Institute (WRI) for designing gender-inclusive transport systems in India – June 2024
8	Dr. Agnivesh P.	Received "Best Thesis Award" (2023 December) by Transportation Research Group (TRG) India for being recognized as the thesis with most notable societal impact during 2018-2023.
9	Prof. Sasankasekhar Mandal	Session chaired in the 10th NCWE 2024 at VIT Chennai, March 15-16, 2024.
10	Ankit Gupta	'Award of Recognition' presented by the Director of CSIR-CRRI. He was awarded for his outstanding contribution to Bitumen and Road Construction Technology at the 3rd Global Road Construction Conference (GRC 2023) held on 8th-9th November, 2023 at Hotel Leela Ambience, Delhi NCR.

Fellowships of academic and professional societies

S. No.	Name of Faculty Member	Details of Fellowship
1	Prof. Devendra Mohan	Life Member, Swadeshi Science Movement of India, Delhi
2	Dr. Medha Jha	1. Life Member of Geological Society of India 2. Life Member of Indian Association of Hydrologists 3. Life member of Quarterly Journal of the Geological Association
3	Dr. Samim Mustafa	Life Membership of Indian Society of Earthquake Technology (ISET)
4	Dr. Manash Chakraborty	Indian Geotechnical Society

S. No.	Name of Faculty Member	Details of Fellowship
5	Dr. Vishwajit Anand	Lifetime Member, Institution of Engineers (India)
6	Dr. Vishwajit Anand	Lifetime Member, Indian Society of Earthquake Technology
7	Prof. Sasankasekhar Mandal	Bureau of Indian Standards, New Delhi, Construction Execution Services Sectional Committee, Services Sector Division (SSD) 21
8	Prof. Sasankasekhar Mandal	Bureau of Indian Standards, New Delhi, Construction Execution Services Sectional Committee, Services Sector Division (SSD) 22
9	Prof. Sasankasekhar Mandal	Bureau of Indian Standards, New Delhi, CED 57, Cyclone resistant structures.

Books, monographs authored/co-authored

S. No.	Name of Author/ Co- Author	Title	Publisher
1.	Ram Raj Meena, Suresh Kumar, Pramod Soni	Electrocoagulation of fluoride from water with Fe-based ion electrode, Accepted for publication in Advanced Treatment Technologies for Fluoride Removal in Water,	Springer Nature, 2023
2.	Megawath Narahari, Nekram Rawal, Pramod Soni	Assessment of hydrological modeling for surface run-off monitoring; hydrodynamic modeling for inundation mapping - A review	Elsa. Elsevier
3.	Dr. Agnivesh P	Handbook of Travel Behaviour (Chapter 24)	Elgar Publishers

Editorial boards of journals

S. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Dr. Supriya Mohanty	Member, Editorial Review Board	International Journal of Geotechnical Earthquake Engineering (IJGEE), IGI Global.
2	Dr. Agnivesh P	Handling Editor	Transportation Research Record
3	Prof. P.K.S. Dikshit	Member	Journal of Hydroinformatics
4	Dr. Ankit Gupta	Associate Editor	Innovative Infrastructure Solutions, Springer
5	Dr. Ankit Gupta	Associate Editor	International Journal of Civil Engineering, Springer
6	Dr. Ankit Gupta	Associate Editor	ICE-Transport, Emerald
7	Dr. Ankit Gupta	Academic Editor	Advances in Civil Engineering, Wiley

Design and Development Activities

New facilities added

S. No.	Details (Infrastructure, Equipments, etc.)	Value (in Lakhs of Rupees)
1	Dr. Samim Mustafa: Four MEMS Accelerometers by EPSON, JAPAN	8.4
2	A new Cycle stand at the back of the department, along the road	34

Patents filed

S. No.	Name of Faculty Member	Title of Patent
1	1. Dr. Bala Ramudu Paramkusam 2. Dr. Deep Jyoti Singh 3. Prof. Arun Prasad	System for electro-osmotic soil Consolidation and a method thereof

Research and Consultancy

Sponsored research projects *(Ongoing only)*

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
1	"Improvement of delamination fracture toughness in nano-graphene particles reinforced polymer composite laminates: An Experimental-numerical approach.	3 years	SERB	18.30	Dr. Rosalin Sahoo
2	An experimental-numerical approach to enhance the mechanical stability of nano-graphene reinforced polymer composite in an in-situ environment emphasizing temperature variation	3 years	SERB	20.60	Dr. Rosalin Sahoo

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
3	An experimental-numerical study of Improved delamination toughness in polymer composite laminates through the incorporation of nano-graphene particles	2 years	MHRD	67.20	Dr. Rosalin Sahoo
4	Development of an Efficient and Portable Bridge Weigh-In-Motion System for In-service Condition Monitoring	2 years (2024-2026)	SERB	28.30	Dr. Samim Mustafa
5	Vibration based structural health monitoring & amp; in-service condition monitoring using bridge weigh-in- motion system	2 years (2022-23)	IIT (BHU)	10.00	Dr. Samim Mustafa
6	Exploring prospects of shared e-micro mobility in Rural India	Aug-2023 to Sep-2024	Transport and Health Integrated research NetworK, UK	2.00	Dr. Anshuman Sharma
7	Making Transit Accessible to All: Ensuring Fairness and Equity in Data-Driven Transit Planning	2023– 2024	I-DAPT Hub Foundation, India-US Collaborative Project	19.92	Dr. Agnivesh P
8	Developing A Data-Driven Practice Guidebook on Mid-Term and Long-Term Freight Demand Modelling for National Highways	2023 – 2026	Ministry of Road Transport and Highways (MoRTH)	21.25	Dr. Agnivesh P
9	A Data-Driven Toolkit for Enabling Multimodal Freight Transportation in India and Austria	2023-25	Department of Science and Technology (DST)	7.12	Dr. Agnivesh P
10	Developing Implementable Passenger Car Units (PCU) For Indian Traffic	2023-26	Ministry of Road Transport and Highways (MoRTH)	20.45	Dr. Agnivesh P
11	Urban Commercial Freight Demand Models for Last-Mile Delivery Activity	2024-25	Volvo Research and Education Foundation (VREF)	2.50	Dr. Agnivesh P
12	Coal mine overburden Alkali-activated composites for pre-fabricated 3D volumetric construction elements & system thereof	2024-2026	Central Mine Planning & Design Institute Limited, Ministry of Coal	62.88	Dr. Suresh Kumar (PI) Dr. Vishwajit Anand (Co-PI)
13	Development of accelerated carbonation curing strategy for durable infrastructure and cleaner environment	2024 (Jan-Dec)	IIT (BHU) Varanasi	10.00	Dr. Vishwajit Anand
14	Prof. Arun Prasad	Stability analysis of ash dykes	NTPC	46.0	Prof. Arun Prasad
15	Prof. Arun Prasad	Retrofitting of ash ponds	Hindalco Industries	16.0	Prof. Arun Prasad
16	Automatic Map Generation from High Resolution Images Applying Deep Learning Techniques	March 2021-March 2024	DST	33.22	Dr. Shishir Gaur
17	Bringing Global Sustainable Solutions for Clean Rivers in India through the Concept of Living Lab	2023-24	The Danish Embassy, New Delhi	59.05	Dr. Anurag Ohri
18	Hydrological experiment and water fluxes modelling for SWOT and Sentinel-3A/3B missions: Ganga River	2023-24	ISRO	10.34	Dr. Anurag Ohri
19	Development of Algorithms for water quality monitoring using ground instrumentation and optical sensors onboard Unmanned Airborne Vehicle and Satellite Data	2022-25	ISRO	25.18	Dr. Anurag Ohri
20	Sustainable and Resilient Strengthening Solutions for Unreinforced Masonry structures in Rural India	01/01/2023-31/12/2024	JICA	20.00	Dr. A. Rajagopal (IIT Hyderabad) & Dr. Mahendra Kumar Pal (IIT-BHU)
21	Development of Integrated Low-Cost Identification and Alert System for Overloading, Over Speeding, and Lane Discipline Violation of Vehicles operating on Expressways	2 years	I-DAPT-HUB-Foundation, IIT (BHU)	17.88	Brind Kumar

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
22	Development of Performance Based Mix Design Process: A Re-look at the Marshall Mix Design Process for Production of Strong and Durable Bituminous Mixes	2021 – 2024	NHAI	92.00	Dr. Ankit Gupta
23	Development of Road Research Laboratory at IIT (BHU) Varanasi	2021-2026	GR Infraprojects Pvt. Ltd.	375.00	Dr. Ankit Gupta
24	Utilization of Industrial Waste in dense and Gap Graded Asphalt Mixes as Fillers	2022-2024	DST	60.00	Dr. Ankit Gupta
25	Developing Implementable Passenger Car Units (PCU) for Field Usage and Nationwide Transferability	2023-2026	MoRTH	22.00	Dr. Ankit Gupta
26	Development of Codal Guidelines for Performance Based Mix Design for Marshall Mixes (for Plant Produced Mixes)	2023-2026	MoRTH	4.5	Dr. Ankit Gupta
27	Strategic Planning for Water Resources and Implementation of Novel Biotechnical Treatment solutions and Good Practices (SPRING) 2020	2020-2023 (Ongoing)	Indo- EU Collaborative Research Project, funded by 'Horizon 2020' and DBT, GOI	71.28	Prof. Prabhat Kumar Singh
28	Bringing Global Sustainable Solutions for Clean Rivers in India through the Concept of Living Lab (Co-PI)	Jan 16, 2023-Oct. 31, 2023	Indo-Danish collaboration project, funded by Danish Embassy, New Delhi	59.45	Dr. Shishir Gaur

Industrial consultancy projects *(Ongoing only)*

S. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
1	Prof. Rajesh Kumar & Prof. S. Mandal	Planning and Design of R&R Colony of amelia Coal Mine Project at Singrauli, M.P., through MOU	Tehri Hydro Development Corporation India Limited. (THDCIL),	1.5 Crore
2	Prof. Rajesh Kumar	Vetting of Construction of Elevated Corridor: Danapur to Bihta Section.	Govt. of Bihar, through Contractor	36.0 lakh
3	Prof. Rajesh Kumar	Vetting of Various Bridges of NHAI	NHAI, through Contractor	50.0 lakh approx.
4	Dr. Basuraj Bhowmik	Design and vetting of overhead water tanks	Buildsworth Pvt. Solutions Noida	30.00
5	Dr. Pramod Soni	Submission of Hydrology of Major Bridge @ Km 405+272 for Proof Checking.	NKC Projects Pvt Ltd, Survey	Rs. 59,000/-
6	Dr. Pramod Soni	Vetting of Hydraulic design of Intake structure for Multi-village water supply scheme (Prayagraj Ganga scheme)	GAJA Engineers Pvt. Ltd.	Rs. 47,200/-
7	Dr. Pramod Soni	Technical Vetting of DPR for hydrology report (excluding guide bunds)	Technical Consultancy Services 14-C, Arawali Enclave, G.M.S. Road, Dehradun-248001	Rs. 1,18,000/-
8	Dr. Pramod Soni	Vetting of Hydraulic Design STP & SPS of Dehri on Sone Bihar, Project	Jayanti Super Construction Pvt. Ltd.	Rs. 3,55,180/-
9	Dr. Pramod Soni	Hydraulic Vetting of Protection work of Bridge (1. Protection work of 100m length RCC Gullar Bridge over Kho river. 2. Protection work of 90m length RCC Grastanganj Bridge over Kho river. 3. Protection work of 300m length double lane RCC Bridge near BEL of Kodiya Motadhank motor road.)	Er. D. P. Singh, Construction Division PWD, Dugadda-Garhwal	Rs. 1,77,000/-
10	Dr. Pramod Soni	Hydraulic and Structural Vetting of Firozabad Package-1 Project under SWSM, UP under the Jal Jeevan Mission	Anoop Srivastava, GM, Tech NCC Ltd., Sector D2 150, Sushant Golf City,Lucknow	Rs. 11,80,000/-
11	Dr. Pramod Soni	Hydraulic Vetting of Protection Work of Damaged Roads/Bridge/Pier in Pauri Garhwal District	Design Tech StructuralConsultant 108/12/3,NehruColony, Dharampur, Dehradun	Rs. 4,24,800/-
12	Dr. Pramod Soni	Hydrological Vetting of Analyses of Construction Work of Bridge at Pathri Over Roh River	ExecutiveEngineer, ProvisinalDivision, P.W.D,Devpura, Haridwar	Rs. 1,94,700/-

S. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
13	Dr. Pramod Soni	Technical Vetting: 1. Bridge over Bangali Nala of Rusha Farm Bhattowala Motor Road in Distt. Dehradun, 2. Culvert at Km. 3 of Doiwala-Bullawala Motor Road in Distt. Dehradun, 3. R.C.C Bridge at Km, 4-5 of Bhogpur-Thano Motor Road in Distt. Dehradun, 4. Steel Girder Bridge (Class B Loading) at Km. 1 of Maldevta Motor Road in Distt. Dehradun.	Ramesh Joshi Managing Director Technical Consultancy Services	Rs. 3,54,000/-
14	Dr. Pramod Soni	Technical Vetting of raw water rising main and distribution network of District–Ballia	SPIND Consultancy Services Pvt. Ltd. 80/230, Patel Marg, Mansarovar, Jaipur,Rajasthan	Rs. 3,54,000/-
15	Dr. Pramod Soni	Feasibility Study for RENOVATION of badi Gaibi Kund	Varanasi Development Authority	Rs. 28,320/-
16	Dr. Samim Mustafa	Vetting of structural design and drawings of RCC and Zinc Alumnae Water Tanks	M/s LC Infra Projects Pvt Ltd.	50 Lakh
17	Dr. Vishwajit Anand	Structural stability assessment of existing minor bridges in Janghai-Phaphamau section	Rail Vikas Nigam Limited (RVNL)	28.32
18	Dr. Anurag Ohri	Geoenvironment study for PPGCL	PPGCL	12.00
19	Dr. Anurag Ohri	Fly Ash Audit of PPGCL	PPGCL	3.00
20	Prof. Sasankasekhar Mandal	Vetting of overhead water tanks under Jal Jeevan Mission	Many Private companies working under JJM, UP, MP Govt.	35 lakhs
		21	LEA Associates and other agencies	20 lakhs
22	Dr. Mahendra Kumar Pal	Identify the distressed structural members and suggest the kind of non-invasive testing for various distress locations and Propose Repair Strategy	M/s Jatasya Promoter Pvt Ltd (JPPL)	1.5
23	Dr. Mahendra Kumar Pal, Dr. Vishwajit Anand and Prof. S. Mandal	Third Party Audit of Bill of Quantities of construction of AIIA campus- Phase-II	All India Institute for Ayurveda, New Delhi	19.17
24	Dr. Mahendra Kumar Pal, Dr. Vishwajit Anand and Prof. P.K. Singh Dikshit	Structural safety audit of concrete bridge over Ghaghara River on Barhalganj-Doharighat Highway, Gorakhpur District	PWD, Gorakhpur	14.3
25	Prof. K.K. Pathak	Proof Checking of Structural Design and Drawings for Construction & Redevelopment of Darbhanga Medical College & Hospital, Laheriasarai, Darbhanga	Bihar Medical Services & Infrastructure Corporation Ltd,	40 lakh
		26	PWD, UPRNN Railways,Bridge corporations	30 lakh
		27	PWD, UPRNN, Railways, MES, UPCLDF, UPRNSS etc.	40 lakh
28	Dr. Ankit Gupta	Proof Checking of Geometric Design and Pavement Design Reports	Various Consultants, Contractors	20 (Approx)
29	Dr. Ankit Gupta	Mix Design of various pavement layers mixes	Various Contractors, PWDs, NHAI, RRDA, etc.	30 (Approx)
30	Dr. Ankit Gupta	Pavement Failure Investigations	NHAI, UPPWD, RRDA, etc.	30 (Approx)
31	Dr. Ankit Gupta	Black Spot Audits	UPPWD	30 (Approx)
32	Dr. K. K. Pandey	Mathematical Model study of Yamuna bridge protection work	GMR Power and Urban Infra Limited, Civil Line, Allahabad - 211001 Uttar Pradesh India	15.34 L
33	Dr. K. K. Pandey	Vetting of Design and Drawing of sewer line at Ravindrapuri Varanasi	M/s Ishwar Singh,159/1 Chande Nagar Alambagh Lucknow-226005	88.5 K
34	Prof. Prabhat Kumar Singh	Review of Environmental damage cost assessment due to spillage of fly ash at Sasan Ultra Mega Power Project, Waidhan, Madhya Pradesh	Sasan Power Ltd., Singrauli, M.P.	10 Lakh

Research Publications

S. No.		No.
1	Total Number of Papers Published in Refereed National Journals	25
2	Total Number of Papers Published in Refereed International Journals	101
3	Total Number of Papers Presented in National Conferences	5
4	Total Number of Papers Presented in International Conferences	7

Refereed International Journals

1. Singh, A., & Mandal, S. (2023). Effect of wind and structural parameters on across wind load of super high-rise buildings. *Research on Engineering Structures and Materials*, 9(4): 1459-1475. http://dx.doi.org/10.17515/resm2023.727st0403.
2. Singh, A., Mandal, S., Gaikwad, P. (2024). Effect of wind loading pattern on shear lag phenomenon in framed-Tube Building. *Journal of Rehabilitation in Civil Engineering*, 12(1),1-17. DOI: 10.22075/jrce.2023.28689.1729
3. Gyani Jail Singh, Amit Kumar, Shashi Bhushan Kumar and Rajesh Kumar (2023), Performance-Based Quality Optimization Approach for Mechanically Treated Recycled Concrete Aggregates, Journal of Materials in Civil Engineering, ASCE.
4. Dheeresh Kumar Nayak, Gaurav Verma, Akshat Dimri, Rajesh Kumar and Veerendra Kumar (2023), Predicting the 28-days Compressive Strength of OPC and PPC prepared Concrete through Hybrid GA-XGB model, Practice Periodical on Structural Design and Construction, ASCE.
5. Babu Lal Chauhan, Gyani Jail Singh, Amit Kumar, Rajesh Kumar (2024), Strength and durability performance of acid-mechanically treated recycled aggregate concrete with metakaolin, lime powder, and A-fine, Construction and Building Materials, Elsevier, https://doi.org/10.1016/j.conbuildmat.2024.136615
6. Amit Kumar, Gyani Jail Singh, Babu Lal Chauhan, and Rajesh Kumar (2024), "Strength and Durability Performance of Recycled Aggregate Structural Concrete with Silica Fume, Furnace Slag, and M-Fine, Journal of Materials in Civil Engineering, ASCE, 2024, 36(7): 04024165
7. Amit Kumar, Gyani Jail Singh, Priyanshu Raj, and Rajesh Kumar (2024), Performance of Quality-Controlled Recycled Concrete Aggregates, ACI Material Journal, V.121, No. 1, January 2024.
8. Ishu Sharma, Gyani Jail Singh, Kaushal Kumar, Krishna Pratap Singh and Rajesh Kumar (2024), Analytical modeling of stress concentration in composite box girders, Engineering Research Express 6 (2024)015103, https://doi.org/10.1088/2631-8695/ad257a.
9. Abhilash P P., Vadim Potapov, Rajesh Kumar, Veerendra Kumar, Urwashi Gupta (2024), Integrated Effects of Metakaolin and Nano-silica in Superplasticizer-Free Mortar: An Analysis of Mortar Compressive Strength with Relative Strength, K-Factor and Clinker Savings, Civil Engineering and Architecture 12(3): 1540-1561, 2024, DOI:10.13189/cea.2024.120321, http://www.hrpub.org.
10. Abhilash P P Rajesh Kumar, Veerendra Kumar (2024), Thermal impact on superplasticizer-free metakaolin-nano-silica binary and ternary mortars, Materials at High Temperatures, Taylor & Francis, Volume 41, 2024-Issue 3.
11. Kumar A., Mohan D., Paramkusam B. R. and Singh A. P. (2024) Efficacy of surfactants in the sustainable restoration of the geotechnical properties of diesel-contaminated soil. International Journal of Environmental Science and Technology. 21(1):867–874. https://doi.org/10.1007/S13762-023-04875-Z
12. Kumar S., Ranjan A., Kumar R. and Mohan D. (2024) Experimental study on carbonation depths of OPC and PPC concrete by conventional and advanced methods. Indian Journal of Engineering and Materials Sciences. 31(1):67-75. https://doi.org/10.56042/ijems.v31i1.2190
13. Kushwaha R., Singh R. S. and Mohan D. (2023) Comparative study for sorption of arsenic on peanut shell biochar and modified peanut shell biochar. Bioresource technology. 375: 128831. https://doi.org/10.1016/j.biortech.2023.128831
14. Kushwaha R., Singh R. S. and Mohan D. (2023) Arsenic resistance and accumulation by two bacteria isolated from Ratanpur Village of Varanasi District, Uttar Pradesh. Bioresource Technology Reports. 24:101639. https://doi.org/10.1016/j.biteb.2023.101639
15. Mohan D., Ranjan R., Kushwaha R., Sonam, Markandeya and Shukla S. P. (2023) Arsenic removal using iron oxide nanoparticles produced employing a green synthesis approach. Environmental Quality Management. 33(4):567-578. https://doi.org/10.1002/tqem.22113

16. Mohan D., Goyal H., Kushwaha R., Markandeya, Shukla S. P. and Srivastava V. (2023) Fluoride removal using activated red mud. Environmental Quality Management. 33(4):559-566. https://doi.org/10.1002/tqem.22112

17. Singh N.K., Markandeya, Manar M.K., Shukla S.P. and Mohan D. (2023) Statistical and spatio-temporal analyses of noise pollution level and its health impact. Environmental Science and Pollution Research. 30:82951–82963. https://doi.org/10.1007/s11356-023-28264-8

18. Tiwari S., Tripathi P., Mohan D. and Singh R. S. (2023) Bioremediation of Imidacloprid in a Stirred Tank Reactor Using Bacterial Consortium: Kinetic Analysis and Toxicity Assessment. Industrial & Engineering Chemistry Research. 62(31):12073-12084. https://doi.org/10.1021/acs.iecr.3c01125

19. Bhowmik B. (2024) Advancements in online modal identification: A recursive simultaneous diagonalization comprehensive framework for real-time applications. Engineering Structures, Elsevier, vol. 305, 117770.

20. Pathak I., Jha I., Sadana A., & Bhowmik B. (2023). CNN-Based Structural Damage Detection using Time-Series Sensor Data. arXiv preprint arXiv:2311.04252.

21. González-Sopeña J. M., Ghosh B., Mucchielli P., Bhowmik B., & Pakrashi V. (2023). Short-term power prediction and downtime classification. In Wind Energy Engineering (pp. 489-498). Academic Press.

22. Panda S., Das S., Bhowmik B., & Hazra B. (2023). Mastering Complex Modes: A New Method for Real-Time Modal Identification of Vibrating Systems. arXiv preprint arXiv:2303.17349.

23. Rathnamala G. V., Shivashankara G. P., Ashwini R. M., Rashmi H. R., & Bhowmik B. (2023). A health risk model for rural households based on the distribution of multi pollutants. Water Science & Technology, 87(7), 1686-1702.

24. Pramod Soni (2024) The Impact of Data Uncertainty on Identifying Precipitation Trends in India. MAUSAM.

25. Ram Raj Meena, Suresh Kumar, Pramod Soni (2023), Review on Hydrodynamic Simulation and Analysis Using CFD: Electrochemical Reactors and Redox Flow Batteries, Chem Bio Eng Reviews, 670-683

26. V. K. Singh., H. K. Pandey, S. K., Singh Pramod Soni (2023), Groundwater analysis using Gravity Recovery, Climate Experiment and Google Earth Engine: Bundelkhand region, India, Physics and Chemistry of the Earth, Parts A/B/C, Volume 130, 103401

27. Sandeep Kumar Maddheshiya, Medha Jha, Sanjay Tignath and Nikhilesh Singh (2024) Study of riverine wetlands of Bakulahi River in the interfluvial zone of Ganga and Sai Rivers, Uttar Pradesh, India.Environmental Earth Sciences, 80(242), 1-20. https://doi.org/10.1007/s12665-024-11531-3

28. Shekhar, S., and Jha, M. (2023). A broad review on the usage of modular three-dimensional finite-difference groundwater flow model for estimating groundwater parameters. International Journal of Environmental Science and Technology, 20(9), 10465-10476. https://doi.org/10.1007/s13762-022-04495-z

29. Shishir Gaur, Ranveer Kumar, Anurag Ohri, Shreyansh Mishra, Ajeet Kumar Gond, Shyam Bihari Dwivedi, Medha Jha, Abhyanand Chaturvedi and Bhola Nath Singh (2023), Study of hydrologically critical subbasins under climate change, Journal of Water and Climate Change (2023) 14 (5): 1723–1740. https://doi.org/10.2166/wcc.2023.038.

30. Mishra, N.B., Pani, A., Bansal, P., Mohapatra, S.S., Sahu, P. (2024) "Towards sustainable logistics in India: Forecasting freight transport emissions and policy evaluations", Transportation Research Part D: Transport and Environment, Vol. 133, DOI: https://doi.org/10.1016/j.trd.2024.104267

31. Pani, A., Unnikrishnan, A., Sinha, S., and Varghese, V. (2024) "Shopping Travel Behaviour Trade-Offs Between Physical Stores and Online Deliveries: Post-COVID Scenario in New Delhi, India", Transportation in Developing Economies, Volume 10, Issue 2, (2024). https://doi.org/10.1007/s40890-024-00203-3

32. Sahu, P., Marazi, N., Majumdar, B., Maji, A., and Pani, A. (2024) "How are sociodemographic differences contributing to red light violation behavior? the underlying role of gender, age, driving experience, and income", Transportation Letters, https://doi.org/10.1080/19427867.2024.2348846

33. Joshi, A., Pani, A., Sahu, P., Majumdar, B., and Tavasszy, L. (2024) "Gender and generational differences in omnichannel shopping travel decisions: What drives consumer choices to pick up in-store or ship direct?", Research in Transportation Economics, Volume 103, 2024, https://doi.org/10.1016/j.retrec.2023.101403

34. Pani, A., Balla, S.N., Sahu, P. (2023) "Decoding consumer-centric transition to electric mobility based on sentiment, semantic and statistical analysis", Research in Transportation Business & Management, Vol. 51, DOI: https://doi.org/10.1016/j.rtbm.2023.101069

35. Pani, A., Sahu, P., Tavasszy, L., and Mishra, S. (2023) "Freight activity-travel pattern generation (FAPG) as an enhancement of freight (trip) generation modelling: Methodology and case study", Transport Policy, Vol. 144, DOI: https://doi.org/10.1016/j.tranpol.2023.09.020

36. Pani, A., Sahu, P., and Mishra, S. (2023) "Gender disparities in multimodal travel attitudes, behavior, and satisfaction", Transportation Research Part D: Transport and Environment, Vol. 123, DOI: https://doi.org/10.1016/j.trd.2023.103917

37. Hirose, R., Mehran, B., Pani, A., Omrani, R., and Sahu, P. (2023) "Implementing Survival Analysis to Capture Stochastic Characteristics of Saturation Flow Rate Considering the Impacts of Adverse Road-weather Conditions", Canadian Journal of Civil Engineering, DOI: https://doi.org/10.1139/cjce-2023-0312

38. Mishra, B.N, Pani, A., Mohapatra, SS., Sahu, P. (2023) "Decoding Private or Commercial Vehicle Ownership Decisions for Low-Carbon Mobility Transitions", Transportation Research Record, Vol. 140, DOI: https://doi.org/10.1177/03611981231194346

39. Mondal, S., Pandey, A., Gupta, A., and Pani, A. (2023) "Identifying the Critical Risk Factors for Road Crashes Based on Large-Scale Safety Audits in India", Korean Society of Civil Engineers, Vol. 27, DOI: https://doi.org/10.1007/s12205-023-0679-7

40. Sukhija, M., Saboo, N., and Pani, A. (2023) "Suitability of warm mix asphalt (WMA) technologies based on performance and energy consumption", Road Materials and Pavement Design, Vol. 27, DOI: https://doi.org/10.1080/14680629.2023.2268721

41. Prasad, A.N., Saboo, N., and Pani, A. (2023) "Material and mix design aspects of hot recycled asphalt mixes: A review", Environmental Science and Pollution Research, Vol. 30, DOI: https://doi.org/10.1007/s11356-023-29913-8

42. Balla, S.N., Pani, A., Sahu, P., and Gonzalez-Feliu, F. (2023) "Examining shifts in public discourse on electric mobility adoption through Twitter data", Transportation Research Part D: Transport and Environment, Vol. 123, DOI: https://doi.org/10.1016/j.trd.2023.103917

43. Mishra, B.N, Mohapatra, SS., Pani, A., Sahu, P. (2023) "Exploring variation of length of haul and associated freight transport emission of Indian establishments: A survival analysis approach", Transport Policy, Vol. 140, DOI: https://doi.org/10.1016/j.tranpol.2023.06.010

44. Jayakumar, M., Sahu, P., Majumdar, B.B., and Pani, A. (2023) "Analysis of Travel Satisfaction with Commuting in Developing Economy: A Case of New Delhi, India", Transportation in Developing Economies, Vol. 9, DOI: https://doi.org/10.1007/s40890-022-00177-0

45. Mishra, S., Sharma, I., and Pani, A. (2023) "Analyzing autonomous delivery acceptance in food deserts based on shopping travel patterns", Transportation Research Part A, Vol. 169, DOI: https://doi.org/10.1016/j.tra.2023.103589

46. Balla, B.S., Sahu, P., and Pani, A., Sharma, S., and Majumdar, B. (2023) "Comparison of Parametric and Non-Parametric Methods for Modeling Establishment-Level Freight Generation", Transportation Research Record, DOI: https://doi.org/10.1177/03611981221116369

47. Sarkar, S., Eshwaree P., and Chakraborty, M. (2023). Revisiting lateral earth pressures for unsaturated retaining walls. *Geotechnical and Geological Engineering*, 1-22.

48. Roy, S., and Chakraborty, M. (2023). Unsaturated Bearing Capacity of Strip Foundations by using Upper Bound Rigid Block Method. *Computers and Geotechnics* 156, 105260.

49. Singh, A. and Chakraborty, M. Combined Effect of Non-Darcian Flow and Semi-Permeable Drainage Boundaries on One–Dimensional Consolidation of Unsaturated Soil. *International Journal of Geomechanics*. 24 (8), 04024157.

50. Anand V., Kadiri V.L. and Putcha C. (2023) Passive Buildings: A State-of-the-Art Review. Journal of Infrastructure Preservation and Resilience. 4(1): 3.

51. Verma, A.K., Prasad, A., and Bonal, N.S. (2023). Investigation of the Long-Term Shear Strength Behaviour of Municipal Solid Waste Fines Stabilized with Biopolymer: An Experimental Study. Journal of Environmental Chemical Engineering, 11(3), https://doi.org/10.1016/j.jece.2023.109805

52. Mishra S., Bosc L., Gaur S., Kacem M., Ohri A. (2023), Handling Large Decision Variables in Multi-Objective Groundwater Optimization Problems: Aquifer Parameter-Based Clustering Approach. Water Resources Management, 37(11): 4553-4568.

53. Bajpai M., Gaur S., Kumar R., Ohri A. and Piégay H. (2023)- Suitable sites for groundwater development: A capture map-based approach integrated with weighted overlay analysis, AQUA—Water Infrastructure, Ecosystems and Society, 72(7): 1184-1197.

54. Gaur S., Kumar R., Ohri A, Mishra S., Gond A.K., Dwivedi S.B., Jha M., Chaturvedi A., Singh B.N.(2023) Study of hydrologically critical subbasins under climate change. *Journal of Water and Climate Change*, 14 (5): 1723–1740.

55. Gond A., Ohri A., Maurya S.P., Gaur S. (2023), Accuracy assessment of Relative-GPS as function of distance and duration for CORS Network, Journal of the Indian Society of Remote Sensing, 51 (6), 1267-1277.

56. Tewari, A., Singh, P. K., Gaur, S., Mishra, S., & Kumar, R. (2024). Cluster-based delineation of optimal sites for managed aquifer recharge: a case study of Lower Betwa River Basin, India. Environmental Earth Sciences, 83(1), 20. https://doi.org/10.1007/s12665-023-11308-0

57. Priya Singh, Mahendra Kumar Pal, Prabhat Kumar Singh, Dikshit, Goutham Banerjee (2023), Experimental Investigation on Tertiary Treatment of Secondary Treated Wastewater Using Zetag- 4120 Coagulant, Indian Journal of Environmental Protection [Accepted on 16-10-2023]

58. An investigation on analytical techniques and Statistical Design for tertiary treatment of secondary wastewater using Zetag- 4120 coagulant, Current Science, [Accepted on 10/04/2024]

59. Ishan Jha, Krishna K Pathak (2023), Synergetic concrete shape and cable layout optimization of pre-stressed concrete beams, Structural and Multidisciplinary Optimization,66

60. Sudhir Babu Patel and Krishna Kant Pathak (2023), Remaining Fatigue Life Assessment of a Steel Railway Bridge Based on Fracture and Stress Life approach, ASCE's Practice Periodical on Structural Design and Construction, 28(4), https://doi.org/10.1061/PPSCFX.SCENG-1348

61. Sudhir Babu Patel, Pranjal Bisht and Krishna Kant Pathak, (2024) "Semantic Segmentation of cracks on masonry surfaces using Deep Learning (DL) Techniques, ASCE's Practice Periodical on Structural Design and Construction, 29(2), https://doi.org/10.1061/PPSCFX.SCENG-14

62. Sukanya Saxena, Krishna Kant Pathak (2024), Conventional and ferrocementbased hybrid design of RCC tanks: A comparative study, Innovative Infrastructure Solutions 9:122, https://doi.org/10.1007/s41062-024-01435-3

63. Wagh, V. P., Sukhija, M. and Gupta, A. (2023). "Exploring the Consequences of Reduced Aging on the Performance of Warm Mix Asphalt Binders", International Journal of Pavement Engineering, Taylor and Francis, 24(2), 2270768.

64. Wagh, V. P., Sukhija, M. and Gupta, A. (2023). "Investigation on Bonding Between Aggregates and Asphalt Binder Containing Warm Mix Additives", Construction and Building Materials, Elsevier, Vol. 409, 133797.

65. Mondal, S., Pandey, A., Gupta, A. and Pani, A. (2023) "Identifying the Critical Risk Factors for Road Crashes Based on Large-Scale Safety Audits in India", Korean Society of Civil Engineers (KSCE), Journal of Civil Engineering, Springer, 27(11), pp. 4906-4918.

66. Kumar, A., Tang, T., Gupta, A. and Anupam, K. (2023). "A State-of-the-Art Review of Measurement and Modelling of Skid Resistance: The Perspective of Developing Nation", Case Studies in Construction Materials, Elsevier, Vol. 18, e02126.

67. Singh, A., Gupta, A. and Miljkovic, M. (2023). "Intermediate-and High-Temperature Damage of Bitumen Modified by HDPE from Various Sources", International Journal of Road Materials and Pavement Design, Taylor and Francis, Vol. 24:sup1, 640-653.

68. Mondal, S. and Gupta, A. (2023) "Microsimulation Based Framework For Urban Signalized Intersection Under Mixed Traffic", Proceedings of the Institution of Civil Engineers (ICE) – Transport, Vol. 176, Issue 4, pp. 237-249.

69. Mishra, S., Singh, V., Gupta, A., Bhattacharya, D. and Mudgal, A. (2023) "Adaptive Traffic Signal Control for Developing Countries Using Fused Parameters Derived from Crowd-Source Data", Transportation Letters: The International Journal of Transportation Research, Taylor and Francis, 15(4), pp. 296-307.

70. Mondal, S. and Gupta, A. (2022) "Evaluation of Driver Acceleration/Deceleration Behavior at Signalized Intersections using Vehicle Trajectory Data", Transportation Letters: The International Journal of Transportation Research, Taylor and Francis, 15(4), pp. 350-362.

71. Choudhary, J., Chaudhary, M. and Gupta, A. (2023). "Applicability of Multiple Stress Creep and Recovery Test for the Analysis of Fatigue Resistance of Bituminous Mastics", Petroleum Science and Technology, Taylor and Francis, pp. 1-21. (DOI: 10.1080/10916466.2023.2175856)

72. Hussain, M. S., Goswami, A. K. and Gupta, A. (2023) "Predicting Pedestrian Crash Locations in Urban India: An Integrated GIS-Based Spatiotemporal HSID Technique", Journal of Transportation Safety and Security, Taylor and Francis, 15(2), pp. 103-136.

73. Yao, T., Zhang, C., Zhao, J., Gupta, A. and Mondal, S. (2023). "Adaptive Signal Control for Overflow Prevention at Isolated Intersections Based on Fuzzy Control", Transportation Research Record (TRR), Journal of the Transportation Research Board (TRB), Sage Journals, 2677(5), pp 1387-1401.

74. Mondal, S., Chakraborty, S., Roy, S. K. and Gupta, A. (2023). "Estimation of Passenger Car Unit for Heterogeneous Traffic Stream of Urban Arterial: Case Study of Kolkata", Transportation Letters: The International Journal of Transportation Research, Taylor and Francis, 15(10), pp. 1276-1288.

75. Chaudhary, M., Saboo, N., Gupta, A., Steineder, M. and Hofko, B. (2023). "Effect of Analysis Procedure and Sample Geometry on the Fatigue Life Results of Asphalt Mastics from Linear Amplitude Sweep Test", Mechanics of Time-Dependent Materials, Springer Nature, 27(4), pp. 1097-1121.

76. Kumar, A., Gupta, A., Anupam, K. and Wagh, V. P. (2024). "Finite Element Based Framework to Study the Response of Bituminous Concrete Pavements under Different Conditions", Construction and Building Materials, Elsevier, Vol. 417, 135368.

77. Wagh, V. P., Saboo, N. and Gupta, A. (2024). "Using Tribological Approach to Assess Production Temperatures of Asphalt Binders", Construction and Building Materials, Elsevier, Vol. 419, 135513.

78. Shahu, J. T., S. Kumar, and R. Bhowmik. 2023. "Ground Improvement for Transportation Infrastructure : Experimental Investigations on Cyclic Behavior of a Group of Granular Columns." 23 (3): 1–13. https://doi.org/10.1061/IJGNAI.GMENG-7880.

79. Shahu, J. T., S. Kumar, and R. Bhowmik. 2023b. "Ground Improvement for Transportation Infrastructure: Experimental Investigations on Cyclic Behavior of a Group of Granular Columns." International Journal of Geomechanics, 23 (3): 1–2. https://doi.org/10.1061/ijgnai.gmeng-7880.

80. Shahu, J. T., S. Kumar, and R. Bhowmik. 2024. "Behaviour of Geogrid-Encased Group of Stone Columns Under Monotonic and Cyclic Loading." International Journal of Civil Engineering. https://doi.org/10.1007/s40999-023-00929-y.

81. Pradeep, N. M., S. Kumar, and S. K. Shukla. 2024. "Evaluation of Strength Behavior of Aggregates Mixed with Tire Chips in Granular Piles." Iranian Journal of Science and Technology, Transactions of Civil Engineering, 48 (1): 81–96. https://doi.org/10.1007/s40996-023-01155-1.

82. Pradeep, N. M., and S. Kumar. 2023. "Soft Soil Improvement with Encased Granular Piles Composed of Aggregates and Tire Chips Mixture: Experimental and Numerical Studies." Iranian Journal of Science and Technology - Transactions of Civil Engineering, (0123456789). Springer International Publishing. https://doi.org/10.1007/s40996-023-01306-4.

83. Pradeep, N.M., and S. Kumar. 2024. "Cyclic performance of geosynthetic-encased granular pile with tire chips and aggregates mixture in soft soil – A model study." Transportation Geotechnics, 45 (February): 101222. Elsevier Ltd. https://doi.org/10.1016/j.trgeo.2024.101222

84. Pradeep, N. M., S. Kumar, S. Gupta, and M. Nishant. 2024. "Behavior of group of geosynthetic encased granular piles with tire chips- aggregates mixture under static and cyclic loading – A model study." Construction and Building Materials, 431: 136507. https://doi.org/https://doi.org/10.1016/j.conbuildmat.2024.136507.8. Gupta, S., and S. Kumar. 2023. "A state-of-the-art review of the deep soil mixing technique for ground improvement." Innovative Infrastructure Solutions, 8 (4): 129. https://doi.org/10.1007/s41062-023-01098-6.

85. Gupta, S., and S. Kumar. 2023. "Dynamic behavior of geopolymer stabilized kaolin clay under long-term cyclic loading." Construction and Building Materials, 407 (September): 133562. Elsevier Ltd. https://doi.org/10.1016/j.conbuildmat.2023.133562

86. Gupta, S., and S. Kumar. 2024. "Mechanical and microstructural analysis of soft kaolin clay stabilized by GGBS and dolomite-based geopolymer." Construction and Building Materials, 421 (February): 135702. Elsevier Ltd. https://doi.org/10.1016/j.conbuildmat.2024.135702.

87. Nishant, M., and S. Kumar. 2024. "Sustainable Use of Recycled Waste Plastic Material for Improvement of Granular Column Foundation in Soft Soil–Experimental and Numerical Investigations." International Journal of Geosynthetics and Ground Engineering, 10 (3): 52. https://doi.org/10.1007/s40891-024-00562-2.

88. G. Pandey, V. K. Mourya, D. Patel, R. Kumar, and S. Kumar. 2024. "Load sharing behaviour in piled-raft foundations over sand and clay: An experimental investigation." Research on Engineering Structures and Materials, 1–26. https://doi.org/10.17515/resm2023.41me0714rs.

89. Pandey, G., D. Patel, V. K. Mourya, R. Kumar, and S. Kumar. 2023. "A Review on Soil-Foundation-Interaction Models." Journal of Rehabilitation in Civil Engineering, 11 (3): 158–179. Research Scholar, Department of Civil Engineering, IIT (BHU) Varanasi, India. https://doi.org/10.22075/jrce.2022.25247.1570.

90. Abhash, A., Tripathi, R. P., Omar, P. J., Gupta, N., & Pandey, K. K. (2023). Numerical study of flow through Linear Weir. In River, Sediment and Hydrological Extremes: Causes, Impacts and Management (pp. 397–406). Springer Nature Singapore Singapore.

91. Tripathi, R. P., & Pandey, K. (2023). Gene-expression programming for scour around spur dike. International Journal of Hydrology Science and Technology, 15(3), 295–303.

92. Singh PK, Ranjan N. (2024) Ecological impact of pharmaceutical pollutants and options of river health improvements-A risk analysis-based approach, Science of the Total Environment, 172358

93. Kumar, R., Tewari, A., Mishra, S., Singh, P.K., and Gaur, S. (2024). Multi-Facet analysis of analytical and numerical models to resolve sustainable artificial recharge rates in unconfined aquifers, Journal of Environmental Management, 362, 121233. Impact Factor-8.91.

94. Tewari, A., Singh, P.K., Gaur (2023), Cluster-based delineation of optimal sites for managed aquifer recharge: a case study of Lower Betwa River Basin, India, Environmental Earth Sciences 83

95. Sharma YC, Debnath A., Prabhat Kumar Singh (2023), Spatial distribution of heavy metals in the sediments of River Ganges, India: Occurrence, contamination, source identification, seasonal variations, mapping, and ecological risk evaluation. Marine Pollution Bulletin 198 (115910)

96. Dwivedi,S.B.,Pathak P.,Theunuo K. and Kumar R.R.(2023) U–Pb SHRIMP zircon dating and geochemistry of metapelites from the Shillong Meghalaya Gneissic Complex, NE India: Implications for nature of protolith and tectonic setting Geosystems and Geoenvironment 2 (2), 100161

97. Pathak P, Dwivedi S.B. and Kumar R.R(2022) Phase equilibria modelling and textural relationship of metapelitic granulites and Grt-Bt-bearing gneisses from Mauranipur area, Bundelkhand Craton, central India Arabian Journal of Geosciences 15 (21), 1642

98. Pathak P. and Dwivedi S,B. (2022) Characterization of Trace and Rare Earth Element in the gneissic rocks from the Bundelkhand Craton, Central India Mathematical Statistician and Engineering Applications 71 (4), 24-36

99. Pathak P, Dwivedi S.B. and Kumar R.R(2022) Metamorphic Evolution of the Amphibolites from Bundelkhand Craton, Central India: PT Constraints and Phase Equilibrium Modelling Journal of Environmental & Earth Sciences 4 (1), 15

100. RR Kumar R. R, Dwivedi S.B. and Pathak P.(2022) Phase equilibria modelling and geochemistry of high-grade gneiss from the Chhotanagpur Granite Gneiss Complex, eastern India: Implications for tectono-metamorphic evolution Geosystems and Geoenvironment 1 (4), 100082

101. Kumar R. R, Kawaguchi K,, Dwivedi, S.B and Das K (2022)Metamorphic evolution of the pelitic and mafic granulites from Daltonganj, Chhotanagpur Granite Gneiss Complex, India: Constraints from zircon U–Pb age and phase equilibria Geological Journal 57 (3), 1284-1310

Refereed National Journal

1. Singh, A., Gaikwad, P., Mandal, S. (2023). Shear Lag Effect in Framed-Tube Buildings Due to Torsional Wind Load. In: Rajasekharan, S.G., Arunachalam, S., Harikrishna, P. (eds) Proceedings of the 9th National Conference on Wind Engineering. NCWE 2023. Lecture Notes in Mechanical Engineering. pp. 123–131, Springer, Singapore. https://doi.org/10.1007/978-981-99-4183-4_12

2. Singh A. and Mandal, S. (2024). "Wind-induced torsional loads on low and medium rise buildings" 10th National Conference on Wind Engineering, 15-16 March, VIT Chennai. Ashish Singh and Sasankasekhar Mandal

3. Mohan D. and Kushwaha R. (2023) छोटेशहरोंतथाअर्द्ध - शहरीयऔरग्रामीणक्षेत्रोंमेंअवजल (मलजल) शोधनहेतुप्रभावीविकल्पकेरूपमेंअभियन् त्रिततालाबोंकाउपयोग Swadeshi Vigyan Patrika. 4(1):8-12.

4. Megawath Narahari, Nekram Rawal, Pramod Soni (2023), Steady Flow Analysis Performed for Flood Inundation Mapping Using HEC-RAS. Hydro 2023, NIT Warangal

5. Krishna Kumar, R. D. Gupta, Pramod Soni, (2023) ANN FOR URBAN FLOOD FLOW MODELLING USING REAL TIME DATA, Hydro 2023, NIT Warangal

6. Megavath Narahari, Dr. Nekram Rawal and Dr. Pramod Soni (2023), Assessment of surface run-off for Brahmani-Baitarani river basin Number RHHAR-2023 IIT (BHU), Varanasi

7. Krishna Kumar, R. D. Gupta, Pramod Soni (2023), STUDY THE EFFECT OF URBANIZATION ON GROUINDWATER BALANCE IN AGROCLIMATIC ZONE USING ANN RHHAR-2023 IIT (BHU), Varanasi 2023

8. Babar A, Sahoo R. (2024), "Static, Buckling, and Free Vibration Responses of Functionally Graded Carbon Nanotube-Reinforced Composite Beams with Elastic Foundation in Non-Polynomial Framework", The Journal of Strain Analysis for Engineering Design, SAGE, (accepted)

9. Babar A, Sahoo R. (2024), "A Non-Polynomial Axiomatic Framework to Investigate the Structural Responses of CNT-Reinforced Beams: An Analytical Solution", Archive of Applied Mechanics, Springer (accepted)

10. Babar A, Sahoo R. (2024), "Static, Buckling, and Free Vibration analysis of CNT Reinforced Composite Beams with Elastic Foundation using IHSDT", Journal of Vibration Engineering & Technologies, (accepted)

11. Bhardwaj N, Sinha A, Babar A, Sahoo R. (2024), "Static and Free Vibration Analysis of Delaminated Composite Plates using Secant Function based Shear Deformation Theory", The Journal of Strain Analysis for Engineering Design, SAGE, (accepted)

12. A G Chanda, DPN Kontoni, R Sahoo (2023), Development of analytical and FEM solutions for static and dynamic analysis of smart piezoelectric laminated composite plates on elastic foundation. Journal of Engineering Mathematics. 138 (1):12.

13. Mustafa S, Sekiya H, Hirano S. (2023) Evaluation of Fatigue Damage in Steel Girder Bridges Using Displacement Influence Lines. Structures, (Elsevier), 53, 1160-1171.

14. Yoshida I, Mustafa S, Sekiya H, Maruyama K. (2023) Bridge Weigh-In-Motion considering dynamic response in observation noise with application to multiple driving conditions. Structural Safety, (Elsevier), 103, 102350.

15. Mustafa S, Yoshida I, Sekiya H. (2023) Bayesian-based bridge influence line identification and uncertainty estimation. Life-Cycle of Structures and Infrastructure Systems, pp. 1903-1910, CRC Press.

16. Ali, Y., Sharma, A. and Chen, D. (2024) Investigating autonomous vehicle discretionary lane-changing execution behaviour: Similarities, differences, and insights from Waymo dataset. Analytic Methods in Accident Research, 42, p.100332.

17. Sun, J., Zheng, Z., Sharma, A. and Sun, J. (2023) Stability and extension of a car-following model for human-driven connected vehicles. Transportation Research Part C: Emerging Technologies, 155, p.104317.

18. Nirmale, S., Sharma, A. and Pinjari, A.R. (2023) Multi-vehicle anticipation-based driver behavior models: a synthesis of existing research and future research directions. Transportation Letters, pp.1-20.

19. Kumar, A., and Mudgal, A. (2024). Defining Traffic Conflict in Nonlane-Based Traffic Conditions: An Extreme Value Approach. Journal of Transportation Engineering, Part A: Systems, 150(9), 04024050.

20. Kumar, A., & Mudgal, A. (2024). Risk assessment of rear-end crashes by incorporating vehicular heterogeneity into Bayesian hierarchical extreme value models. Transportmetrica B: Transport Dynamics, 12(1), 2323058.

21. Behera, S. K., Mudgal, A., & Singh, A. K. (2023). Spatiotemporal exposure of motorcyclists to particulate matter in a densely populated urban area: A case study of Varanasi, India. Atmospheric Pollution Research, 101808.

22. Sarkar, S. and Chakraborty, M. (2023). Effect of transient flow and pseudo-static forces on the lateral earth pressures developed in retained unsaturated backfills. *Sadhana,* 48(3), 161.

23. Dhriyan, S.S., Prasad, A. & Verma, A.K. (2024). Experimental Study on Bio-cementation of Red Mud Through Microbially Induced Calcite Precipitation. Indian Geotech J. https://doi.org/10.1007/s40098-024-00975-w

24. Pandey V and Dwivedi S.B(2022) Metamorphic evolution of mafic granulites from Tiyara area, Makrohar granulite belt, Singrauli district, Madhya Pradesh, India. Current Science (00113891) 123 (11)

25. Pathak P, Dwivedi and S.B and Kumar R.R (2022) Geochemistry and Phase Equilibrium Modelling of Garnet-Biotite Gneiss from Mauranipur, Bundelkhand Craton, Northern India: Implication for Tectonic Setting and Metamorphism Journal of Geosciences Research 7 (2), 186-192

Proceedings of International Conferences

1. Mustafa S, Yoshida I, Sekiya H. 2023. Bayesian-based bridge influence line identification and uncertainty estimation. In proceeding of Eighth International Symposium on Life-Cycle Civil Engineering (IALCCE 2023), Milano, Italy.
2. Singh, A. and Chakraborty, M. (2023). Consolidation analysis in unsaturated soils with non-Darcian flow. Geotechnics for Sustainable Infrastructure Development - Geotec Hanoi 2023, Phung (Edt). ISBN.
3. Abhay Kumar Verma, Abhishek Kumar, Arun Prasad. 2023. The viability of using biopolymer-stabilized municipal solid waste fines in subgrade to enhance pavement performance, Proc. Smart Geotechnics for Smart Societies – Zhussupbekov, Sarsembayeva & Kaliakin (Eds). In 17th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering (17th ARC, Astana, Kazakhstan, 14-18 August, 2023.
4. Akanksha Singh, Tanmay Goyal, and P. R. Maiti " Damage detection using modified computer vision YOLO V4, "International Conference on advances in civil and environmental engineering (ICACEE-2024) " Held on March 14-15, 2024 in Maharishi Markandeshwar Engineering College, Mullana, Ambala, Haryana, India.
5. Ankit Verma, Subhash Kumar, Akanksha Singh and P. R. Maiti "Shear buckling strength of steel girder with trapezoidal corrugated web", "International Conference on recent development in sustainable infrastructures: Engineering, Technology and Innovation (ICRDSI-2022) held on March 3-4 2023 ", KIIT University, Bhuvaneshwar

Proceedings of National Conferences

1. Chakraborty, M., Roy S., and Prasad, S.D. (2023). Unsaturated Bearing Capacity of Strip Foundation from Upper Bound Limit Analysis. ICCMS 2023, IIT Gandhinagar.
2. Anand V. (2024) Correlation of spectral measures of ground motions with source and record station parameters. Geosciences for Sustainable World, Banaras Hindu University.
3. Mahendra Kumar Pal, Gaurv Singh, Lalith Wijerathne, (2023), Investigation on imposing essential boundary conditions in Higher Order Particle Discretization Scheme, In the proceedings of 2nd AIP Conf. Proc. 2721, International conference on Futuristic and Sustainable Aspects in Engineering and Technology, 070039 (2023)
4. Shivani Lamba 1 and Mahendra Kumar Pal (2023), Seismic Performance Assessment of BHU Campus Using High-Performance Computing, Accepted, 13th Structural Engineering Convention, SVNIT, Nagpur, Maharastra, India, 07-09 Dec 2023
5. Amisha Prajapati, Mahendra Kumar Pal(2023), CONCRETE CRACK DETECTION USING CONVOLUTIONAL NEURAL NETWORK Accepted, 13th Structural Engineering Convention, SVNIT, Nagpur, Maharastra, India, 07-09 Dec 2023
6. Singh PK and Ranjan N. (2023) Effects of Pharmaceutical Pollutants on River Health assessment through a River Health Index (RHI) 6th International Eco Summit Building a Sustainable and Desirable Future (ECOSUMMIT-2023) Gold Coast, Australia, 13-17 June, 2023
7. Singh PK and Ranjan N. (2023) Separation of Yellow Waters from Liquid Waste Streams at Source: Preventive Measures to Improve River Health Condition. 3rd International Conference on River Health Assessment to Restoration (RHAR-2023) Varanasi India, October 2023)

Details of 5 Articles from the Department/School with maximum no. of Citations in last 5 years

1. Anand V. and Kumar S. (2018) Seismic soil-structure interaction: A state-of-the-art review. Structures, 16(C), 317-326. [Citations: 152]
2. Abhash, A., & Pandey, K. K. (2021a). Experimental and numerical study of discharge capacity and sediment profile upstream of piano key weirs with different plan geometries. Water Resources Management, 35(5), 1529–1546.
3. Abhash, A., & Pandey, K. K. (2021b). Nonlinear Regression Analysis Between Discharge and Head for Piano Key Weirs with Increasing Developed Length (L/W) Ratio and Constant Channel Width. Water Resources Management and Reservoir Operation: Hydraulics, Water Resources and Coastal Engineering, 241–250.
4. Abhash, A., & Pandey, K. K. (2021c). Numerical study of discharge-head relationship of piano key weirs for low heads. Water Resources, 48, 235–244.
5. Abhash, A., & Pandey, K. K. (2022). A review of Piano key Weir as a superior alternative for dam rehabilitation. ISH Journal of Hydraulic Engineering, 28(sup1), 541–551.

Distinguished Visitors

S. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	Dr. Rajesh Krishnan, CEO of ITSPE Transport Company, Dr. Agnivesh P.	25-06-2023	Signing an MoU with I-DAPT Hub Foundation and Visiting Civil Engineering Department

Other activities

International collaboration/achievements by the Department

1. Signing of MoU with IIT (BHU) and Australia India Water Centre (AIWC) at New Delhi on September 18, 2023.

Indian Faculty visits in the Department

S. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1	Prof. Vasant Matsagar, IIT Delhi	PhD viva voce of Mr. Ashish Singh.	16th February 2024

Foreign Faculty Visits in the Department

S. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1	Prof. Sanjay Nimbalkar, Associate Professor, University of Technology Sydney	Guest Lecture	07.07.2023; Seminar Hall, Civil Engg. Dept.
2	Dr Kashi Vishwanadh Ganga Prakhya	Adjunct faculty	October November 2024

Key Instruments

Shake table structural Dynamics LabAutomated Triaxial Apparatus

10. Department of Computer Science and Engineering

Complete Name of Department: Computer Science and Engineering

Year of Establishment: 1983

Head of the Department: Prof. Sanjay Kumar Singh w.e.f. 01.01.2021.

Brief Introduction of the Department:

The Department of Computer Science and Engineering was established in July 1983. The department offers a 4 year course, B.Tech. in Computer Sc. & Engineering, 5 year Integrated Dual Degree (B.Tech. and M.Tech.) in Computer Science and Engineering from 2005-2006, and Ph.D. degree in various specializations of Computer Science and Engineering. Computer Science and Engineering is the most sought- after branch for the JEE (Advanced) selected students that come to the Institute. Our graduates have distinguished themselves in higher studies at the top Universities. They also occupy positions of eminence in the computer industry. Our Alumni remain in constant touch with us and are contributing in the development of the department. Placements for our graduates are the best in the Institute. The faculty members of the department have international experience and training. The departmental research is focused in the areas of Artificial Intelligence, Parallel and Distributed Computing, Software Engineering, Image Processing and Computer Vision, Machine Learning\Deep Learning, Medical Image Processing, Pattern Recognition, Data mining and Web mining, semantic web, Natural Language Processing (NLP), IoT, Communications, Security and Information Extraction. The department has all the facilities to carry out the related teaching and research work.

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	B.Tech	109	109	109	109	00
2.	Dual Degree	37	37	37	37	32
3	M.Tech	24	17	00	00	00
4	Ph.D (Under Institute Fellowship)	15	04	09	02	10
5	Ph.D (Under Project Fellowship)	01	01	00	00	00
6	Ph.D (Under Sponsored Category)	00	04	07	00	02

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Shashank Kumar Singh	17071508	The 6th International Conference on Computational Intelligence in Communications and Business Analytics (CICBA 2024)	24 Jan 2024, NIT Patna, India	IIT (BHU)
2	Neha Sharma	22071009	17th IEEE International Conference on Advanced Networks and Telecommunication Systems (ANTS'23)	17-20 Dec 2023, MNIT Jaipur, India	SERB
3	Purushottam Tiwari	19074029	The 8th International Conference on Soft Computing: Theories and Applications (SoCTA 2023) (Springer), Lecture Notes in Networks and Systems (LNNS).	24-26 Dec 2023, IIIT Una, India.	IIT (BHU)
4	Agrya Halder	21071509	8th International Conference on Computer Vision and Image Processing, 2024	03-05 Nov 2023, IIT Jammu, India	SERB
5	Dhruv Gupta	19074005	9th International Congress on Information and Communication Technology, 2024	19-22 Feb 2024	IIT (BHU)
6	Shilpi Kumari	21071502	25th International Conference on Distributed Computing and Networking (ICDCN)	4 – 7 Jan 2024	ICDCN Travel Grant

Names of scholars/students who won Convocation/Institute Day prizes

Sl. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1	Binit Singh	21072001	He is awarded I.I.T. (B.H.U.) Varanasi Medal for standing First at the M.Tech. in Computer Science and Engineering Examination, 2023.	IIT (BHU)
2	Harshit Agrawal	18074019	He is awarded I.I.T. (B.H.U.) Varanasi Medal for standing First at the 5- Year I.D.D. (B.Tech.-M.Tech.) in Computer Science & Engineering Examination, 2023.	IIT (BHU)
3	Evuri Harish	19075090	a) I.I.T. (B.H.U.) Varanasi Medal for standing First at the B.Tech. in Computer Science & Engineering Examination, 2023. b) Late Shri Shyam Sunder Lal Razdan Memorial Gold Medal for securing highest percentage of marks in B.Tech. Examination, 2023. c) Prof. Gopal Tripathi Memorial Gold Medal for securing highest marks at the B.Tech. Examination, 2023. d) Smt. Arati Paul and Prof. Binod Bihari Paul Gold Medal for securing highest marks in IV Year Examination among all the students of B.Tech. Examination, 2023. e) Umesh Pratap Singh Gold Medal for First Rank at the B.Tech. Examination, 2023 among all the branches. f) C. Raja Gopal Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Computer Science & Engineering Examination, 2023. g) Shri Raj Kishore Kapoor Silver Medal for securing highest marks at the B.Tech. Examination, 2023. h) Dr. Annie Besant Prize (in the forms of books by Dr. Annie Besant including copy of the 'Bhagavadgita') for standing First position among all the branches of B.Tech. Examination, 2023.	IIT (BHU)
4	Anushka Gupta	19075088	a) Prof. B.B. Bansal Memorial Gold Medal for being involved in Social Services/ Co-curricular activities and having highest CPI at the undergraduate engineering Examination, 2023 among such students. b) Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Computer Science & Engineering Examination, 2023.	IIT (BHU)

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Date of award of PhD degree	Major Areas of Specialization
PROFESSORS			
1	Dr. Anil Kumar Tripathi (13770)	1992	Parallel/Distributed Computing and Software Engineering
2	Dr. Rajeev Srivastava (18363)	April 2011	Image Processing, Computer Vision, Pattern Recognition, Machine Learning, Video Surveillance, and Medical Image Analysis.
3	Dr. Sanjay Kumar Singh (18362)	August 2004	Artificial Intelligence, Data Science, Machine Learning
ASSOCIATE PROFESSORS			
1	Dr. Bhaskar Biswas (16832)	2010	Data Mining, Web Mining and Social Networks
2	Dr. Ravi Shankar Singh (17184)	2010	Data Structures, Algorithms and High Performance Computing
3	Dr. Anil Kumar Singh (50014)	July 2010	Natural Language Processing, Computational Linguistics, Information Retrieval
4	Dr. Ruchir Gupta (50126)	18.06.2014	Peer-to-peer network, Social Networks, Game Theory, NLP and Machine Learning
5	Dr. Sukomal Pal (50052)	10.09.2012	Information Retrieval, Recommender Systems, Text Mining, Data Science
6	Dr. Ravindranath Chowdary C (19845)	31.07.2009	Information Extraction, Text Summarization, Web Mining
7	Bidyut Kumar Patra (50306)	25.04.2012	Educational Technology, Anomaly Detection, Recommender System.
8	Dr. Lakshmanan Kailasam (50127)	28.06.2013	Reinforcement Learning, Network Science
9	Dr. Hari Prabhat Gupta (50031)	31.10.2014	Computer Networks, WSN, Ubiquitous Computing, and IoT
10	Dr. Tanima Dutta (50075)	16.10.2014	Computer Vision, Deep Neural Networks, Digital Forensics, IoT
ASSISTANT PROFESSORS			
1	Dr. Vinayak Srivastava (13773)	07.03.2009	Software Engineering, Software Re-engineering
2	Dr. Amrita Chaturvedi (50125)	12.01.2016	Software Architecture, Ontologies, Semantic Web, Soft Computing and Machine Learning
3	Dr. Pratik Chattopadhyay (50151)	06.11.2015	Image and Video Processing, Pattern Recognition, Machine Learning, Cyber-security, Generative Neural Networks

Sl. No.	Name, Qualifications, Employee No.	Date of award of PhD degree	Major Areas of Specialization
4	Dr. Prasenjit Chanak (50248)	12.02.2016	Wireless Sensor Networks, Internet of Things (IoT), Cyber-Physical Networks (CPN), Consumer electronics
5	Dr. Ajay Pratap (50243)	16.07.2018	IoT, Fog Computing, Design and Analysis of Algorithms, Cellular Wireless and 6G networks
6	Dr. Mayank Swarnkar (50244)	30.09.2019	Network Security, System Security, Network Penetration Testing, IoT Security, Cyber Forensics
7	Dr. Obbattu Sai Lakshmi Bhavana (50315)	29.05.2020	Theoretical Computer Science, Security and Privacy
8	Dr. Vignesh Sivaraman (50313)	31.01.2021	Network Security and Privacy, Network Performance, Generative AI and Networks
9	Dr. Indra Deep Mastan (50425)	30.05.2021	Deep Learning for Computer Vision, Unsupervised learning, Vision and Language Models

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Dr. Roshan Singh (Ph.D.)	System Analyst (50008)	27.06.2015 (F/N)
2	Shri Mahesh Pandey (MCA)	System Analyst (50013)	27.06.2015 (F/N)
3	Shri Prakhar Kumar (MA Economics Hons.)	Senior Assistant (50132)	10.07.2017 (A/N)
4	Shri Shubham Pandey (M.Sc. Physics)	Senior Assistant (50189)	13.06.2018 (F/N)
5	Dr. Ram Prasad Meena Ph.D. (Botany)	Sr. Technical Superintendent (18756)	06.01.2009 (A/N)
6	Shri Anand Kumar Dwivedi	Skilled Staff	03.10.2023 (F/N)
7	Shri Raghuvir Sharan Tripathi M.Sc. (Tech.)- (Geophysics)	Senior Technical Superintendent (18753)	03.01.2009 (F/N)
8	Shri Dinesh Kumar Tiwari (M.A.- Economics)	Junior Technical Superintendent (18600)	18.08.2008 (A/N)
9	Shri Shashi Kant Singh (B.Sc.)	Junior Technical Superintendent (18640)	18.08.2008 (F/N)
10	Shri Manoj Kumar Singh (B.Sc.)	Junior Technical Superintendent (18601)	18.08.2008 (A/N)
11	Shri Pramod Kumar (B.Sc.)	Junior Technical Superintendent (18661)	27.04.2011 (A/N)
12	Shri Bhawesh Prasad, (M.Tech Instrumentation & Control Engineering)	Junior Technician (50377)	14.11.2023 (F.N)

Short-term courses/workshops/seminars/symposia/conferences organised by faculty member

Sl. No.	Coordinator	Title	Period
1	Dr. Prasenjit Chanak	How Agritechs can use AI and IoT to Reinvent Indian Agricultural Sector	26-28 Feb 2024
2	Dr. Prasenjit Chanak	A Two-day workshop on Internet of Things	30 Nov – 1 Dec 2023
3	Dr. Obbattu Sai Lakshmi Bhavana	Innovations in Computing	7 - 9 Mar 2024

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	International Workshop	3rd International Workshop on Machine Learning and Blockchain for Smart Society (MLBSS 2023), Co-located with ICDCN 2024	One day Venue, IIT Madras.

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of Faculty Member	Topic of Lecture	Institution	Date
1	Dr Mayank Swarnkar	Exercising DHCP Servers in LAN Attacks By Hackers and Defence Mechanisms	NIT Kurukshetra	18 Jun 2024
2	Dr Mayank Swarnkar	Fundamentals of Cyber Security in Smart Agriculture	IIT (BHU)	27 Feb 2024
3	Dr Mayank Swarnkar	OptiTuneD: An Optimized Framework for Zero-Day DNS Tunnel Detection Using N-Grams	IIIT Gwalior	12 Dec 2023
4	Dr Mayank Swarnkar	Lightweight Deep Packet Inspection Methods for Network Traffic Classification in Defensive Security	NIT Patna	11 Sep 2023
5	Dr. Prasenjit Chanak	IoT-enabled Embedded systems	VNR Vignana Jyothi Institute of Engineering & Technology, Pragathi Nagar, Nizampet (S.O) Hyderabad - 500 090	11 March 2024
6	Dr. Ajay Pratap	Application of Blockchain in Smart Healthcare	CGPIT, Uka Tarsadia University (UTU), and Central Institute of Technology, Kokrajhar (CITK)	8 July 2023
7	Dr. Ajay Pratap	Fog Computing-enabled Heterogeneous 5G networks: Application Perspective	"World Telecommunication & Information Society Day" event, hosted by IETE Varanasi subcenter and Department of ECE, IIT (BHU), Varanasi, at IIT (BHU), Varanasi	16 May 2023
8	Bidyut Kr. Patra	Recent Trends in Recommender System	IIT Guwahati	June 2023
9	Dr. Obbattu Sai Lakshmi Bhavana	Nonmalleable codes and secret sharing schemes	NIWC Workshop on Code based Cryptography	July 2023

Honours and awards

Sl. No.	Name of Faculty Member	Details of Award
1	Dr. Prasenjit Chanak	Received the Third Place Best Paper Award at IEEE IATMSI in Gwalior, India, 2024.
2	Dr. Pratik Chattopadhyay	Best Student Paper Award at CVIP 2023, IIT Jammu
3	Dr. Ajay Pratap	Best Paper Award-2nd runner-up, 17th IEEE International Conference on Advanced Networks and Telecommunication Systems, MNIT Jainpur 2024.
4	Dr. Obbattu Sai Lakshmi Bhavana	Recipient of DST INSPIRE Faculty Fellowship

Fellowships of academic and professional societies

Sl. No.	Name of Faculty Member	Details of Fellowship
1	Dr. Amrita Chaturvedi	Member IEEE
2	Dr. Amrita Chaturvedi	Member APNNS (Asia Pacific Neural Network Society)
3	Dr Mayank Swarnkar	Member IEEE, Member ACM
4	Dr. Prasenjit Chanak	Senior Member, IEEE
5	Dr. Prasenjit Chanak	Life Member, Indian Science Congress (ISC)
6	Dr. Pratik Chattopadhyay	Member IEEE, Member IEEE Signal Processing Society
7	Dr. Ajay Pratap	Member IEEE

Books, monographs authored/co-authored

Sl. No.	Name of Author/Co- Author	Title	Publisher
1	Ashish Kumar, Sachin Srivastava, Pratik Chattopadhyay	Machine and Deep-Learning Techniques for Image Super-Resolution in Machine Learning Algorithms for Signal and Image Processing	John Wiley & Sons
2	Sukomal Pal	Operating Systems	AICTE, Govt of India
3	Anshul Sharma, Abhinav Kumar, and Sanjay Kumar Singh.	Early classification of time series data: overview, challenges, and opportunities.	Data Fusion Techniques and Applications for Smart Healthcare
4	Abhinav Kumar, Sanjay Kumar Singh, S Saxena, A.K. Singh, and Sameer Shrivastava.	Recent trends in histopathological image analysis.	Medical Information Processing and Security: Techniques and Applications

Sl. No.	Name of Author/Co- Author	Title	Publisher
5	Hari Prabhat Gupta and Rahul Mishra	Design and Analysis of Algorithms	AICTE
6	Mayank Swarnkar, Shyam Singh Rajput Rajput	Artificial Intelligence for Intrusion Detection System	CRC Press, Tyler and Francis
7	Hiren Thakkar, Mayank Swarnkar, Robin Singh Bhadoria	Predictive Data Security using AI: Insights and Issues of Blockchain, IoT and DevOps	Computational Intelligence, Springer

Editorial boards of journals

Sl. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Dr. Amrita Chaturvedi	Associate Editor	Results in Control and Optimization (Elsevier)
2	Dr. Pratik Chattopadhyay	Associate Editor	IEEE Transactions on Systems, Man, and Cybernetics: Systems

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1	Prof S.K. Singh	A method and system for identifying cattle by combining unique identification of owner and cattle
2	P. Chanak, P. K. Jain, Nuthan Chingeetham	A portable curb-drowning monitoring system

Research and Consultancy

Sponsored research projects *(Ongoing only)*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	Cattle verification using muzzle print.	2 years	Heritage Foods Limited	10 lakhs	Project Coordinator Prof S.K. Singh, PI Dr R.S. Singh
2	Developing Improved Algorithms for Intelligent Video Surveillance	March 2021-September 2024	Core Research Grant, Science and Engineering Research Board, Dept. of Science & Technology, India	28.09 lakhs	Dr. Pratik Chattopadhyay (PI)
3	Development of a Lightweight Android Mobile Software Powered by Deep Learning for Identification of Plant Leaf Disease	March 2023-March 2025	Technology Development Programme, Dept. of Science & Technology, India	35.94 Lakhs	Dr. Pratik Chattopadhyay (PI)
4	Privacy-aware Federated learning based Security Solutions for beyond 5G Networks	October 2023-October 2025	Science and Engineering Research Board	22.47 Lakhs	Dr. Vignesh Sivaraman
5	Design and Development of IoT-Accessed Secure E-Finance Platform for Managing Severe Acute Malnutrition Among Vulnerable Tribes Population in Chhattisgarh	November 2023 - November 2025	IIT Bhilai Innovation And Technology Foundation	53.43 Lakhs	Dr. Vignesh Sivaraman (Co-PI)
6	Design and Development of Computer based Intervention Model for Enhancing Numerical Cognition of Pupils to Cope with Mathematics Curricula in Primary School.	February, 2024-January, 2027	DST	50.04 Lakhs	Dr. Bidyut Kumar Patra (PI)
7	Development of Disaster response system for collecting & disseminating information through social media text processing	Jan 2023 - Jan2026	UPCST	8.94 Lakhs	Sukomal Pal (PI) Dr P Chattopadhyay (Co-PI)
8	AI-Based Platform for Persons with Visual Impairment for Effective Social Inclusion	January 2024-January 2026	ICSSR (India)--NSTC (Taiwan)	11.82 Lakhs	Prof. S. K. Singh

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
9	Developing novel therapeutic strategies for mitigating antimicrobial resistance	May 2023- May 2026	NASF, GOI	153.89 Lakhs	Prof. S.K. Singh (PI) Dr. R.S. Singh (Co-PI)
10	Artificial Intelligence & IoT-based Smart Vet Ecosystem for Animal Health, Patient Care & Precision Livestock Farming	Dec 2023- Dec 2026	NASF, GOI	215.38 Lakhs	Prof. S.K. Singh (PI) Dr. R.S. Singh (Co-PI)
11	Analyze the Convergence Bounds of Federated Learning with Closer- to-Practice Constraints	Duration: 2024-2027 (Three years)	Funding agency: SERB (MATRICS)	6.60 Lakhs	Role: Hari Prabhat Gupta (PI)
12	Designing a Cybersecured LoRaWAN Framework-Enhancing Jamming Mitigation and Device Authentication	Duration: 2024-2026 (Two years) INR	Funding agency: C3iHub Foundation	17.47 Lakhs	Role: Hari Prabhat Gupta (PI)
13	Capacity Building of Tribal Population in Agriculture and Allied Sectors	April 2024 to October 2024	TIH IIT Bhilai	18 Lakhs	Role: Dr. Ruchir Gupta (PI)
14	Algorithm with Provable Guarantees for Dynamic Social Networks	2022-2025	DST SERB MATRICS	6 Lakhs	Dr. Lakshmanan Kailasam (PI)
15	Non-malleability and Multiparty computation	2023-2028	DST INSPIRE	35 Lakhs	Dr. Obbattu Sai Lakshmi Bhavana (PI)
16	Efficient Multiparty Computation and applications	2024-2026	SERB	20 Lakhs	Dr. Obbattu Sai Lakshmi Bhavana (PI)
17	Development of Integrated Low-Cost Identification and Alert System for Overloading, Over Speeding, and Lane Discipline Violation of Vehicles operating on Expressways	2023-2025	IDAPT Hub Foundation	17.88 Lakhs	Dr. Hari Prabhat Gupta (Co-PI)
18	Development of an Intelligent Internet of Things (IIoT)-enabled Portable Device for Early Diagnosis of Foot and Mouth Diseases of Dairy Cows	Duration: 2023-2026 (Three years)	SERB, Government of India	48.50 Lakhs	Role: Dr. Prasenjit Chanak (PI)
19	Investigation and Development of Mobile Sink-Based Intelligent Data Routing Scheme for IoT-enabled Wireless Sensor Networks	Duration: 2022-2024	SERB, Government of India	31 Lakhs	Role: Dr. Prasenjit Chanak (PI)

Research Publications

Sl. No.		No.
1	Total Number of Papers Published in Refereed International Journals	70
2	Total Number of Papers Presented in National Conferences	01
3	Total Number of Papers Presented in International Conferences	17

Refereed International Journals

1. Sonali Ajankar, and Tanima Dutta (2024) Image-relevant Entities Knowledge aware News Image Captioning. IEEE Multimedia. 31: 88-98.
2. Chowdhury P. and Bhandary D. (2023) Evolution, Stability, and Applicability of Surfactant Aggregates in Targeted Delivery. Journal of Physical Chemistry B. 127(13): 3001–3009.
3. Aadarsh Kumar Singh, Akhil Rao, Pratik Chattopadhyay, Rahul Maurya, and Lokesh Singh (2024) Effective Plant Disease Diagnosis Using Vision Transformer Trained with Leafy-Generative Adversarial Network-Generated Images. Expert Systems with Applications.
4. Binit Singh, Divij Singh, Rohan Kaushal, Agrya Halder, and Pratik Chattopadhyay (2024) GSSTU: Generative Spatial Self-Attention Transformer Unit for Enhanced Video Prediction. IEEE Transactions on Neural Networks and Learning Systems.
5. Somnath Sendhil Kumar, Binit Singh, Pratik Chattopadhyay, Agrya Halder, and Lipo Wang (2024) BGaitR-Net: An Effective Neural Model for Occlusion Reconstruction in Gait Sequences by Exploiting the Key Pose Information. Expert Systems with Applications. 246.

6. Harshit Agrawal, Agrya Halder, and Pratik Chattopadhyay (2024) A Systematic Survey on Recent Deep Learning-based Approaches to Multi-Object Tracking. Multimedia Tools and Applications. 83(12): 36203-36259.
7. Nirbhay Kumar Tagore, Prathistith Raj Medi, and Pratik Chattopadhyay (2024) Deep Pixel Regeneration for Occlusion Reconstruction in Person Re-identification. Multimedia Tools and Applications. 83(2): 4443-4463.
8. Shruti Bajpai, and Amrita Chaturvedi (2024) Towards Detecting Rumor Initiator in Online Social Networks using Ontology Driven Model. Arabian Journal for Science and Engineering.
9. Shruti Bajpai, and Amrita Chaturvedi (2024) A multi-criteria decision making based integrated approach for rumor prevention in social networks. Multimedia Tools and Applications.
10. Sudhansu Bala Das, Divyajyoti Panda, Tapas Kumar Mishra, Bidyut Kr Patra, and Asif Ekbal (2024) Multilingual Neural Machine Translation for Indic to Indic Languages. ACM Transactions on Asian and Low-Resource Language Information Processing. (Just Accepted)
11. Anita Saroj, Akash Thakur, and Sukomal Pal (2024) Sentiment analysis on Hindi tweets during COVID-19 pandemic. Computational Intelligence. 40(1).
12. Naina Yadav, Sukomal Pal, and Anil Kumar Singh (2024) Diversified recommendation using implicit content node embedding in heterogeneous information network. Multimedia Tools and Applications. 83(7): 20605-20635.
13. Anita Saroj, and Sukomal Pal (2024) Ensemble-based domain adaptation on social media posts for irony detection. Multimedia Tools and Applications. 83(8): 23249-23268.
14. Abhinav Kumar, H Tiwari, R Singh, A.K. Singh, and Sanjay Kumar Singh (2024) SLIDE-Net: A Sequential Modeling Approach with Adaptive Fuzzy C-Mean Empowered Data Balancing Policy for IDC Detection. IEEE Transactions on Fuzzy Systems.
15. Abhinav Kumar, Anshul Sharma, A.K. Singh, Sanjay Kumar Singh, and Sonal Saxena (2024) Data Augmentation for Medical Image Classification based on Gaussian Laplacian Pyramid Blending with a Similarity Measure. IEEE Journal of Biomedical and Health Informatics.
16. Jayashankara, M., Anshul Sharma, A.K. Singh, P Chanak, and Sanjay Kumar Singh (2024) A novel intelligent modeling and prediction of heat energy consumption in smart buildings. Energy and Buildings. 114105.
17. V Bharti, A Kumar, V Purohit, R Singh, A.K. Singh, and Sanjay Kumar Singh (2024) A label efficient semi self-supervised learning framework for iot devices in industrial process. IEEE Transactions on Industrial Informatics.
18. Shrikant Tiwari, Rishav Singh, Sanjay Kumar Singh, Abhishek Singh Kilak, Ahmed Alkhayyat, and Ankit Vidyarthi (2024) Biometrics recognition of newborn: a review. Multimedia Tools and Applications. 1-31.
19. Sushant Kumar, Sumit Datta, Vishakha Singh, Sanjay Kumar Singh, and Ritesh Sharma (2024) Opportunities and Challenges in Data-Centric AI. IEEE Access.
20. Sandeep S Udmale, Aneesh G. Nath, Durgesh Singh, Aman Singh, Xiaochun Cheng, Divya Anand and, Sanjay Kumar Singh (2024) An optimized extreme learning machine-based novel model for bearing fault classification. Expert Systems. 41(2): 13432.
21. Rahul Mishra, H. P. Gupta, G. Banga, and S. K. Das (2024) Resource Aware Clustering for Tackling the Heterogeneity of Participants in Federated Learning. IEEE Transactions on Parallel and Distributed System (TPDS). [Accepted]
22. Antriksh Goswami, and Ruchir Gupta (2024) Stable reputation management system in P2P networks: An evolutionary perspective. Journal of Computational Science. 78.
23. Himanshu Singh, Ajay Pratap, Ram Narayan Yadav, and Debasis Das (2024) Loss Aware Federated Learning for Service Migration in Multimodal E-Health Services. IEEE Transactions on Services Computing. 1-12.
24. Moirangthem Biken Singh, Himanshu Singh, and Ajay Pratap (2024) Stable Matching based Revenue Maximization for Federated Learning in UAV-Assisted WBANs. IEEE Transactions on Services Computing. 1-12.
25. M. Swarnkar, and R. Kumar (2024) BitIoT: A Bit Level Deep Packet Inspection Method for Identification of MQTT-based IoT Devices in the Wild. IEEE Transactions on Network and Service Management. 1-10.
26. M. Swarnkar, and N. Sharma (2024)OptiClass: An Optimized Classifier for Application Layer Protocols Using Bit Level Signatures. ACM Transactions on Privacy and Security. 1-23.
27. Sushant Kumar, Ritesh Sharma, Vishakha Singh, Shrikant Tiwari, Sanjay Kumar Singh, and Sumit Datta. (2024) Potential Impact of Data-Centric AI on Society. IEEE Technology and Society Magazine. 42(3): 98-107.

28. Vaibhav Agarwal, Shashikala Tapaswi, and Prasenjit Chanak (2024) Energy Efficient Query Processing Mechanism for IoT-enabled WSNs. IEEE Transactions on Green Communications and Networking. (Accepted)

29. Anand Rawal, and Prasenjit Chanak (2024) A Q-Learning-based Fault-Tolerance Data Routing Scheme for IoT-Enabled WSNs. IEEE Internet of Things Journal. (Accepted)

30. V Ramanjaneyulu Yannam, Jitendra Kumar, Korra Sathya Babu, and Bidyut Kr. Patra (2024) Euclidean embedding with preference relation for recommender systems. Multimedia Tools and Applications

31. Rahul Mishra, and Hari Prabhat Gupta (2023) A Model Personalization-based Federated Learning Approach for Heterogeneous Participants with Variability in the Dataset. ACM Transactions on Sensor Networks. 20(1): 1–28.

32. Vaibhav Padhye, Kailasam Lakshmanan (2023) A deep actor critic reinforcement learning framework for learning to rank. Neurocomputing. 547: 126314.

33. Sanjay Kumar Gupta, and Pratik Chattopadhyay (2023) Pose-Based Boundary Energy Image for Gait Recognition from Silhouette Contours. Sadhana. 48(4).

34. Preetam Pal, Pratik Chattopadhyay, and Mayank Swarnkar (2023) Temporal Feature Aggregation with Attention for Insider Threat Detection from Activity Logs. Expert Systems with Applications. 224: 119925.

35. Agrya Halder, Pratik Chattopadhyay, and Sathish Kumar (2023) Gait Transformation Network for Gait De-Identification with Pose Preservation. Signal, Image and Video Processing. 17(5): 1753-1761.

36. Rakesh Kumar, Amrita Chaturvedi (2023) Software Bug Prediction using Reward-Based Weighted Majority Voting Ensemble Technique. IEEE Transactions on Reliability. 73(1): 726 - 740.

37. Shashank Kumar Singh, Amrita Chaturvedi (2023) A reliable and efficient machine learning pipeline for American sign language gesture recognition using EMG sensors. Multimedia Tools and Applications. 82: 23833–23871.

38. Vaibhav Padhye, Kailasam Lakshmanan, Amrita Chaturvedi (2023) Proximal policy optimization based hybrid recommender systems for large scale recommendations. Multimedia Tools and Applications. 82: 20079–20100.

39. Shashank Kumar Singh, Amrita Chaturvedi (2023) Leveraging deep feature learning for wearable sensors based handwritten character recognition. Biomedical Signal Processing and Control. 80(1): 104198.

40. Abhaya and Bidyut Kr. Patra (2023) An Efficient Method for Autoencoder based Outlier Detection. Expert Systems with Applications. 213: 118904.

41. Siba Sankar Sahu, Sukomal Pal (2023) Building a text retrieval system for the Sanskrit language: Exploring indexing, stemming, and searching issues. Computer Speech & Language. 81: 101518.

42. Siba Sankar Sahu, Sukomal Pal (2023) A Study on Corpus-based Stopword Lists in Indian Language IR. ACM Transactions on Asian and Low Resource Language Information Processing 22(7): 202:1-202:22.

43. Jayashankara, M., Priyansh Shah, Anshul Sharma, P Chanak, and Sanjay Kumar Singh (2023) A novel approach for short-term energy forecasting in smart buildings. IEEE Sensors Journal. 23(5): 5307-5314.

44. Ritesh Sharma, Sameer Shrivastava, Sanjay Kumar Singh, Abhinav Kumar, Amit Kumar Singh, and Sonal Saxena (2023) EnDL-HemoLyt: Ensemble deep learning-based tool for identifying therapeutic peptides with low hemolytic activity. IEEE Journal of Biomedical and Health Informatics.

45. Ritesh Sharma, Sameer Shrivastava, Sanjay Kumar Singh, Abhinav Kumar, Amit Kumar Singh, and Sonal Saxena. (2023) Artificial intelligence-based model for predicting the minimum inhibitory concentration of antibacterial peptides against ESKAPEE pathogens. IEEE Journal of Biomedical and Health Informatics.

46. Anviti Pandey, Sanjay Kumar Singh, Sandeep S. Udmale, and K. K. Shukla. (2023) An intelligent optimized deep learning model to achieve early prediction of epileptic seizures. Biomedical Signal Processing and Control 84: 104798.

47. Durgesh Singh, Sanjay Kumar Singh, and Sandeep Sambhaji Udmale (2023) An efficient self-embedding fragile watermarking scheme for image authentication with two chances for recovery capability. Multimedia Tools and Applications. 82(1): 1045-1066.

48. B. Shilpa, H. P. Gupta and R. K. Jha (2023) Edge Processing: A LoRa-Based LCDT System for Smart Building with Energy and Delay Constraints. IEEE Systems, Man, and Cybernetics Magazine. 9(3): 37-43.

49. Rahul Mishra and Hari Prabhat Gupta (2023) Designing and Training of Lightweight Neural Networks on Edge Devices using Early Halting in Knowledge Distillation. IEEE Transactions on Mobile Computing.

50. C. Singh, R. Mishra, H. P. Gupta and G. Banga (2023) A Federated Learning-Based Patient Monitoring System in Internet of Medical Things. IEEE Transactions on Computational Social Systems. 10(4): 1622-1628.
51. Rahul Mishra and Hari Prabhat Gupta (2023) Transforming Large-size to Lightweight Deep Neural Networks for IoT Applications: A Review. ACM Computing Surveys. 55(11): 1–35.
52. R. Mishra, H. P. Gupta, R. Kumar and T. Dutta (2023) Leveraging Augmented Intelligence of Things to Enhance Lifetime of UAV-Enabled Aerial Networks. IEEE Transactions on Industrial Informatics. 19(1): 586-593.
53. R. Kumar, H. P. Gupta, R. Mishra and S. Pandey (2023) Machine Learning-Based Interference Mitigation in Long-Range Networks for High-Ceiling Smart Buildings. IEEE Access. 11: 96103-96118.
54. R. Kumar, R. Mishra and H. P. Gupta (2023) A Federated Learning Approach with Imperfect Labels in LoRa-Based Transportation Systems. IEEE Transactions on Intelligent Transportation Systems. 24(11): 13099-13107.
55. Chopade, S.S., Gupta, H.P. & Dutta, T. (2023) Survey on Sensors and Smart Devices for IoT Enabled Intelligent Healthcare System. Wireless Personal Communications. 131: 1957–1995.
56. S. Kumar, V. Maurya and R. Gupta (2023) A Distributed Load Balancing Technique for Multitenant Edge Servers With Bottleneck Resources. IEEE Transactions on Reliability. 73: 1147 - 1159.
57. Kumar, S., Sharma, A., & Gupta, R. (2023). QoS driven cost-efficient resource allocation in edge computing: A distributed game theoretic approach. Journal of Computational Science. 72: 102106.
58. S. Kumar, A. Goswami, R. Gupta, S. P. Singh and A. Lay-Ekuakille (2023) A Cost-Effective and QoS-Aware User Allocation Approach for Edge Computing Enabled IoT. IEEE Internet of Things Journal. 10(2): 1696-1710.
59. Arora S, Tripathy SK, Gupta R, Srivastava R. (2023) Exploiting multimodal CNN architecture for automated teeth segmentation on dental panoramic X-ray images. Proceedings of the Institution of Mechanical Engineers, Part H. 237(3): 395-405.
60. Kumar, N., Bhoi, S.S., Gupta, R. Singh A.K. (2023) Sliding window symbol-pair constrained codes for energy harvesting. Annals of Telecommunications. 78: 71–77.
61. Vaibhav Agarwal, Shashikala Tapaswi, Prasenjit Chanak, Neeraj Kumar (2023) Intelligent Emergency Evacuation System for Industrial Environments using IoT-enabled WSNs. IEEE Transactions on Instrumentation and Measurement. 72: 9514612-9514612.
62. Archana Ojha, Anshul Jindal, Prasenjit Chanak (2023) An Intelligent Indoor Emergency Evacuation System using IoT-enabled WSNs for Smart Buildings. IEEE Internet of Things Journal. 11(5): 8838 - 8847.
63. Moirangthem Biken Singh, Himanshu Singh, and Ajay Pratap (2023) Energy-Efficient and Privacy-Preserving Blockchain Based Federated Learning for Smart Healthcare System. IEEE Transactions on Services Computing. 1-12.
64. Gagandeep Kaur, Prasenjit Chanak. (2023) An Intelligent Fault Tolerant Data Routing Scheme for Wireless Sensor Network-assisted Industrial Internet of Things. IEEE Transactions on Industrial Informatics. 9(4): 5543 - 5553.
65. Utkarsh Mishra, Akshat Agrawal, Josephine Crystal R Mathew, Rajesh Kumar Pandey, and Pratik Chattopadhyay (2023) An Efficient Approach for Image De-fencing based on Conditional Generative Adversarial Network. Signal, Image and Video Processing. 17 (1): 147-155.
66. Amit Biswas, Ravi Yadav, Gaurav Baranwal, and Anil Kumar Tripathi (2023) Proof of Karma (PoK): A Novel Consensus Mechanism for Consortium Blockchain. IEEE Transactions on Services Computing.
67. Manisha Singh, Gaurav Baranwal, Anil Kumar Tripathi (2023) A novel 2-phase consensus with customized feedback-based group decision-making involving heterogeneous decision-makers. The Journal of Supercomputing. 79(4): 3936-3973.
68. Manisha Singh, Gaurav Baranwal, Anil Kumar Tripathi (2023) Decentralized Group Decision Making using Blockchain. The Journal of Supercomputing. 79: 20141– 20178.
69. Pandey, Sushant Kumar, and Anil Kumar Tripathi. (2023) DBDNN-Estimator: A Cross- Project Number of Fault Estimation Technique. SN Computer Science. 5: 1-29.
70. Pandey, Sushant Kumar, Arya Haldar, and Anil Kumar Tripathi. (2023) Is deep learning good enough for software defect prediction. Innovations in Systems and Software Engineering. 1-16.
71. Uttam Singh, Rabi Shaw and Bidyut Kr. Patra (2023) A Data Augmentation and Channel Selection Technique for Grading Human Emotions on DEAP Dataset. Biomedical Signal Processing and Control. 79.

Proceedings of National Conferences

1. Verma A., Pramanik H., (2022) Multiphase catalytic pyrolysis of waste expanded polystyrene via solid base catalyst calcium carbonate, CHEMCON-2022, Held from 27th to 30th December 2022, HBTU Kanpur.

Proceedings of International Conferences

1. Dhruv Gupta, Dhruve Kiyawat, V Venkata Vinay Kumar, Utkarsh Mishra and Pratik Chattopadhyay. 2024. DefenceLite: An Effective Lightweight GAN-based Image De-fencing Model. 9th International Congress on Information and Communication Technology, 2024.
2. Saikat Mondal, Anand Prakash Rawal and Prasenjit Chanak. 2024. Dynamic Load Balancing in Multiple Gateway-based Industrial IoT-enabled WSNs. IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI), 2024.
3. Archana Ojha, Rishav Das and Prasenjit Chanak. 2024. Energy-Efficient Relay Node Selection Scheme for Fault-Tolerant Data Routing in Wireless Sensor Networks. IEEE International Conference on Interdisciplinary Approaches in Technology and Management for Social Innovation (IATMSI), 2024.
4. Shashank Kumar Singh and Amrita Chaturvedi. 2024. Leveraging handwriting dynamics, explainable AI and Machine learning for Alzheimer prediction. Communications in Computer and Information Science (CCIS). 6th International Conference on Computational Intelligence in Communications, and Business Analytics (CICBA 2024), NIT Patna, India, 2024.
5. Himanshu Singh, Moirangthem Biken Singh, Pratik Prakash Kagale and Ajay Pratap. 2024. Cost-aware Hierarchical Federated Learning for Smart Healthcare. 141-146. 16th International Conference on COMmunication Systems & NETworkS, 2024.
6. Abhishek Kumar, Shilpi Kumari, Ajay Pratap and Sunil Kumar. 2024. NVM-Enhanced MLI Placement for Revenue Maximization in UAV-Fog Assisted MEC with Stable Matching. 1-6. 25th International Conference on Distributed Computing and Networking, 2024.
7. Himanshu Singh, Moirangthem Biken Singh, Ajay Pratap, Shilpi Kumari, Abhishek Kumar, Sajal K Das. 2024. Splitfed-based Patient Severity Prediction and Utility Maximization in Industrial Healthcare 4.0. 1-6. 25th International Conference on Distributed Computing and Networking, 2024.
8. Moirangthem Biken Singh, Suraj Mahawar, Himanshu Singh, Shilpi Kumari and Ajay Pratap. 2024. Blockchain and Fog Access Point Integrated Healthcare System for Contact Tracing and Infection Probability Evaluation. 1-6. 25th International Conference on Distributed Computing and Networking, 2024.
9. Yasasvitha Koganti, Ram Narayan Yadav and Ajay Pratap. 2024. Optimizing Resource Utilization and QoS-Conscious Application Deployment Through AHP in Edge Computing. 135-140. 16th International Conference on COMmunication Systems & NETworkS (COMSNETS), 2024.
10. Kaartik Bhushan, Sai Lakshmi Bhavana Obbattu, Manoj Prabhakaran and Rajeev Raghunath.2024. R3PO: Reach-Restricted Reactive Program Obfuscation and its Application to MA-ABE. Public Key Cryptography, 2024.
11. Purushottam Tiwari, Zope Sumedh Murlidhar, Amrita Chaturvedi and Shashank Kumar Singh. 2023. Ensemble Models for Vulnerability Prediction using code metrics. Lecture Notes in Networks and Systems (LNNS). 8th International Conference on Soft Computing: Theories and Applications (SoCTA), IIIT Una, India, 2023.
12. Rakesh Kumar and Amrita Chaturvedi. 2023. Software Bug Count Prediction Model Based on Software Source Code. 14th International Conference on Computing, Communication and Networking Technologies (ICCCNT), IIT Delhi, India, 2023.
13. Harshit Agrawal, Agrya Halder and Pratik Chattopadhyay. 2023. MotionFormer: An Improved Transformer-Based Architecture for Multi-Object Tracking. 8th International Conference on Computer Vision & Image Processing, 2023.
14. Himanshu Singh, Moirangthem Biken Singh, Akash Patel and Ajay Pratap. 2023. Stochastic On-Time Arrival Path Prediction and Dynamic Programming for Criticality Aware Mobile Healthcare System. 1-6. 17th IEEE International Conference on Advanced Networks and Telecommunication Systems, 2023.
15. Neha Sharma and Mayank Swarnkar. 2023. OptiTuneD: An Optimized Framework for Zero-Day DNS Tunnel Detection Using N-Grams. 1-6, 17th IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS'23), Jaipur, India, 2023.

16. Moirangthem Biken Singh, Himanshu Singh and Ajay Pratap. 2023. Criticality-Driven Scheduling for UAV-Assisted Remote Health Monitoring System. 1-6. 17th IEEE International Conference on Advanced Networks and Telecommunication Systems, 2023.

17. Himanshu Singh, Moirangthem Biken Singh, Harsh Pratik and Ajay Pratap. 2023. UAV and UGV Assisted Path Planning for Sensor Data Collection in Precision Agriculture. 1-6. 11th IEEE International Conference on Embedded Systems Devices and Computing (ESDC), 2023.

Distinguished Visitor

Sl. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	C Pandurangan, Chair Professor IISc	9 March 2024	Research Insights and talks

Key Instruments

1. Name of Lab: Network security lab

Ipv6 Switch and router for network setup

2. Name of Lab: Vision and coputing lab

Benchmark high speed solution

3. Name of Lab: Internet of things and embedded systems lab

Arduino board, GPS module

development board

4.Name of Lab: Artificial intelligence lab

Two high performance GPUs

5. Name of Lab: Multimedia lab

Drone setup for Ubiquitous lab

6.Name of Lab: Pattern recognition lab

Tyrone high power GPU server

7.Name of Lab: Information retrieval lab

Tyrone server

11. Department of Electrical Engineering

Complete Name of Department: Department of Electrical Engineering

Year of Establishment: 1919

Head of the Department: Prof. R.K. Pandey

Brief Introduction of the Department:

Mahamana Pt. Madan Mohan Malviya founded BHU in the year 1916 with the benevolent and magnanimous contributions of the then Maharajas and other persons of eminence. The University was nurtured by Sir Sunderlal as the 1st V.C. of the University, followed by great visionaries, such as Pt. Madan Mohan Malviya, Acharya Narendradev, Sir S. Radhakrishnan and many other eminent personalities.

The Benaras Engineering College (BENCO) was started in the year 1919, with its strong foundation laid by revered Prof. Charles A. King, Prof. H. P. Philpot and Prof. M. Sengupta. With the passage of time, the College of Mining and Metallurgy (MINMET) and the College of Technology (TECHNO) were included, expanding its horizon. These three colleges were merged and named as Institute of Technology in the year 1968 to give more autonomy for its better perspective in terms of academic and administrative decisions. It's undergraduate students are admitted through Joint Entrance Examination (JEE) being conducted for all IITs.

Since the inception of BENCO in 1919, a combined Bachelor's degree in Mechanical and Electrical Engineering was awarded till 1952. The Department of Mechanical Engineering and the Department of Electrical Engineering were separated in 1953 and conferred separate degrees in respective disciplines.

Presently, the Department of Electrical Engineering runs five postgraduate (M. Tech.) programmes in Electrical Machines and Drives (started in 1956), Power Systems (started in 1964), Control Systems (started in 1964), Power Electronics (started in 1982) and Interdisciplinary Systems Engineering (started in, 1982) and Ph. D. programme in all disciplines of Electrical Engineering. The department also has a five-year Integrated Dual Degree (IDD) Program (started in 2006) leading to a Master's degree specialising in Power Electronics.

The department has received the Special Assistance Programme (SAP) of UGC since 1988 and the COSIST program of UGC from 1995 to 2000. Apart from these, the department has been conducting research projects funded by DST, AICTE, CPRI and other R&D organisations of Govt. of India.

The department has excellent placement records over the years. The students of this department are joining core companies such as PGCIL, IOCL, HPCL, Trident, Reliance, Maruti, etc. Electronics companies such as Broadcom, Sony, etc., regularly recruit students from this department. Our students regularly join software companies such as Morgan Stanley, Goldman Sachs, Citrix, Oracle, SISO, etc. The vast number of job offers is mainly due to the versatility of the branch, which ensures that students can sit for interviews in software, core electrical, electronic, and non-technical companies.

Some of the department's famous alumni include Mr. Nikesh Arora: Senior Vice President and Chief Business Officer at Google, Mr Rajiv Dogra: Indian diplomat, Ex- Consul General to Karachi, Pakistan, Mr. Gyanesh Pandey: Co-founder, CEO and CTO of Husk Power Systems and Mr Narla Tata Rao: Winner of Padma Shree, a doyen of the power sector in India.

The department is pursuing academic activities with the following goals and objectives:

- Further up-gradation and technological modernisation of infrastructural facilities.
- Encouraging teaching innovations through audio-visual and multimedia aids.
- Channelizing expertise of faculty in the frontier areas of electrical engineering.
- Research, testing and consultancy.
- Training the undergraduate and postgraduate students towards entrepreneurship in consonance with the liberalisation and privatisation policies of the Government.
- Development of energy-efficient, environment-friendly electrical technologies as per the norms set by various planning, regulatory and other statutory bodies

Major Areas of Research

- Control System
- Electrical Machines and Drives
- Power Electronics
- Power System
- Systems Engineering

Infrastructure

Sl. No.	Particulars	Number
1	No. of classrooms/lecture halls	7
2	No. of Laboratory	5
3	No. of computers available in the department for students	140

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	B.Tech	127	125	127	124	27
2	IDD	33	32	32	35	27
3	M.Tech	41	27	-	-	-
4	Ph. D (Under Institute Fellowship)	10	4	11	7	7
5	Ph. D (Under Sponsored Category)	-	1	-	2 (QIP)	-
6	Ph. D (Full time External Category)	-	1	2	1	-
7	Ph. D (Part Time)	-	-	1	-	3
8	Ph.D Foreign Students	-	-	1	-	-

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Ashish Prajapati	19081011	3rd International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE 2023)	17- 20 Dec 2023, Hotel Hycinth, Trivandrum, Kerala	IIT-BHU
2	Piyush Singh	22081502	2023 IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC)	10-13 Dec 2023, KIIT Bhubaneswar	IIT-BHU
3	Vineet Bharadvaj	23081008	2023 IEEE International Transportation Electric Conference (iTECH-India)	13-15 Dec 2023, Chennai Trade Centre	Self
4	Monika Mishra	20081001	International Conference on Energy, Power and Environment: Towards Flexible Green Energy Technologies (ICEPE)	15-17 Jun 2023 & Shillong, India	RSGF by Institute
5	Ajitesh Pandey	19084004	G20 Y20 Conference on “Importance of AI in education”	18 Aug 2023 Varanasi	Government of India
6	Vulavakayala Siva	19081005	3rd International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE 2023)	17- 20 Dec 2023 Hotel Hycinth, Trivandrum, Kerala, India	STGS
7	Ankit Kumar Pratihasta	21081001	IECON 2023	16-19 Oct 2023, Singapore	IIT-BHU
8	Lokendra Singh Lodhi	20085051	Real Time Simulation for Power Electronics and Power Systems Applications	21 - 25 Aug 2023 (Online-mode)	Self

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
9	Saumya Singh	20081509	SEFET-23/iTEC INDIA 2023/One-week High-End Workshop (Offline)-KARYASHALA (MNIT JAIPUR) /EV ENCLAVE-23	09 Aug 2023 Siksha 'O' Anusandhan/Dec 12 - 15 iTEC India 2023 Khandagiri Marg,Chennai Trade Centre, Nandambakkam - India/ 05 -11, Jul 2023 MNIT, JAIPUR	Self
10	Prateek Utkarsha	18081003	PESGRE 2023	17-20 Dec 2023, Trivandrum, Kerala, India	--
11	Piyush Singh	22081502	STPEC Confeternce & Power Train design of Battery Electric Vehicles Workshop	8 Dec 2023	Self
12	Mayank Mehta	22084013	Intellectual property rights workshop	9 Mar 2024	Self
13	Alok Kumar	20081002	IEEE Region 10 Conference (TENCON 2023)	31 Oct 2023 - 03 Nov 2023 & Chiang Mai, Thailand	CPDA by Institute
14	Priyatosh Jena	19081501	IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society	16-19 Oct 2023 Singapore	IIT-BHU
15	Prakash Ji Barnawal	19081008	IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society	16-19 Oct 2023 Singapore	IIT-BHU
16	Warda Matin Khan	20081502	IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society	16-19 Oct 2023 Singapore	Self
17	Priyatosh Jena	19081501	2023 IEEE International Transportation Electrification Conference (ITEC-India)	12-15 Dec 2023 Chennai India	IIT-BHU
18	Virendra Prasad Maurya	19081501	2023 IEEE International Transportation Electrification	12-15 Dec 2023 Chennai, India	IIT-BHU
19	Arya Singh	2208102	2023 IEEE International Transportation Electrification Conference (ITEC-India)	12-15 Dec 2023 Chennai, India	IIT-BHU

Names of students/scholars who got prizes and awards outsidethe Institute

Sl. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Yash Somalkar	21165060	Capture the Flag (Cybersecurity) competition CSAW	12 Nov 2023 & Online	New York University Tandon School of Engineering, Brooklyn, New York, United States
2	Bhavya Malhotra	20085019	OPJEMS 2023 Scholar	23 Mar 2024 Gulmohar Hall, Indian Habitat Centre, New Delhi	OP Jindal Group
3	Bhavya Malhotra	20085019	Power of Love contest	Remote	Aryajanani Trust
4	Sushil	21085103	Inter IIT Cultural Meet 6.0 Silver Fine Arts Cup	1 Jan 2024, IIT Kharagpur	Inter IIT Cultural Meet 6.0, IIT Kharagpur
5	Saumya Singh		Best paper award in the IEEE 3rd International Conference on SEFET-2023	9-12 Aug 2023	IEEE SEFET-2023
6	Shristi Singh	22084022	Inter-IIT	27-29 Dec 2023 IIT Kharagpur	Inter-IIT cultural meet 6.0 IIT Kharagpur

Names of scholars/students who won Convocation/Institute Day prizes

Sl. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1	Pratyush Singh	20085071	Merit Awards SNTC, Gymkhana	Gymkhana Awards (Merit Awards SNTC)

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
PROFESSORS			
1	Prof. R. K. Pandey, PhD, 16623	22/05/1992	Power Systems: EHV AC & DC Transmission TechnologyDesign and Development, FACTS Controllers Design, Analysis and Applications, Integrated Large Power System Operation & Smart Control, Intelligent Grid Control Architecture, High Voltage DC Transmission Technology including VSC for RE Grid Interface Connectivity, Electricity Policy and Planning, Distribution System Planning & Automation, Distributed Energy Resources & Management, Design and Development of Integrated Smart Power Systems (Generation, Transmission and Distribution) under Large Renewable Energy, Electric Vehicle and Energy Storage Penetration in Grid.
2	Prof. R.K. Srivastava B.Tech. EE; M.Tech. EMD; PhD. EE; Dip in German., 13788	06/03/2000	Linear Induction Motors, Special purpose Electric Machines, Electromagnetic Fields applied to Electrical Machines
3	Prof. R.K. Misra, PhD, 13791	23/03/2005	Power Distribution Systems, AI and its Application in Power Systems, Control and Applications of Computational Intelligence in Power Systems
4	Prof. R. Mahanty, PhD, 13792	10/10/2005	Power Electronics
5	Prof. Devender Singh, PhD, 17094	05/04/2002	Short-term Load Forecasting, State Estimation, Distributed Generation
6	Prof. M. K. Verma, PhD, 17590	31/5/2005	Power System voltage stability, Application of FACTS controllers, Smart grid
7	Prof. R. K. Saket, PhD, 17548	16/06/2006	Reliability Engineering, Power System Reliability, Electrical Machines & Drives
8	Prof. Santosh K Singh, PhD, 17446	28/11/2011	Silicon carbide converters, Power Electronic converter topologies, Electric Drives, Multiport Permanent magnet generator, Renewable energy integration and applications
9	Prof R. K. Singh, PhD, 17464	12/02/2013	Power Electronics, Energy Storage System and Optimal Bidirectional Battery Chargers, Modelling, simulation, and control of Power Electronics System, Power Electronics for the Hybrid Renewable AC/ DC micro-grid, Modeling and control for Point-of-load, EV/PHEV interface with renewable energy and grid
ASSOCIATE PROFESSORS			
1	Dr. Kalpana Chaudhary, PhD, 16629	19/07/2009	Power Electronics, Electrical Machines and Drives, Renewable energy generation, Fuel Cell based hybrid microgrid; fuel cell vehicle; Electric Drive train for electric vehicle
2	Dr. S. R. Mohanty, PhD, 50224	23/02/2007	Disturbance detection and classification and protection issues in power system and Microgrid, Multi-objective Robust Control and optimisation in Microgrid, Wide area Monitoring and control in Smart grid
3	Dr. V. N. Lal, PhD, 175549	09/09/2015	Power Electronics for Microgrid and Renewables, Electric Vehicle, Design and Control of Solar PV System, Hybrid AC/ DC Converters, Bidirectional Power Converters
4	Dr. Sandip Ghosh, PhD, 50063	11/11/2010	Control System Engineering
5	Dr. Shyam Kamal, PhD, 50062	14-08-2014	Nonlinear control, Adaptive control, Fault Tolerant Control
ASSISTANT PROFESSORS			
1	Dr Jeewan Chandra Pandey, PhD, 17538	02-02-2018	High Voltage electrical insulation, Nanodielectrics
2	Dr. N K Swami Naidu, PhD, 50209	27/05/2015	Power Electronics, Renewable Energy Integration to the grid, Smart Grid, Power Electronic Drives, Power Quality, Hybrid Energy Storage Systems.
3	Ms. Sobhita Meher, M. Tech., 17589	--	Computer Science
4	Dr. Avirup Maulik, PhD 50258	21-08-2019	Power systems, Distribution system, Microgrid optimisation
5	Dr. Chinmaya K A, PhD, 50257	05/08/2019	Electric Machines & Drives, Power Electronics, Electric Vehicles (EVs).

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
6	Dr. Naveen Yalla, PhD, 50293	26/08/2019	Multilevel Converters, EV Chargers, Magnetics
7	Dr. Subho Paul, PhD, 50382	10/11/2021	Distribution network optimal power flow, microgrdi energy management, power system optimization and resiliency analysis, application of artificial intelligence in power systems
8	Dr. Suman M, PhD (Relieved to join NIT Trichy)	11/02/2019	Power Systems

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the Department
1	Mr. Sanjeev Kumar Maurya, B.Sc. MA, MBA	Superintendent, 50149	25.07.2017
2	Mr. Soumitra Sinha, Postgraduate	Junior Superintendent, 19874	22.05.2023
3	Ms. Preeti Dayal Gautam, MBA	Junior Assistant, 50393	01.01.2024
4	Mr. Abhishek Pandey, B.E., PGDBA	Senior Technical Officer, 18824	17.07.2009
5	Mr. A.N.Singh (*Re-engaged*). B.Sc., CIC, M.A	Technical Superintendent, 14007	16.06.1988
6	Mr. R. C. Sharma, B.A.	Technical Superintendent, 14008	26.04.1991
7	Mr. Radhe Shyam Patel, Intermediate, Polytechnic in EE	Technical Superintendent, 18648	05.08.2008
8	Mr. Umesh Mishra, B. Sc.	Junior Technical Superintendent, 18658	05.08.2008
9	Mr. Satish Kumar Singh, B. A.	Junior Technical Superintendent, 18652	06.08.2008
10	Mr. Dharmendra Kumar Singh, Highschool+ITI	Junior Technical Superintendent, 18647	07.08.2008
11	Mr. Sanjay Kumar Bharti, B.Sc., B.Ed.	Junior Technical Superintendent, 18659	11.08.2008
12	Mrs. Ranjana Singh, Postgraduate	Junior Technical Superintendent, 14740	13.04.2012
13	Mr. Anjneya Kumar, M.Sc. B.Ed.	Senior Technician, 19649	21.09.2012
14	Mr. Vinish Singh, B.Tech	Junior Techincian, 50358	14.11.2023
15	Mr. Pradeep Kumar Patel, Diploma in Electrical Engg. (Polytechnic)	Junior Techincian, 50406	10.01.2024

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

Sl. No.	Coordinator	Title	Period
1	Kalpana Chaudhary	SERB POWER Mobility Meeting	3 Nov 2023
2	Rajeev Kumar Singh	EV conclave 2023 "Driving the Future: Confluence of Data Analytics and Electric Mobility	16 – 17 Dec 2023
3	Vivek Nandan Lal	EV conclave 2023 "Driving the Future: Confluence of Data Analytics and Electric Mobility	16 – 17 Dec 2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	N Krishna Swami Naidu	3rd International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE 2023)	17-20 Dec 2023, Hotel Hycinth, Trivandrum, Kerala, India
2	Kalpana Chaudhary	CII Technology Conclave and Innovation Awards	15 Dec 2023, Hotel The Lalit, Delhi
3	Mitresh Kumar Verma	IEEE International Conference on Energy Technologies for Future Grids (ETFG)	03-06 Dec 2023, Wollongong, Australia.
4	Santosh K Singh	The 49th Annual conference of the IEEE Industrial Electronic Society (IECON 2023)	16-19 Oct 2023, Singapore
5	Santosh K Singh	IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE)	Dec 2023, India
6	Avirup Maulik	IEEE TENCON 2023	Chiangmai, Thailand, 31 Oct.-3rd Nov, 2023.
7	Avirup Maulik	IEEE TENCON 2023	IEEE TENCON 2023, Chiangmai, Thailand, 31 Oct -3 Nov, 2023.

Sl. No.	Name of Faculty Member	Title	Period and Venue
8	Vivek Nandan Lal	IEEE 14th International Conference on Power Electronics and Drive Systems (PEDS)	07-10 Aug 2023 Montreal, QC, Canada, 2023
9	Vivek Nandan Lal	The 49th Annual conference of the IEEE Industrial Electronic Society (IECON 2023)	16-19 Oct 2023, Singapore
10	Rajeev Kumar Singh	2024 IEEE Applied Power Electronics Conference and Exposition (APEC)	16-20 Mar 2024 Atlanta, Georgia

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	Dr. N Krishna Swami Naidu	Experimental Implementation of Doubly Fed Induction Generator for Wind Energy Conversion Systems	Lendi Institute of Engineering and technology, Vizianagaram	24/01/2024
2	Dr. Naveen Yalla	Power Converter Topologies for EV Chargers	Lendi Institute of Engineering and technology, Vizianagaram	25/01/2024
3	Dr. Naveen Yalla	Power Factor Correction Converters for EV Chargers	National Institute of Technology, Uttarakhand	06/02/2024
4	Dr. Chinmaya K A	Hybrid Electric Vehicles and Battery management System (HEVBMS-2023)	Rajkiya Engineering College Sonbhadra, Uttar Pradesh	04/07/2023
5	Dr. Chinmaya K A	Global Wind Day 2023	Amity University, Noida, Uttar Pradesh	15/06/2023
6	Santosh K Singh	Keynote speech on High Power density solutions for Renewable integration	GKCIET, Malda, West Bengal (ICICASEE-2023 conference)	23/09/2023
7	Avirup Maulik	Matlab Hands-on: Introduction to Power Electronics and Power Systems	Ashoka Institute of Technology	13/12/2023
8	Avirup Maulik	Microgrids	L&T, CTEA, Mysore	24/01/2024
9	Dr. V. N. Lal	Particle Swarm Optimization Based Maximum Power Point Tracking (MPPT) Control for Grid-Integrated PV System	National Institute of Technology, Manipur	01/11/2023

Honours and awards

Sl. No.	Name of Faculty Member	Details of Award
1	Kalpana Chaudhary	SERB POWER Fellowship
2	Kalpana Chaudhary	Featured as Women Achiever in STEM in the Compendium published by Confederation of Indian Industries (CII), 2023.
3	Rakesh Kumar Srivastava	Prof G K Dubey Memorial Life -time Achievement Award 2022, by IEEE UP Section, IIT Kanpur

Fellowships of academic and professional societies

Sl. No.	Name of Faculty Member	Details of Fellowship
1	Kalpana Chaudhary	Fellow, Institution of Engineers (India) (F-124564-5)
2	Kalpana Chaudhary	Fellow, The Institution of Electronics and Telecommunication Engineers (IETE)
3	Prof. R.K. Saket	FIETE (India)

Books, monographs authored/co-authored

Sl. No.	Name of Author/Co- Author	Title	Publisher
1	Prof. R.K. Saket	Reliability Analysis of Modern Power Systems	IEEE – Wiley (USA)

Editorial boards of journals

Sl. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Kalpana Chaudhary	Member	Scientific Reports (Nature)
2	Prof. R.K. Saket	Associate Editor	IET Renewable Power Generation (UK)
3	Prof. R.K. Saket	Associate Editor	IEEE Access (USA)
4	Prof. R.K. Saket	Associate Editor	IET Electrical Systems in Transportation (UK)
5	Prof. R.K. Saket	Managing Guest Editor	IEEE Journal of the Electron Devices Society (USA)

Sl. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
6	Prof. R.K. Saket	Managing Guest Editor	Computers & Electrical Engineering, Elsevier
7	Prof. R.K. Saket	Managing Guest Editor	Electrical Engineering, Springer Nature
8	Prof. R.K. Saket	Managing Guest Editor	IET Generation, Transmission & Distribution (UK)
9	Prof. Rajeev Kumar Singh	Associate Editor	IEEE Transaction On Industry Application
10	Prof. Rajeev Kumar Singh	Guest Editor	Energies, MDPI
11	Dr. Vivek Nandan Lal	Guest Editor	Energies, MDPI

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1	Naveen Yalla	A Six Switch Single-Phase Five Level Rectifier
2	Kalpana Chaudhary	A Multimode Electric Vehicle
3	Santosh K Singh	An Ultra-Sparse Matrix Converter with Auxiliary Shoot-Through Switches
4	Rajeev Kumar Singh	A Novel DC/DC Converter with Both Current and Voltage Source Property for Optimal Battery Charging System (Granted)
5	Rajeev Kumar Singh	Adaptive Optimal Power Management Technique for Renewable Based Mix Energy System (Granted)

Research and Consultancy

Sponsored research projects *(Ongoing only)*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	Installation of Pavan Vruksh for harnessing wind energy at GTAC / Institute library Premises of IIT(BHU)	Feb 2023 to Dec 2024	IDAPT HUB Foundation	15.95	N K Swami naidu
2	Development of Energy Efficient and Compact Electric Drive Train for Fuel Cell Electric Vehicle	Feb 2022 to Feb 2025	Science and Engineering Research Board	49.17	Kalpana Chaudhary
3	Reliability Evaluation and Performance Enhancement of Grid Integrated Hybrid Renewable Power Systems	March 05, 2022 to March 04, 2025	Science and Engineering Research Board	41.36	Prof. R.K. Saket
4	Design and development of Cybersecured Smart Power interface for Energy-Local area network (E-LAN	2022-2025	C3iHub IIT Kanpur	14.64	Santosh K Singh
5	Smart DC charging with integrated digital platform for CPOs and Power distribution companies	2022-2024	MeiTY	35.52	Santosh K Singh
6	Silicon Carbide devices based High voltage gain Converter with Novel Current-source Gate driver for Electric Vehicle Powertrain	2023-2026	SERB-CRG	49.99	Santosh K Singh
7	Compact Pulse power supply using sequentially controlled PFN based on Silicon carbide high gain modular converter	2024-2027	DRDO	603.39	Santosh K Singh
8	Control and Operation of Networked DC Microgrids	2024-2026	CPRI	27.36	Avirup Maulik
9	Reconfigurable On-Board Wired and Wireless Battery Charger for Electric Vehicle	2024-2026	The Council of Science and Technology, U.P.	30.00	Rajeev Kumar Singh
10	Design and Development of the Next Generation Cost Effective Reconfigurable On- Board Battery Charger with Health and Fault Monitoring	2021-24	MeitY	314.00	Rajeev Kumar Singh
11	Design, Development and Demonstration of solar PV integrated On board and Off- board Electric-Rickshaw charging Infrastructure	2021-24	DST SERD	89.49	Vivek Nandan Lal
12	Electrolytic Capacitor-less Six Pulse DC-Link Photovoltaic System Connected to Grid	2021-24	CPRI	45.00	Vivek Nandan Lal
13	Data Anomaly Detection and Mitigation for Distributed Control and Optimization with Inverter Based resources (IBR) in cyber physical Network Infrastructures (CPNI)	2021-24	NSF-DST	36.00	Rajeev Kumar Singh

Research Publications

Sl. No.		No.
1	Total Number of Papers Published in Refereed International Journals	81
2	Total Number of Papers Presented in International Conferences	54

Refereed International Journals

1. Mishra, Monika, Singh, Amit; Misra, Rakesh Kumar; Singh, Devender; Maulik, Avirup. 2023. A Scalable and Computational Efficient Peer-to-Peer Energy Management Scheme. IEEE Access.
2. Mishra, Monika; Singh, Amit; Misra, Rakesh Kumar; Singh, Devender. 2023. Peer-to-Peer Energy Trading with Active Participation of Distributed Generation. IEEE Internet of Things Journal.
3. Anand, N.V., Praneeth, A.V.J.S., Naveen Yalla and Sood, V.K. 2023. A quasi-two-switch power factor correction converter for on-board battery chargers. International Journal of Circuit Theory and Applications.
4. Narendrababu, A., Naveen Yalla. and Naidu, N.S. 2023. Hybrid Clamped Four-Level T-Type Inverter with Capacitor Voltage Balancing Algorithm. IEEE Transactions on Industry Applications.
5. Mishra, Monika; Singh, Amit; Misra, Rakesh Kumar; Singh, Devender. 2024. Enhancing network-constrained P2P energy sharing through virtual communities. Sustainable Energy, Grids and Networks.
6. Amit Kumar Thakur, Shiv Pujan Singh, Shailendra Singh, Ankit Sachan. 2023. Sliding Sector-Based Controller for Regulating Voltage/Frequency in Autonomous Microgrid. Electric Power Components and Systems (Taylor & Francis).
7. Amit Kumar Thakur, Shailendra Singh, Shiv P Singh. 2023. Modal voltage decomposition-based passive method for islanding detection using variational mode decomposition in active distribution network. Electric Power Systems Research (Elsevier).
8. SP Singh, Mohammed Aslam Husain, Ahmad Faiz Minai, Farhad Illahi Bakhsh, Akhtar Saleem Ansari, Ahmad Neyaz Khan, Yudhishthir Pandey. 2023. A 3-layered feedforward back-propagation ANN-based SVPWM control for neutral point clamped converter for PV grid integration. Engineering Research Express (IOP Publishing).
9. Shailendra Singh, Vijay Babu Pamshetti, Amit Kumar Thakur, SP Singh, Hoay Beng Gooi. 2023. Profit maximization in ADN Through Voltage Control and DR Management With Networked Community Micro-Grids. IEEE Transactions on Industry Applications.
10. Rohit Kumar, Soumya R. Mohanty and M. K. Verma. 2024. A robust damping control for battery energy storage integrated power systems to mitigate inter-area oscillations. International Journal of Electrical Power and Energy Systems (Elsevier), Vol. 157, Article No. 109885.
11. Rohit Kumar, Soumya R. Mohanty and Mitresh Kumar Verma. 2024. Robust damping control for integrated wind turbine power networks during low inertia condition. International Journal of Circuit Theory and Applications (Wiley).
12. Rohit Kumar, S. R. Mohanty and M. K. Verma. 2023. Design and Optimal Location of Power System Stabilizer in the Multi-Machine Power Network. IETE Journal of Research (Taylor and Francis).
13. Shailendra Singh and M. K. Verma. 2023. Smart charging schedule of plug-in electric vehicles for voltage support: A prosumer-centric approach. Sustainable Energy, Grids and Networks (Elsevier).
14. Rohit Kumar, Soumya R. Mohanty, M.K. Verma. 2024. A robust damping control for battery energy storage integrated power systems to mitigate inter-area oscillations. International Journal of Electrical Power & Energy Systems, Volume 157.
15. A. Pandey, S. R. Mohanty and R. Mohanty. 2024. A Cyber Resilient Protection Scheme for Bipolar DC Microgrids Using Symmetrical Component Decomposition. IEEE Transactions on Industrial Informatics, vol. 20, no. 3, pp. 4481-4491.
16. M. Banafer and S. R. Mohanty. 2023. Traveling Wave-Based Primary Protection and Fault Localization Scheme for MTDC Grid Considering IEC 61869-9 Measurement Standard. IEEE Transactions on Instrumentation and Measurement, vol. 72, pp. 1-16.
17. V. Kumar, U. Prasad and S. R. Mohanty. 2024. Entirely Coupled Recurrent Neural Network-Based Backstepping Control for Global Stability of Power System Networks. IEEE Transactions on Automation Science and Engineering, vol. 21, no. 2, pp. 1647-1660.
18. V. Kumar and S. R. Mohanty. 2023. Resilient Optimal Gain Control and Continuous Twisting Observer for Enhanced Power System Performance Under Uncertainties. IEEE Systems Journal, vol. 17, no. 2, pp. 2733-2744.

19. A. K. Pandey, N. Kishor, S. R. Mohanty, and P. Samuel. 2024. Intelligent Fault Detection and Classification for an Unbalanced Network with Inverter-Based DG Units. IEEE Transactions on Industrial Informatics.

20. Rohit Kumar, Soumya R. Mohanty and Mitresh Kumar Verma. 2024. Robust damping control for integrated wind turbine power networks during low inertia condition. International Journal of Circuit Theory and Applications (Wiley).

21. A Pandey and S.R. Mohanty. 2023. Graph Convolutional Network Based Fault Detection and Identification for Low-Voltage DC Microgrid. Journal of Modern Power Systems and Clean Energy.

22. Singh A and Maulik A. 2023. DC Microgrid energy management with correlated uncertainties. Sustainable Energy, Grids and Networks (Elsevier).

23. Singh A, Maulik A, and Maheshwari A. 2023. Probabilistic multi-objective energy management of a distribution system considering reactive power injection by voltage source converters. Electrical Engineering (Springer).

24. Singh A and Maulik A. 2023.Energy management of an active distribution network considering correlation between uncertain input variables. Arabian Journal for Science and Engineering (Springer).

25. Singh A and Maulik A. 2023. A Derivative and Inversion-Free Quasi-Newton Power Flow for a Droop-Regulated Islanded AC Microgrid, Iranian Journal of Science and Technology. Transactions of Electrical Engineering (Springer);47(1):61-78.

26. Subho Paul and Narayana Prasad Padhy. 2024. A New Iterative Mixed Integer Linear Programming Based Real Time Energy Efficient Management of AC-DC Distribution Networks. International Journal of Electrical Power and Energy Systems (Elsevier), vol. 157, art. no. 109793.

27. Kalpana Chaudhary, KartikeyBhardvaj, Ayushi Chaudhary. 2024. A Qualitative Assessment of Hydrogen Generation Techniques for Fuel Cell Applications. Fuel Vol. 358 Part A 130090.

28. K. A. Singh, A. Chaudhary and K. Chaudhary. 2023. Three-phase AC-DC Converter for Direct-drive PMSG-based Wind Energy Conversion System. Journal of Modern Power Systems and Clean Energy, vol. 11, no. 2, pp. 589-598.

29. A. Prajapati and K. Chaudhary. 2024. Analysis and Design of Integrated Boost-Luo Converter with Reduced Voltage Stress for Renewable Application. IEEE Journal of Emerging and Selected Topics in Industrial Electronics.

30. P. Utkarsha, N. K. S. Naidu, B. Sivaprasad and K. A. Singh. 2023. A Flexible Virtual Inertia and Damping Control Strategy for Virtual Synchronous Generator for Effective Utilization of Energy Storage. IEEE Access, vol. 11, pp. 124068-124080.

31. Dilip Pandit, Atri Bera, R.K. Saket, Joydeep Mitra, Nga Nguyen. 2024**.** Probabilistic Sizing of Energy Storage Systems for Reliability and Frequency Security in Wind-Rich Power Grids. IEEE Transactions on Industry Applications (USA), volume: 60, issue: 3, pp: 4608-4621.

32. Morteza Azimi Nasab, Mohammad Zand, Mohsen Miri, P. Sanjeevikumar, Josep M. Guerrero, R.K. Saket, Baseem Khan. 2024.Predicting Solar Power Potential via an Enhanced ANN Through the Evolution of Cub to Predator (ECP) Optimization Technique. Electrical Engineering (WoS & SCIE), Springer Nature.

33. Om Prakash Bharti, Aanchal Singh S. Vardhan, Akanksha Singh S. Vardhan, R.K. Saket, D.P. Kothari. 2024. Static Output Feedback Based DFIG Controller Design for Wind Driven Scheme. IETE Journal of Research (WoS& SCIE), Taylor & Francis (USA), volume: 70, issue: 2, pp: 1-10.

34. AanchalVerma, Aditya Singh, K.S. Anand Kumar, R.K. Saket, Baseem Khan. 2023. Reliability Analysis of Multilevel and Matrix Converters used in more Electric Aircraft. IET Electrical Systems in Transportation (UK), Volume: 13, Issue: 2, pp: 1-12.

35. Sandeep Kumar Soni, Saumya Singh, Kumar Abhishek Singh, Xiaogang Xiong, R.K. Saket, Ankit Sachan. 2023.Event-Triggered Control for LPV Modeling of DC-DC Boost Converter. 4.4: Express Briefs, Volume: 70, Issue: 6, pp: 2062-2066.

36. KumariSarita, R.K. Saket, Baseem Khan. 2023.Reliability, Availability and Condition Monitoring of Inverters of Grid-Connected Solar Photovoltaic Systems. IET Renewable Power Generation (UK), Volume: 17, Issue: 7, pp: 1635-1653, pp: 1-19.

37. Saumya Singh, R.K. Saket, Baseem Khan. 2023. A Comprehensive State of the art Review on Reliability Assessment and Charging Methodologies of Grid Integrated Electric Vehicles. IET Electrical Systems in Transportation (UK), Volume: 13, issue: 1, pp: 1-29.

38. Smriti Singh, R.K. Saket, Baseem Khan. 2023.A Comprehensive Review of Reliability Assessment Methodologies for grid-connected Photovoltaic Systems. IET Renewable Power Generation (UK), Volume: 17, issue: 7, pp: 1859-1880.

39. Anjali Agrawal, PratimaWalde, Seema N. Pandey, Laxmi Srivastava, R.K. Saket, Baseem Khan. 2023.Cascaded Deep NN-based Customer Participation by Considering Renewable Energy Sources for Congestion Management in Deregulated Power Markets. IET Renewable Power Generation (UK), Volume: 12, issue: 02, pp: 1-14.

40. Raja Ram Kumar, Priyanka Devi, ChandanChetri, AnkitaKumari, Papu Moni Saikia, R.K. Saket, Kundan Kumar, Baseem Khan. 2023.Performance analysis of dual stator six-phase embedded-pole permanent magnet synchronous motor for electric vehicle application. IET Electrical Systems in Transportation (UK), Volume: 13, Issue: 02, pp: 1-13.

41. Jyoti Maurya, R.K. Saket, R.K. Srivastava. 2024. Performance Analysis of Single-Stage and Two-Stage VSI-fed Induction Motor Drives for Solar Water Pumping Applications. IEEE Transactions on Industry Applications (USA), Impact Factor: 4.4, Accepted for publication.

42. Vulavakayala Siva, M Raghuram, Aakash Singh, Santosh K Singh, Yam P Siwakoti. 2023. Switching Strategy to Reduce Inductor Current Ripple and Common Mode Voltage in Quasi Z-Source Ultra Sparse Matrix Converter. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, Volume: 4, Issue: 4, pp. 1159-1169.

43. Vulavakayala Siva, M Raghuram, Aakash Singh, Santosh K Singh. 2024. Analysis and Control of Impedance Network Integrated High Voltage Gain USMC for Wider Output Frequency. IEEE Transactions on Industrial Electronics.

44. Vulavakayala Siva, M. Raghuram, Santosh K Singh. 2024. Stabilized High Voltage Gain with Reduced Common Mode Voltage Using SN-USMC for Remote Green EV Charging. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, Volume: 5, Issue: 2, pp. 577-585.

45. Vulavakayala Siva and Santosh K Singh. 2024. Mitigation of common mode voltage in ultra sparse matrixconverters using auxiliary shoot-through switches for wind energy systems. International Journal of Circuit Theory and Applications.

46. Aakash Singh, Vulavakayala Siva, Avneet Kumar, Santosh K Singh. 2023. Analysis and Design of Switched LC Converter with reduced Voltage stress for Photovoltaic applications. IEEE Transactions on Industry Applications,Volume: 59, Issue: 5, pp. 6468-6479.

47. Prakash Ji Barnawal, V. N. Lal, and R. K. Singh. 2024. Electrolytic Capacitor-less Dual Half Active Bridge Resonant Converter with PSO Based MPP Tracking. IEEE Transactions on Power Electronics.

48. P. Kumar and R. K. Singh. 2024. Various MPPT Modes and Dynamic Performance of Coupled Inductor Bipolar Multi-Output Converter With no Right Half Plane Zero. IEEE Transactions on Power Electronics, vol. 39, no. 5, pp. 6338-6351.

49. S. R. Meher and R. K. Singh. 2023. A Reconfigurable Power Processor for Electric Vehicle Facilitating Both Wired and Wireless Charging. IEEE Power Electronics Magazine, vol. 10, no. 4, pp. 31-38.

50. V. P. Maurya, A. K. Pratihasta and R. K. Singh. 2024. A Multimode On-Board Charger With Multiport Outputs With Reduced Switch Count for EVs. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, vol. 5, no. 1, pp. 263-273.

51. P. S. Sarker, M. F. Rafy, A. K. Srivastava and R. K. Singh. 2024. Cyber Anomaly-Aware Distributed Voltage Control With Active Power Curtailment and DERs. IEEE Transactions on Industry Applications, vol. 60, no. 1, pp. 1622-1633.

52. W. M. Khan, R. K. Singh and R. Mahanty. 2024. Current-Driven Bifrequency Resonant Dual Active Bridge Converter for Optimal Battery Charging. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, vol. 5, no. 2, pp. 498-510.

53. P. Jena, R. K. Singh and V. N. Lal. 2024. Novel Modulation Technique Based Bidirectional DC to AC Dual Active Bridge for G2V and V2H. IEEE Transactions on Vehicular Technology, vol. 73, no. 1, pp. 80-92.

54. Soumya Ranjan Meher, Rajeev Kumar Singh. 2023. Single-Phase Wireless Electric Vehicle Charger Using EF2 Inverter. International Transactions on Electrical Energy Systems, vol. 2023, Article ID 6038394, 14 pages.

55. S. R. Meher and R. K. Singh. 2024. A Multimode Power Processor With Wired and Wireless Battery Charging for Electric Vehicle. IEEE Transactions on Industrial Electronics, vol. 71, no. 4, pp. 3318-3329.

56. S. R. Meher and R. K. Singh. 2023. A Standard Two Stage On-Board Charger With Single Controlled PWM and Minimum Switch Count. IEEE Transactions on Industry Applications, vol. 59, no. 4, pp. 4628-4639.

57. M. K. Mishra and V. N. Lal. 2023. A Multiobjective Control Strategy for Harmonic Current Mitigation With Enhanced LVRT Operation of a Grid-Tied PV System Without PLL Under Abnormal Grid Conditions. IEEE Journal of Emerging and Selected Topics in Power Electronics, vol. 11, no. 2, pp. 2164-2177.

58. P. Prasun, Shyam Kamal, S. Pandey, A. Bartoszewicz and Sandip Ghosh. 2024. A minimum operator based discrete-time sliding mode control. IEEE Transactions on Automatic Control.

59. Vijay Kumar Singh, Shyam Kamal, Bijnan Bandyopadhyay, Sandip Ghosh, Thach Ngoc Dinh. 2024. Prescribed-Time Optimal Control of Nonlinear Dynamical Systems With Application to a Coupled Tank System. IEEE Transactions on Automation Science and Engineering.

60. S. Pandey, Shyam Kamal, P. Osinenko and D. Singh. 2024. Finite and Fixed-Time Stabilization of Discrete-Time Systems Using Passivity Based Control. International Journal of Robust and Nonlinear Control.

61. Vinay Pandey, Shyam Kamal, Sandip Ghosh. 2024. Finite-Time Discrete Control for Two-DOF Helicopter System. IEEE Transactions on Circuits and Systems II: Express Briefs.

62. Vijay Kumar Singh, Shyam Kamal, Sandip Ghosh. 2024. Predefined-time Adaptive Backstepping Control for a Class of Nonlinear Dynamical Systems with Parametric Uncertainties. International Journal of Adaptive Control and Signal Processing.

63. Parijat Prasun, Shyam Kamal, Sandip Ghosh, Thach Ngoc Dinh. 2024. A Minimum Operator based Discrete Variable Structure Control. European Journal of Control.

64. Haritha Mittapally, Sandip Ghosh, Shyam Kamal, Pawel Dworak. 2024. Sequential Output Information based Predictive Control for Event-triggered Networked Control Systems. ISA transactions.

65. Sunil Kumar, Sandeep Kumar Soni, Shyam Kamal. 2023. Predefined-Time Frequency Estimation of Biased Sinusoidal Signals. IEEE Transactions on Circuits and Systems II: Express Briefs.

66. Jitendra Kumar Goyal, Ankit Sachan, N Amutha Prabha, Shyam Kamal, Avneet Kumar Chauhan, Sandip Ghosh, Bijnan Bandyopadhyay, Xiaogang Xiong. 2023. Non-smooth integral sliding surface based control for systems with mismatched disturbances. Journal of Process Control.

67. Parijat Prasun, Shyam Kamal, Andrzej Bartoszewicz, Sandip Ghosh. 2023. A Difference Equation With Minima Based Reaching Law for Discrete Variable Structure Systems. IEEE Transactions on Circuits and Systems II: Express Briefs.

68. Vijay Kumar Singh, Shyam Kamal, Sandip Ghosh. 2023. Prescribed-time Constrained Feedback Control for an Uncertain Twin Rotor Helicopter. Aerospace Science and Technology.

69. Vijay Kumar Singh, Shyam Kamal, Sandip Ghosh, Thach Ngoc Dinh. 2023. Neuro adaptive Prescribed-time Consensus of Uncertain Nonlinear Multi-agent Systems. IEEE Transactions on Circuits and Systems II: Express Briefs.

70. Parijat Prasun, Sunidhi Pandey, Shyam Kamal, Sandip Ghosh, Xiaogong Xiong. 2023. A Minimum Operator based Discrete-time Super-twisting-like Algorithm. IEEE Transactions on Circuits and Systems II: Express Briefs.

71. Haritha Mittapally, Sandip Ghosh, Shyam Kamal. 2023. Predictive control of networked control system with event-triggering in two channels. European Journal of Control.

72. Bhawana Singh, Shyam Kamal, Sourav Patra, Sandip Ghosh. 2023. Finite, Fixed and Prescribed-Time Stability and Stabilization of Nonlinear Negative Imaginary Systems. Automatica.

73. Sunil Kumar, Anil Kumar Pal, Shyam Kamal, X. Xiong, Design of Switched High-gain Observer for Nonlinear Systems, International Journal of Systems Science, 2023.

74. Vijay Kumar Singh, Shyam Kamal. 2023. Prescribed-Time Adaptive Backstepping Control of an Uncertain Nonlinear 2-DOF Helicopter. IEEE Transactions on Circuits and Systems II: Express Briefs.

75. Jitendra Kumar Goyal, Shubham Aggarwal, Ankit Sachan, Pradosh Ranjan Sahoo, Sandip Ghosh, Shyam Kamal. 2023. An Improved Output Feedback Controller Design for Linear Discrete-time systems using a Matrix Decomposition method. Asian Journal of Control.

76. Vinay Pandey, Eram Taslima, Bhawana Singh, Shyam Kamal, Thach Ngoc Dinh. 2023. Predefined Time Synchronization of Multi-Agent Systems: A Passivity Based Analysis. Sensors.

77. Shubham Aggarwal, Jitendra Kumar Goyal, Sandip Ghosh, Shyam Kamal. 2023. H∞ Performance of Multi-agent Consensus with Output Feedback and Saturated Input. International Journal of Robust and Nonlinear Control.

78. Kallol Chatterjee, Vijay K Singh, Parijat Prasun, Shyam Kamal, Sandip Ghosh, Thach N Dinh. 2023. Fixed-time Event-Triggered Control under Denial-of-Service Attacks. European Journal of Control.

79. S Chakraborty, J Singh, AK Naskar, S Ghosh. 2023. A New Analytical Approach For Set-Point Weighted 2DOF-PID Controller Design For Integrating Plus Time-Delay Processes: An Experimental Study. IETE Journal of Research.

80. Jitendra Kumar Jain, Weidong Zhang, Sandip Ghosh. 2023. A New Robust Output Feedback Control For A Class Of Uncertain Nonlinear Systems. International Journal of Control.

81. Subho Paul and Narayana Prasad Padhy. 2024. A New Iterative Mixed Integer Linear Programming Based Real Time Energy Efficient Management of AC-DC Distribution Networks. International Journal of Electrical Power and Energy Systems (Elsevier), vol. 157, art. no. 109793.

Proceedings of International Conferences

1. Alok Kumar, Avirup Maulik, and K. A. Chinmaya. 2023. Distribution Network Operation by Coordination of Flexible Loads, SOP, and Smart Transformer. TENCON : 1088-1093, IEEE Region 10 Conference (TENCON). IEEE, Chiang Mai, Thailand, October-November 2023.
2. Ruchi Sharma, Avirup Maulik, and Shyam Kamal. 2023. Robust Control of an Islanded DC Microgrid Using H infinity Loop-Shaping Design Considering Parametric Uncertainties, TENCON : 1082-1087, IEEE Region 10 Conference (TENCON). IEEE, Chiang Mai, Thailand, October-November 2023.
3. Kumar A, Saini D, Singh RK, Prakash S, Dwivedi D, Ghosh S, Chinmaya KA. 2023. A Boost-Buck Three-Port Converter for Solar PV Integrated Electric Vehicle Applications. Sustainable Energy and Future Electric Transportation (SEFET) : 1-6 IEEE, 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Bhubaneswar, India, August 2023.
4. Dwivedi, Dhawal, Saurabh Singh, Shubham Kaushik, Eric Semail, Ngac Ky Nguyen, and K. A. Chinmaya. 2023. T-Type Multilevel Inverters: A Comparative Performance Analysis. Sustainable Energy and Future Electric Transportation (SEFET) : 1-6, IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Bhubaneswar, India, August 2023.
5. Ashish Prajapati, Piyush Singh, Kalpana Chaudhary. 2023. Non Isolated High Gain Bipolar Converter for Renewable Application. 3rd International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE 2023), 17-20th December 2023, Trivandrum.
6. Kalpana Chaudhary, Piyush Singh, Abhay Janardan Singh. 2023. Fuel Cell Input Based PMSM Motor Drive for Electric Vehicle Applications. IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), 10-13 December 2023, KIIT Bhubaneswar.
7. Ashish Prajapati, Vineet Bharadwaj, Kalpana Chaudhary. 2023. Isolated DC microgrid operation with hybridization of PV, FC, and Battery. IEEE ITEC India 2023, December 13-15 2023.
8. I.Roy, Kalpana Chaudhary, Amit Jain. 2023. A New Harmonic Compensation Based Modified Field Oriented Control of Permanent Magnet BLDC Motor with Reduced Torque Pulsation. IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (IEEE SeFeT 2023), 9-12 August 2023, Bhubaneswar, India.
9. Suryakant Kumar, Khalid Raza Khan, Vedantham Lakshmi Srinivas, Gauri Shankar, RK Saket, Kartick Chandra Jana. 2023. Electric Vehicle Fast Charging Integrated with Hybrid Renewable Sources for V2G and G2V Operation. IEEE IAS Global Conference on Emerging Technologies (GlobConET), London (UK), pp: 1-6, IEEE IAS Society (USA), May 19-21, 2023.
10. Dilip Pandit, Ram K Saket, Atri Bera, Niannian Cai, Nga Nguyen. 2023. Composite Reliability of PV-Integrated Systems Incorporating Probabilistic Capacity Outages. IEEE IAS Global Conference on Emerging Technologies (GlobConET), London (UK), IEEE IAS Society (USA), pp: 1-6, May 19-21, 2023.
11. Deepak Pandit, Ram K Saket, Niannian Cai, Nga Nguyen. 2023. Advanced Frequency Control for Renewable and Electric Vehicle Integrated Systems. IEEE IAS Global Conference on Emerging Technologies (GlobConET), London (UK), pp: 1-6, IEEE IAS Society (USA), May 19-21, 2023.
12. Khalid Raza Khan, Suryakant Kumar, Vedantham Lakshmi Srinivas, RK Saket, Kartick Chandra Jana, Gauri Shankar. 2023. Voltage Stabilization Control with Hybrid Renewable Power Sources in DC Microgrid. IEEE IAS Global Conference on Emerging Technologies (GlobConET), London (UK), pp: 1-6, IEEE IAS Society (USA), May 19-21, 2023.
13. Gourav Sharma, Jyoti Maurya, RK Srivastava, RK Saket. 2023. A Novel Hybrid MPPT Algorithm Based on Conventional and Artificial Intelligence Methods. IEEE International conference on Energy Technologies for Future Grids (IEEE ETFG 2023), Wollongong, Australia, pp: 1-6, IEEE IAS Society (USA), December 3-6, 2023.
14. Sameer Kumar Behera, Anup Kumar Panda, N Venkataramana Naik, RK Saket. 2023. A Unified mode transition between Grid-tied and Islanded modes in a RBVSG using Uninterrupted Switching Scheme. IEEE International conference on Energy Technologies for Future Grids (IEEE ETFG 2023), Wollongong, Australia, pp: 1-6, IEEE IAS Society (USA), December 3-6, 2023.
15. Santhoshkumar Battula, Anup Kumar Panda, Man Mohan Garg, R.K. Saket. 2023. Performance Analysis of Passivity-Based Controller in a Stand-alone PV Connected System with Energy Storage. IEEE International conference on Energy Technologies for Future Grids (IEEE ETFG 2023), Wollongong, Australia, pp: 1-6, IEEE IAS Society (USA), December 3-6, 2023.
16. Sandeep Kumar Soni, Saumya Singh, Sunil Kumar, Himanshu Sekhar Sahu, R.K. Saket. 2023. Solar-to-Vehicle Charging with Maximum Power Point Tracking using Super-Twisting Controller. IEEE International Transportation Electrification Conference (ITEC-India), pp: 1-6, December 12, 2023.

17. Om Prakash Bharti, Aanchal Verma, R.K. Saket. 2023. Optimization Techniques of DFIG Controller Design for Performance Intensification of Wind Power Conversion Systems. International Congress on Information and Communication Technology (ICICT 2023 UK), Brunel University, London (UK), Springer Nature, 2023.

18. P. Utkarsha, N. K. Swami Naidu, B. Sivaprasad and N. Yalla. 2023. Synchronverter based Multifunctional UPQC for Distributed Generation Applications. IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Trivandrum, India, 2023, pp. 1-6.

19. L. K. Yadav, A. K. Barnwal and M. K. Verma. 2023. Optimal Reconfiguration of Radial Distribution Networks Using PSO-CRO Approach for Loss Minimization and Voltage Stability Enhancement under Voltage Dependent Loads. IEEE International Conference on Energy Technologies for Future Grids (ETFG), Wollongong, Australia, pp. 1-6.

20. Aakash Singh, Vulavakayala Siva, Santosh K Singh. 2023. Quadratic High gain Converter based on Active Switched Inductor and Capacitor - Diode Network for DC Microgrid. 49th Annual conference of the IEEE Industrial Electronic Society (IECON 2023), 16-19 Oct 2023, Singapore

21. V Siva, M Raghuram, A Singh, SK Singh. 2023. Five Phase Impedance Source VSI with the Capability of Delivering two Loads. IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Dec 2023, India

22. A Singh, V Siva, A Kumar, SK Singh. 2023. Active Switched LC based non-isolated Quadratic High gain Converter for renewable Integration. IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Dec 2023, India.

23. S. K. Samal and Rajeev Kumar Singh. 2023. Non Isolated Multiport Inverter with Reduced Common Mode Leakage Current and Minimum Phase Property. IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, USA.

24. R. K. Keshari, P. Nema, S. K. Samal and R. K. Singh. 2024. A LnC2n-2 Network-Based Paralleled Dual Buck-Boost Non-Isolated Multi-Output Hybrid Converter with Reduced Leakage Current. IEEE Applied Power Electronics Conference and Exposition (APEC), Long Beach, CA, USA, pp. 1242-1247.

25. P. Jena, R. K. Singh and V. N. Lal. 2023. Hybrid Energy Input Based EV Charging System with Multi -Mode Power Flow and Adaptive Optimal Power Management Scheme. IEEE International Transportation Electrification Conference (ITEC-India), Chennai, India, pp. 1-6.

26. V. P. Maurya and R. K. Singh. 2023. Versatile On-Board Power Processor for BLDC & IM Driven Electric Vehicles. IEEE International Transportation Electrification Conference (ITEC-India), Chennai, India, 2023, pp. 1-5.

27. V. P. Maurya and R. K. Singh. 2023. A Multifunction Multioutput On-board Power Processor for Electric Vehicles. IEEE International Transportation Electrification Conference (ITEC-India), Chennai, India, pp. 1-5.

28. P. Jena, P. J. Barnawal, R. K. Singh and V. N. Lal. 2023. Soft-Switched Quasi-Single-Stage Dual-Active-Bridge Converter with Unsymmetrical H-Bridge Triangular Modulation. IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society, Singapore, Singapore, pp. 1-6.

29. S. K. Samal, A. Verma, R. K. Singh and R. Mahanty. 2023. Grid Integrated Transformerless Interleaved Hybrid Converter with Reduced Common-Mode Leakage Current. IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society, Singapore, Singapore, pp. 1-6.

30. W. M. Khan, R. K. Singh and R. Mahanty. 2023. Fractional Power Processing Architecture for Ultra-Fast Charging of Electric Vehicles. IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society, Singapore, Singapore, pp. 1-6.

31. Ankit Kumar Pratihasta, Rakesh Kumar Misra, Rajeev Kumar Singh. 2023. Minimum Phase Converter-Based Hybrid Energy Storage System for Electric Vehicles and DC Loads. IEEE Industrial Electronics Society, pp. 1-6.

32. Anantha Padmanabhan., A.K. Kumar, V. Chitransh, R. K. Singh, V. N. Lal and S. K. Singh. 2023. AI-Enabled Cyber Physical System And Battery Life Estimation For Smart Grid Applications. IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society, Singapore, Singapore, pp. 01-06.

33. P. Kumar, P. J. Barnawal, V. N. Lal, and R. K. Singh. 2023. Particle Swarm Optimization-based MPPT Performance of a Minimum Phase Bipolar Converter. IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation Bhubaneswar, India, pp. 1-6.

34. R. Kumar Keshari, P. J. Barnawal, Rajeev Kumar Singh and V. Nandan Lal. 2023. A High Gain Expandable DC-DC Converter with PSO-based MPPT Tracking for Partial Shading Conditions. IEEE 14th International Conference on Power Electronics and Drive Systems (PEDS), Montreal, QC, Canada, pp. 1-6.

35. P. J. Barnawal, V. N. Lal, and R. K. Singh. 2023. Bidirectional Asymmetrical Dual Active Bridge Resonant Converter for Renewable to DC Microgrid Interface. IEEE 14th International Conference on Power Electronics and Drive Systems (PEDS), Montreal, QC, Canada, pp. 1-6.

36. P. Kumar, P. J. Barnawal, V. N. Lal and R. K. Singh. 2023. Particle Swarm Optimization-Based MPPT Performance of a Minimum Phase Bipolar Converter. IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Bhubaneswar, India, pp. 1-6.

37. P. Jena and R. K. Singh. 2023. A Reduced Carrier Count Triangular Modulation for Quasi Single-Stage AC-DC Dual Active Bridge. IEEE Transportation and Electrification Conference and Expo (ITEC-23), Detroit, USA, pp.1-6.

38. V.P. Maurya, P. Jena and R. K. Singh. 2023. Performance Evaluation of a Reconfigurable On-Board Charger for Electric Vehicles with Multi-Output and Reduced Switch Count. IEEE Transportation and Electrification Conference and Expo (ITEC-23), Detroit, USA, pp.1-5.

39. M. K. Mishra and V. N. Lal. 2023. A PLL-free Roboust Control Scheme for Harmonic Current Compensation of Grid-Interfaced PV System Under Distorted Grid Voltages. IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), Bhubaneswar, India, 2023, pp. 1-6.

40. A. Singh, V. N. Lal and R. Mahanty. 2023. Harmonic Minimization in Switched-Capacitor Multilevel Inverter Using Improved Grey Wolf Optimization," 2023 IEEE International Transportation Electrification Conference (ITEC-India), Chennai, India, pp. 1-6.

41. M. K. Mishra, V. N. Lal, S. K. Parida and V. K. Bussa. 2023. Self-Synchronizing Robust Control Scheme for Harmonic Current Supression of Grid-Interfaced PV System Under Distorted Grid Voltages. IEEE International Conference on Energy Technologies for Future Grids (ETFG), Wollongong, Australia, 2023, pp. 1-6.

42. M. Mishra, A. Singh, R. K. Misra and D. Singh. 2023. Virtual Community based Peer-to-Peer Energy Trading. 5th International Conference on Energy, Power and Environment: Towards Flexible Green Energy Technologies (ICEPE), Shillong, India, pp. 1-6.

43. S. Prakash, S. Pandey, S. Ghosh and S. Kamal. 2023. Two-Switch Forward Converter with Second-Order Sliding Mode Control for High Voltage Battery Management System. IECON 2023- 49th Annual Conference of the IEEE Industrial Electronics Society, Singapore, Singapore, pp. 1-6.

44. P. Prasun, S. Pandey, S. Kamal, S. Ghosh and D. Singh. 2023. Discrete-Time Gradient Systems Governed by Difference Equation with Minima. 31st Mediterranean Conference on Control and Automation (MED), Limassol, Cyprus, pp. 783-788.

45. P. Prasun et al.. 2023. Sliding Mode Control for a Class of Systems based on a Non-Monotonic Lyapunov Function. 31st Mediterranean Conference on Control and Automation (MED), Limassol, Cyprus, pp. 618-623.

46. A. K. Pandey, N. Kishor, S. R. Mohanty and P. Samuel. 2023. Voltage Signal-Based Intelligent Fault DetectionConsidering Reactive Power Injection from Inverter-Based DGs. IEEE 20th India Council International Conference (INDICON), Hyderabad, India, pp. 97-102

47. S. Paul, A. Sharma, K. Murari, M. S. Hasan, N. P. Padhy and S. Kamalasadan. 2024. A Fully Distributed Consensus ADMM Approach for Loss Minimization in AC- DC Radial Distribution Networks. IEEE Texas Power and Energy Conference (TPEC), College Station, TX, USA, pp. 1-6.

48. A. Sharma, S. Paul and N. P. Padhy. 2023. Two-Stage Optimal Operation of SOPs in Active Three-Phase Distribution Systems. IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), Bhubaneswar, India, pp. 1-6.

49. S. S. Roy, A. Paramane, B. Ganguly, A. K. Das, S. Paul and S. Chatterjee. 2023. Image Visibility Patch Aided Hydrophobic Class Detection of Silicone Rubber Insulators Employing Bi-LSTM Network. IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), Bhubaneswar, India, pp. 1-6.

50. S. Paul, B. Ganguly and S. Chatterjee. 2023. Nesterov-Type Accelerated ADMM (N-ADMM) with Adaptive Penalty for Three-Phase Distributed OPF under Non-Ideal Data Transfer Scenarios. IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), Bhubaneswar, India, pp. 1-6.

51. S. Paul, K. Murari, N. P. Padhy and S. Kamalasadan. 2023. A Consensus ADMM Based Fully Distributed Peer-to-Peer Approach for Multi-Objective Residential Community Energy Management. IEEE International Conference on Energy Technologies for Future Grids (ETFG), Wollongong, Australia, 2023, pp. 1-6.

52. S. Paul, N. Gray, A. Dubey, A. Bose, M. Touhiduzzaman and J. Ogle. 2023. Robustness Assessment of Distributed OPF Under Communication Non-Idealities Using Cyber-Physical Co-Simulation Framework. IEEE Industry Applications Society Annual Meeting (IAS), Nashville, TN, USA, 2023, pp. 1-8.

53. S. Paul, G. M. Vishwanath and N. P. Padhy. 2023. A New Iterative Mixed Integer Linear Programming Algorithm for Energy Management in Active Unbalanced Distribution Networks. IEEE Power & Energy Society General Meeting (PESGM), Orlando, FL, USA, 2023, pp. 1-5.

54. B. Ganguly, R. K. Ray, A. Chatterjee and S. Paul. 2023. A Deep Learning Aided Intelligent Framework for Condition Monitoring of Electrical Machinery. IEEE Devices for Integrated Circuit (DevIC), Kalyani, India, pp. 82-86.

55. N. Yalla, N. A and N. K. SwamiNaidu. 2023. Performance Analysis of Five Level Reduced Device Count AC-DC Converter. IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Trivandrum, India, 2023, pp. 1-6.

56. N. A, N. Yalla and A. Ghosh. 2023. Reduced Part Count Multiplexed Five-Level Inverters: Effect of Varied Modulation Index. IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Trivandrum, India, 2023, pp. 1-6.

57. P. Utkarsha, N. K. Swami Naidu, B. Sivaprasad and N. Yalla. 2023. Synchronverter based Multifunctional UPQC for Distributed Generation Applications. IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE), Trivandrum, India, 2023, pp. 1-6.

58. V. K. Bussa, T. R. Yalla, V. Bussa, N. Yalla, T. Kobaku and R. Jeyasenthil. 2023. An Improved Quasi-Z-Source DC-DC Converter with Continuous Input and Output Currents. IEEE 3rd International Conference on Smart Technologies for Power, Energy and Control (STPEC), Bhubaneswar, India, 2023, pp. 1-5.

59. U. S. Kumar, S. Halder, S. Bittu, S. Bhattacharjee, N. Yalla and J. Nakka. 2023. SiC Based 3-Phase Vienna Rectifier Using Hybrid SVPWM Strategy for EV Charging Station. International Conference on Computer Applications in Electrical Engineering-Recent Advances (CERA), Roorkee, India, 2023, pp. 1-6.

60. Y. T. Rao, V. K. Bussa, B. Reddy and N. Yalla. 2023. Balanced/Unbalanced Voltage Sag Ride-Through in VSI-Fed Induction Motor Drive Used for Constant Speed Application. IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Bhubaneswar, India, 2023, pp. 1-6.

61. U. S. Kumar, S. Halder, A. Verma, S. Pandey, N. Yalla and J. Nakka. 2023. Performance Analysis of WBG Based High Power Dense T-Type Inverter for Next Generation Carbon Neutral Energy Application. International Conference on Computer, Electronics & Electrical Engineering & their Applications (IC2E3), Srinagar Garhwal, India, 2023, pp. 1-5.

Key Instruments

1. Permanent Magnet Synchronous Motor based wind-energy experimental setup

2. Coupled Tank System

The Coupled Tanks plant is a "Two-Tank" module consisting of a pump with a water basin and two tanks. The two tanks are mounted on the front plate such that flow from the first (i.e., upper) tank can flow through an outlet orifice located at the bottom of the tank into the second (i.e., lower) tank. Flow from the second tank flows into the main water reservoir. In the present laboratory, the Coupled-Tank system is used in two different configurations, namely configuration one and configuration 2. In configuration 1, the objective is to control the water level in the top tank, i.e., tank 1, using the outflow from the pump. In configuration 2, the challenge is to maintain the water level in the bottom tank, i.e., tank 2, from the water flow coming out of the top tank. Configuration 2 is an example of state coupled system. This experimental setup helps to apply the developed control theory in real-time.

12. Department of Electronics Engineering

Complete Name of Department: Electronics Engineering

Year of Establishment: 1971

Head of the Department: Prof. M.K. Meshram w.e.f. 9 Aug 2022

Brief Introduction of the Department:

The Department of Electronics Engineering came into existence as an offshoot of the Electrical Engineering Department in the year 1971 with a great effort of Prof. S.S. Banerjee. In the same year the erstwhile Banaras Engineering College (BENCO), College of Mining and Metallurgy and College of Technology were amalgamated to form the Institute of Technology-Banaras Hindu University (IT-BHU). The Department offers Bachelor, Master and Doctoral programs in Electronics Engineering with the major thrust areas of Microelectronics, Microwave Engineering, Digital Techniques & Instrumentations, and Communication Systems. The Department has been actively engaged in research since its inception as evidenced by the research publications. The first major financial support from the Department of Electronics (DoE), Govt. of India in the tune of Rs.1.0 Crore was received by the Department in 1980 to carry out research for development of High Power Microwave Tubes. Subsequently, in recognition of excellent research contribution, the University Grants Commission (UGC) identified the Department to provide financial support under Special Assistance Program (SAP) in 1983 for five years. During this period, the department established three independent research centres e.g., Centre of Research in Microwave Tubes (CRMT), Centre for Research in Microelectronics (CRME) and Centre for Research in Microprocessor Applications (CRMA) supported by UGC/MHRD. The Department was further recognized as a Centre of Advanced Studies (CAS) by the UGC in 1989. The Department successfully completed three phases of CAS in the year 2009. The Department is also one of the DRDO centre for M.Tech. in Electronics Engineering. In addition to this, the Department has been actively pursuing manpower training and collaborative research programs in specialized areas to meet the national manpower requirement in R&D laboratories, academic institutions and industries. The Department has a close interaction with many reputed national R&D laboratories such as DRDO, CSIR, Bharat Electronics Ltd. and leading software companies as well as foreign Universities.

Major areas of Research

Communication System Engineering, Digital Techniques & Instrumentation, Microwave Engineering, Microelectronics Engineering

Area of the Department (in square meters): 77.25 m x 46.10 m = 3561.22 m^2

Infrastructure

Sl. No.	Particulars	Number
1	No. of Classrooms	08
2	No. of Lecture Halls	01
3	No. of Laboratory	09
4	No. of Computers available for students in the Department	45

Academic Programmes offered

Students on Roll

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1.	B. Tech	146	131	146	146	0
2.	M. Tech	29	20	0	0	0
3.	Ph. D (Under Institute Fellowship)	11	5	6	1	3
4.	Ph. D (Under Project Fellowship)	1	0	0	0	0
5.	Ph. D (Under Sponsored Category)	1	1	2	2	0
6.	Ph. D (Under QIP)	2	1	0	0	0

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Gambali Seshasai Chaitanya	22095132	22nd-International Workshop on Physics of Semiconductor Devices (IWPSD-2023)	13-17 Dec 2023, IIT Madras, Chennai	From the conference organizing committee.
2	Deepak Ram	20091504	2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	10-14 Dec 2023, Ahmedabad	RSGF
3	Kirti	21091002	2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	10-14 Dec 2023, Ahmedabad	IEEE MTT Society
4	Ajeet Singh Verma	23091008	2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	10-14 Dec 2023, Ahmedabad	IEEE MTT Society under PhD Initiative
5	Vishnu Kumar Mishra	23091007	2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	10-14 Dec 2023, Ahmedabad	IEEE MTT Society under PhD Initiative
6	Sagar Bhattacharya	23091001	2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON)	10-14 Dec 2023, Ahmedabad	IEEE MTT Society under PhD Initiative
7	Dharmendra Kumar	19091002	2023 International Conference on IoT, Communication and Automation Technology (ICICAT)	23-24 Jun 2023, Gorakhpur	IIT (BHU), Varanasi

Names of scholars/students who won Convocation/Institute Day prizes

S. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1	Shri Harsh Kashyap	21092007	Sanjeev Memorial Gold Medal for securing First position at the M.Tech. in Electronics Engineering (Digital Technology and Instrumentation) Examination, 2023.	Director IIT (BHU) Varanasi
2	Shri Apoorv Jain	19095017	a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023. b) Late Prof. Nagesh Chandra Vaidya Gold Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023. c) Dr. (Late) Nandita Saha Roy Memorial Gold Medal for securing First position in B.Tech. Electronics Engineering Examination, 2023. d) C. Raja Gopal Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Electronics Engineering Examination, 2023. e) Dr. Ayyagari Sambasiva Rao Prize Rs. 1000/= cash for standing First at the B.Tech. in Electronics Engineering Examination, 2023. f) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in B.Tech. in Electronics Engineering Examination, 2023.	Director IIT (BHU) Varanasi
3	Shri Divyansh Chandra Roy	19095119	a) I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023. b) President's Gold Medal for outstanding performance in academics among all disciplines of B.Tech. Examination 2023. c) Late Prof. Nagesh Chandra Vaidya Gold Medal for standing First at the B.Tech. in Electronics Engineering Examination, 2023. d) Dr. (Late) Nandita Saha Roy Memorial Gold Medal for securing First position in B.Tech. Electronics Engineering Examination, 2023. e) C. Raja Gopal Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Electronics Engineering Examination, 2023. f) Dr. Ayyagari Sambasiva Rao Prize Rs. 1000/= cash for standing First at the B.Tech. in Electronics Engineering Examination, 2023. g) Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in B.Tech. in Electronics Engineering Examination, 2023.	Director IIT (BHU) Varanasi
4	Shri Aadi Shukla	19095118	Prof. A.K. Ghosh Silver Medal for standing Second Position in B.Tech. in Electronics Engineering Examination, 2023.	Director IIT (BHU) Varanasi
5	Shri Harsh Niketan Dixit	21092002	I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Electronics Engineering Examination, 2023.	Director IIT (BHU) Varanasi

Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization
PROFESSORS			
1	Prof. V. N. Mishra Ph.D Employee ID: 10389	1996	Microelectronics, Semiconductor Devices, Microelectronic Gas Sensors
2	Prof. Satyabrata Jit Ph.D Employee ID: 13804	2002	Advanced CMOS Devices, Thin Film Based Nanoelectronic Devices for Electronic, Gas Sensing and Optoelectronic Applications
3	Dr. Manoj Kumar Meshram Ph.D Employee ID: 16628	2001	Microwave antennas, Electrically Small Antennas, Artificial materials, Microwave passive devices
ASSOCIATE PROFESSORS			
4	Dr. N. S. Rajput Ph.D Employee ID: 16800	July 2011	Intelligent Sensors and Systems, Generative AI and Deep Networks, Internet of Things (IoT), Cyber Physical Systems (CPS)
5	Dr. Amit Kumar Singh Ph.D Employee ID: 18299	June 2010	Microwave Engineering
6	Dr. Amritanshu Pandey Ph.D Employee ID: 18360	2016	Communication System Engineering, Microelectronics
7	Dr. M. Thottappan Ph.D Employee ID: 18358	15 May, 2014	Microwave Engineering
8	Kishor P Sarawadekar Ph.D. Employee No. 19847	5 July, 2012	VLSI Architectures, VLSI based Signal and Image Processing, Image Coding and Image Compression
9	Dr. Somak Bhattacharyya Ph.D. Employee No. 50074	30 April, 2015	RF & Microwave Engineering, Metasurfaces, Terahertz Modelling
10	Dr. Smrity Dwivedi Ph.D. Employee No. 50101	29 December, 2012	RF & Microwave Engineering
ASSISTANT PROFESSORS			
11	Mr. M. K. Singh M.Tech. Employee No. 13806	N. A.	Communication System Engineering
12	Dr. Shivam Verma Ph.D. Employee No. 50231	4 January, 2017	Spintronics, Devices and Circuits for VLSI, Non-volatile memory and logic circuits
13	Dr. Sanjeev Sharma Ph.D. Employee No. 50236	17 November, 2018	Wireless Communication, Signal Processing, Machine Learning-based Wireless Communication Systems Design
14	Dr. Priya Ranjan Muduli Ph.D. Employee No. 50246	23 August, 2019	Intelligent Signal Processing, Machine Learning, Image Processing, Internet of Things, Edge Computing, and Biomedical Instrumentation.
15	Dr. Om Jee Pandey Ph. D Employee No. 50287	4 January, 2019	Wireless Sensor Networks, Internet of Things, Cyber Physical Systems, UAV-Assisted Edge and Fog Networks, Low-power Wide-area Networks, Social Networks, Wireless Communications
16	Dr. Atul Kumar Ph. D Employee No. 50288	19 December, 2018	6G, IoT, IIoT and Industry 4.0, AI techniques for end-to-end (E2E) prediction of critical Quality-of-Service (QoS), Joint sensing and communication (JSCS)
17	Dr. Sonam Jain Ph. D Employee No. 50290	4 August, 2020	Wireless Communication, Physical layer security, Coding Theory, NOMA, MIM0, URLLC
18	Dr. Oppili Prasad L Ph.D. Employee ID: 50322	4th March, 2020	Electronic System Design, Flexible and Wearable Electronics, Circuits & Systems for Flexible Electronics
19	Dr. Jaya Jha Ph.D. Employee ID: 50323	August 7, 2021	Microelectronics, Device reliability, MMICs
20	Dr. Ankit Arora Ph.D. Employee ID: 50325	March 25, 2022	Nanoelectronics, Nano-photonics, 2D-materials-based devices
21	Dr. Muralikrishnan Srinivasan Ph.D. Employee ID: 50384	September 25, 2020	Machine Learning, Wireless Communication, Physical Layer Security

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Dr. Vinod Kumar Singh, Ph.D	Senior Technical Superintendent (Gr.-II), 14165	16.01.1990
2	Sri. Tarun Kumar Singh, M.Sc. (Electronics)	Sr. Technical Superintendent (Gr.-I), 16564	15.02.1995
3	Sri. Lal Bahadur Vishwakarma, B.A.	Sr. Technical Superintendent (Gr.-II), 14166	11.03.1988
4	Sri. Krishna Kumar Srivastava, Intermediate	Sr. Technical Superintendent, 14167	16.01.1990
5	Sri. Lalji Prasad, Intermediate, Diploma	Sr. Technical Superintendent, 18022	18.01.2007
6	Sri. Mohan, High School	Sr. Technical Superintendent, 14170	11.03.1988
7	Sri. Jay Ram, High School	Technical Superintendent, 14014	07.02.1995
8	Sri. Sanjiv Kumar Srivastava, B.A., ITI	Technical Superintendent, 18056	20.02.2007
9	Sri. Shyam Narayan, Intermediate, ITI	Jr. Technical Superintendent, 18087	26.02.2007
10	Sri. Bahadur Lal, B.A.	Jr. Technical Superintendent, 18660	05.08.2008
11	Sri. Vinod Kumar Verma, Intermediate, ITI Diploma	Jr. Technical Superintendent, 18653	05.08.2008
12	Sri. Dinesh Kumar, Intermediate, ITI Diploma	Jr. Technical Superintendent, 18673	06.08.2008
13	Sri. Gyan Chand Vishwakarma, High School	Jr. Technical Superintendent, 18904	18.01.2010
14	Sri. Amit Kumar Srivastava, B.A.	Jr. Technical Superintendent, 18609	05.08.2008
15	Sri. Ravindra Nath Ram, Intermediate	Jr. Technical Superintendent, 14016	01.04.1990
16	Sri. Ajit Kumar Singh, Intermediate, ITI	Jr. Technical Superintendent, 19270	09.02.2011
17	Sri. Sanjay Kumar Vishwakarma, M.Sc.	Senior Technician, 19594	11.07.2012
18	Sri. J. K. Sinha Diploma in CSE, BCA, B.Tech in Electronic & Telecommunications PG & MPA	Junior Superintendent, 50016	25.09.2020
19	Sri. Abhishek Pandey Post Graduation in Sociology	Junior Superintendent, 50001	18.04.2024
20	Sri. Rajneesh Kumar Singh M.Tech	Junior Technician, 50363	14.11.2023
21	Sri. Shiv Kumar Singh B.Tech (EE)	Junior Technician, 50410	02.02.2024
22	Sri. Pavan Singh, B.A., ITI	MTS	16.12.2016
23	Sri. Ankit Kumar Rai, M.A., B.Ed	MTS	01.11.2019
24	Sri. Surya Pratap Singh, Intermediate	MTS	25.09.2023

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

S. No.	Coordinator	Title	Period
1	Dr. Atul Kumar	SERB-sponsored Karyashala on "Integrated Sensing and Communication for 6G Networks"	08.01.2024 to 12.01.2024
2	Dr. Sonam Jain, & Dr. Atul Kumar	Introduction to Quantum Communication and Machine Learning	08.01.2024 to 12.01.2024
3	Dr. Somak Bhattacharyya & Prof. M. K. Meshram	"Recessed Ground Techniques for mm- Wave Circuits and Antennas" by Prof. Mahesh Abegaonkar, IIT Delhi	22.04.2023
4	Dr. Somak Bhattacharyya & Prof. M. K. Meshram	"Substrate Integrated Waveguide and Dielectric Image Line Based Circuit Component and Antennas" by Prof. Animesh Biswas, IIT Kanpur	24.04.2023
5	Dr. Somak Bhattacharyya & Dr. Shivam Verma	"Compound Semiconductor devices and circuits for 5G and beyond" by Dr. Sandeep Chaturvedi, GAETEC, Hyderabad	25.08.2023
6	Dr. Somak Bhattacharyya & Dr. Priya Ranjan Muduli	"Solar Data Analysis Using AI & ML Based Technique & Its Relevance to Aditya-L1 Mission" by Dr. Sanmoy Bandyopadhyay, ARIES, Nainital	27.09.2023

S. No.	Coordinator	Title	Period
7	Dr. Somak Bhattacharyya, Dr. Shivam Verma & Prof. M. K. Meshram	"Terahertz (THz) Spectroscopy Development with Applications to Metamaterials Studies Using Far-Field and Near-Field Techniques" by Prof. S. S. Prabhu, TIFR	11.10.2023
8	Dr. Somak Bhattacharyya, Dr. Shivam Verma & Prof. M. K. Meshram	"Introduction to Nanomaterials for Sensing Applications" by Prof. Satyabrata Jit, IIT (BHU), Varanasi	13.03.2024
9	Dr. N. S. Rajput	National Workshop on "Dark Patterns: Detection and Mitigation" by Dr. N. S. Rajput	13.01.2024
10	Dr. N. S. Rajput	Institute workshop on "Dark Patterns: Detection and Mitigation" by Dr. N. S. Rajput	06.01.2024
11	Dr. N. S. Rajput	Dark Patterns Buster Hackathon (DPBH-2023) by Dr. N. S. Rajput	Feb.15-18, 2024
12	Prof. M K Meshram	SERB Sponsored Workshop under SSR "Reflectarray Antennas and their Applications"	Feb 25, 2024
13	Dr. Om Jee Pandey	SERB Sponsored Workshop under SSR "Small-World LPWANs towards IoT Applications"	Dec. 15, 2024

Short-term courses/workshops/seminars/symposia/conferences/training programmes attended by faculty members in academic institutions and public sector undertakings

S. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1.	Dr. Somak Bhattacharyya	Wireless, Antennas and Microwave Symposium (WAMS-2023)	Pandit Deendayal Energy University (PDEU). Gandhinagar, Gujarat; 7-10 June, 2023
2.	Dr. Somak Bhattacharyya	URSI General Assembly and Scientific Symposium 2023 (URSI GASS 2023)	Sapporo, Japan; 19-26 August, 2023
3.	Dr. Somak Bhattacharyya	Sixth IEEE International Workshop on Recent Advances in Photonics (WRAP 2023)	IIIT Allahabad; 7-9 December, 2023
4.	Dr. Somak Bhattacharyya	2nd International Conference Microwave, Antennas and Propagation Conference (MAPCON 2022)	The Forum Celebration Centre and Wyndham Hotel, Ahmedabad, Gujarat; 11-14 December, 2023
5.	Dr. Somak Bhattacharyya	8th International Conference on Computers and Devices for Communications (CODEC 2023)	Ramakrishna Mission Institute of Culture, Kolkata; 14-16 December, 2023
6.	Dr. Somak Bhattacharyya	Wireless, Antennas and Microwave Symposium (WAMS-2024)	Raghu Engineering College (A), Visakhapatnam, Andhra Pradesh; 29 February – 3 March, 2024
7.	Dr. Atul Kumar	Demo presented on "Integrated sensing and communication" under 5G & Beyond Hackathon 202**3**	India Mobile Congress 2023, 27th-29th October 2023 at Pragati Maidan, New Delhi
8	Dr. Atul Kumar	30th National Conference on Communications (NCC 2024)	IIT Madras
9	Dr Oppili Prasad L	Workshop on Wearable Devices and AI-ML trends and Technologies conducted by NIT-Trichy and Datanetiix Solutions Inc	NIT-Trichy (virtual mode), 17 - 21 July, 2023.
10	Dr Oppili Prasad L	One-day Workshop cum Technical Meeting with BIS-officials and faculty members nominated in National Technical Committees of BIS, regarding BIS' agenda of MoU with IIT (BHU)	Dept of Chemical Engineering, IIT (BHU), 14 December 2023.
11	Dr. Shivam Verma	IEEE International Symposium on the Physical and Failure Analysis of Integrated Circuits (IPFA)	Penang, Malaysia, 24-27 July 2023. Universiti Sains Malaysia and Malaysian Semiconductor Industry
12	Dr. N. S. Rajput	United Nations Conference on Trade and Development (UNCTAD)	Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA), New Delhi

S. No.	Name of Faculty Member	Title	Period and Venue
13	Dr. N. S. Rajput	International Symposium on Quantum Computing and Innovations	IIT BHU Campus in Varanasi during July 14 -15,2023
14	Dr. N. S. Rajput	National workshop/ seminar on overview of industry 4.0, quality 4.0 & metrology 4.0 (Online)	RRSL, Ahmedabad July 29, 2023
15	Dr. N. S. Rajput	Technology Development Committee Meeting (Online)	TEXMiN, IIT (ISM) Dhanbad July 25, 2023
16	Dr. N. S. Rajput	Attended India Mobile Congress (IMC), to showcase "Pawan Santari (Air Guard)" among India's top 50 technology products as 5G use cases	India Mobile Congress 27 - 29 October 2023 : Pragati Maidan New Delhi, INDIA
17	Prof. M K Meshram	2nd International Conference Microwave, Antennas and Propagation Conference (MAPCON 2022)	The Forum Celebration Centre and Wyndham Hotel, Ahmedabad, Gujarat; 11-14 December, 2023
18	Prof. M K Meshram	Attended India Mobile Congress (IMC), to showcase "Pawan Santari (Air Guard)" among India's top 50 technology products as 5G use cases	India Mobile Congress 27 - 29 October 2023 : Pragati Maidan New Delhi, INDIA
19	Dr. Om Jee Pandey	Organized India Mobile Congress (IMC) event in online mode at IIT (BHU) Varanasi	India Mobile Congress 27 - 29 October 2023 : IIT (BHU) Varanasi, INDIA
20	Dr. Sanjeev Sharama	Organized India Mobile Congress (IMC) event in online mode at IIT (BHU) Varanasi	India Mobile Congress 27 - 29 October 2023 : IIT (BHU) Varanasi, INDIA
Meetings			
1	Kishor Sarawadekar	7th Executive Committee Meeting of IEEE UP Section	IIIT Allahabad, 15 Oct., 2023
2	Kishor Sarawadekar	9th Executive Committee Meeting of IEEE UP Section	IIIT Allahabad, 28 Jan. 2024
3	Kishor Sarawadekar	40th All India Placement Council meeting	IIT Mandi, 24th February 2024
4	Kishor Sarawadekar	CRG-EECE Review meeting	Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram (IIITD), March 11, 2024
4	Kishor Sarawadekar	Project Progress Status Update meeting	ISRO-SAC Ahmedabad, July 7, 2023
5	Dr Oppili Prasad L	Tenth meeting of Wearable Electronic Devices and Technologies Sectional Committee LITD 33, Bureau of Indian Standards (BIS), Govt of India	07th November, 2023, BIS, New Delhi (virtual mode).
6	Dr Oppili Prasad L	Altium University Educator Program - Meeting with Altium USA team	19th March 2024, Altium USA (virtual mode)
7	Dr. Somak Bhattacharyya	CRG-EECE Review meeting	Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram (IIITD), March 11, 2024
8	Dr. Somak Bhattacharyya. Dr. Shivam Verma, Dr. Atul Kumar	IEEE UP Section Annual AGM	IIIT Allahabad, 28 January, 2024
9	Dr. N. S. Rajput	Sub-group to examine the feasibility of uniform charging port for wearables	Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA), New Delhi 17 April, 2023
10	Dr. N. S. Rajput	Mission Office, NM-ICPS, DST Meeting	I-DAPT Hub Foundation, Varanasi, 21-22 July 2023
11	Dr. N. S. Rajput	Stakeholders meeting on Indo-US joint cooperation in HPC domain at CDAC, Pune	CADC, Pune (Online) 13 July, 2023

S. No.	Name of Faculty Member	Title	Period and Venue
12	Dr. N. S. Rajput	Thesis Assessment Board (TAB) Meeting	ISRO, Dehradun (Online) 25 July, 2023
13	Dr. N. S. Rajput	Meeting of National Working Group (NWG)-2 corresponding to ITU-T Study Group-2 (Online)	TEC, Janpath, New Delhi 18 August 2023
14	Dr. N. S. Rajput	BoS Meeting (Online)	Shanti Ram Engineering College, Nandyal, AP 17 August 2023
15	Dr. N. S. Rajput	Panellist, Confluence-2023	Palo Alto Networks, Bangalore 13 Sep, 2023
16	Dr. N. S. Rajput	Meeting on Digital Twin under NSM 2.0 (Online)	CDAC, Pune 30 Aug 2023
17	Dr. N. S. Rajput	Review Committee Meeting, NM-ICPS, DST	I-DAPT Hub Foundation IIT (BHU), Varanasi 01 Sep 2023
18	Dr. N. S. Rajput	Meeting at DoCA, MoCA on Dark Patterns - Detection and Mitigation and Hackathon	Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA) 09 Sep 2023
19	Dr. N. S. Rajput	Meeting on Digital Twin of DME Production Plant	CSIR – NCL, Pune 08 Sep 2023
20	Dr. N. S. Rajput	Scientific Advisory Committee (SAC) Meeting (Online)	DST, NM-ICPS New Delhi 19 Sep 2023
21	Dr. N. S. Rajput	Press Conference for the Hackathon on Dark Patterns	Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA), 26 Oct 2023
22	Prof. M K Meshram	Annual General Meeting of IEEE UP Section	IIIT Allahabad, 28 Jan. 2024
23	Prof. M K Meshram	Project Progress Status Update meeting	ISRO-SAC Ahmedabad, 7 July, 2023
24	Prof. M K Meshram	Selection Committee for appointment to the posts of Professor, Assistant Professor	HBTU, Kanpur, 11 Sep 2023
25	Prof. M K Meshram	Selection Committee for the post of Director, KNIT, Sultanpur at AKTU	AKTU, Lucknow on 05 Sep 2023

Special lectures delivered by faculty members in other institutions

S. No.	Name of Faculty Member	Topic of Lecture	Institution	Date
1	Prof. Satyabrata Jit	Colloidal ZnO and CdSe Quantum Dots Based Photodetectors	VISAT Engineering College, Ernakulam, Kerala	27 Apr 2023
2	Dr. N. S. Rajput	International Symposium on Quantum Computing and Innovations	CDAC, Patna at IIT BHU Campus in Varanasi during July 14 -15,2023	15 Jul 2023
3	Dr. N. S. Rajput	Invited Speaker "Intelligent Sensors and Systems"	5th International Conference on Sensors & Transducers 2023 University of Engineering and Management Kolkata, India, October 11-13, 2023	12 Oct 2023
6	Kishor Sarawadekar	FPGA Architecture and Design Implementation	Skill Development Program in Electronics, at Shri Mata Vaishno Devi University, Katra, J&K	14 Mar 2024
7	Kishor Sarawadekar	RTL Design and Synthesis of Algorithms	in Workshop on RISC-V & VLSI chip design flow using EDA tools, NIT, Jamshedpur	18 Feb 2024
8	Kishor Sarawadekar	Ultrasound Imaging and Signal Processing	in "Karyashala (High-end Workshops)" on Emerging Devices, Circuits & Systems for Next Generation Biomedical Applications, NIT Rourkela	12 Jul 2023

S. No.	Name of Faculty Member	Topic of Lecture	Institution	Date
9	Kishor Sarawadekar	Signal Processing: Algorithms to VLSI Architecture Perspective	in "Karyashala (High-end Workshops)" on Image Processing and its Application using VLSI Architectures, Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar	6 Jul 2023
7	Kishor Sarawadekar	Algorithms to Architecture	in IEEE technically co-sponsored One month summer training program on VLSI design (STPVD-2023), IIIT Allahabad	28 Jun 2023
8	Kishor Sarawadekar	Ultrasound Signal Processing and Hardware Implementation	in Karyashala (High-end Workshops)" on Artificial Intelligence for Biomedical Engineering, IIT (BHU)	27 May 2023
9	Kishor Sarawadekar	Applications of signal processing	G. H. Raisoni college of Engineering, Nagpur	7 Oct 2023
10	Kishor Sarawadekar	Gesture Recognition Based Human Computer Interaction	in 6th International Conference on Computing Communication Control and Automation (ICCUBEA-2022), Pimpri Chinchwad College of Engineering, Pune	27 Aug 2023
11	Dr. Somak Bhattacharyya	Recent Trends in High Frequency Communications	One week SERB Karyashala "Futuristic Trends in Microwave and Millimeter Wave Technologies: An ML Approach" organized by Dept. of Electronics and Communication Engineering, National Institute of Technology, Silchar (Webinar)	5 Jun 2023
12	Dr. Somak Bhattacharyya	Recent Advancements in Metasurfaces for Microwave, Antenna and High Frequency Applications	IEEE AP/MTT Joint Chapter, Gujarat Section, Ahmedabad (IEEE MTT-S Speakers Bureau Program)	8 Jun 2023
13	Dr. Somak Bhattacharyya	Recent Accomplishments in High Frequency Communication	Young Professional Talk, Wireless, Antenna and Microwave Symposium (WAMS), Pandit Deendayal Energy University in Gandhinagar, Gujarat	9 Jun 2023
14	Dr. Somak Bhattacharyya	High Frequency Communication: Recent Accomplishments	Department of Electronics & Communication Engineering, National Institute of Technology Durgapur, India	12 Jun 2023
15	Dr. Somak Bhattacharyya	High Frequency Communication: Recent Accomplishments	IEEE AP-MTT-S Student Branch Chapter, IEEE Kharagpur Section (IEEE MTT-S Speakers Bureau Program)	13 Jun 2023
16	Dr. Somak Bhattacharyya	High Frequency Communication: Recent Advancements	IEEE AP-MTT-S Joint Chapter of Kolkata Section in association with IEEE MTT-S Student Branch Chapter of Jadavpur University (IEEE MTT-S Speakers Bureau Program)	22 Jun 2023
17	Dr. Somak Bhattacharyya	Recent Advancements in High Frequency Communications	Department of Electronics and Telecommunication Engineering, Symbiosis Institute of Technology, Pune	10 Jul 2023
18	Dr. Somak Bhattacharyya	Recent Advancements in High Frequency Communication	Department of Electronics and Telecommunication Engineering, IEEE MTT-S Student Branch Chapter, Amrutvahini College of Engineering, Sangamner in association with IEEE MTT-S Bombay Section (IEEE MTT-S Speakers Bureau Program)	11 Jul 2023
20	Dr. Somak Bhattacharyya	Advanced Application of Metasurface	Giant Metrewave Radio Telescope (GMRT), Khodad, Pune	11 Jul 2023
21	Dr. Somak Bhattacharyya	Recent Advancements on High Frequency Communications	IEEE MTT-S Student Branch Chapter, Don Bosco Institute of Technology (IEEE MTT-S Speakers Bureau Program)	13 Jul 2023
22	Dr. Somak Bhattacharyya	Recent Advancements of High Frequency Communications: An Indian perspective	IETE Navi-Mumbai & ISF-RAIT at D. Y. Patil deemed to be University, Ramrao Adik Institute of Technology	13 Jul 2023
23	Dr. Somak Bhattacharyya	Recent advancements of metasurfaces in high frequencies	One week SERB Karyashala "Modern Antennas and Metasurfaces for Microwave, Millimeter-wave and Terahertz-wave Communication Technologies" organized by Dept. of Electronics and Communication Engineering, National Institute of Technology, Jamshedpur (Webinar)	29 Jul 2023

S. No.	Name of Faculty Member	Topic of Lecture	Institution	Date
24	Dr. Somak Bhattacharyya	A Flexible Dual-Band Metasurface Antenna for Biomedical Applications	XXXVth URSI General Assembly and Scientific Symposium 2023 (URSI GASS 2023) organized by URSI in Sapporo, Japan	25 Aug 2023
25	Dr. Somak Bhattacharyya	Recent Advancements of Graphene-based Metasurfaces in Terahertz Frequencies	XXXVth URSI General Assembly and Scientific Symposium 2023 (URSI GASS 2023) organized by URSI in Sapporo, Japan	25 Aug 2023
26	Dr. Somak Bhattacharyya	Recent Accomplishments in High Frequency Communication	Five-day High-end Workshop on "Advanced Techniques for Emerging Microwave, Millimeter-Wave, and Terahertz Devices" sponsored by IEEE MTT-S Student Branch Chapter, NIT Patna and organized by Department of Electronics & Communication Engineering, NIT Patna (Webinar)	14 Oct 2023
27	Dr. Somak Bhattacharyya	High Frequency Communication: Recent Advancements	Department of ECE in association with IEEE Student Branch JIIT Noida and IEEE Young Professionals UP Section (Webinar)	26 Oct 2023
28	Dr. Somak Bhattacharyya	Recent Advancements of High Frequency Communications: An Indian perspective	IEEE Antennas and Propagation Society (IEEE AP-S) Student Branch Chapter (SBC) at Indian Institute of Technology (IIT) Indore, in collaboration with IEEE Student Branch Chapter at IIT Indore and IEEE Madhya Pradesh Section AP-S Chapter	31 Oct 2023
29	Dr. Somak Bhattacharyya	Applications of Metasurfaces at Terahertz Frequencies	Sixth IEEE International Workshop on Recent Advances in Photonics (WRAP 2023) organized by IEEE Photonics Society UP Section at IIIT Allahabad, Prayagraj	8 Dec 2023
30	Dr. Somak Bhattacharyya	Recent Advancements of Metasurfaces for Applications in High Frequencies	8th International Conference on Computers and Devices for Communications (CODEC 2023) organized by Institute of Radio Physics & Electronics at Ramakrishna Mission Institute of Culture, Kolkata (IEEE MTT-S Speakers Bureau Program)	15 Dec 2023
31	Dr. Somak Bhattacharyya	High Frequency Communication: Recent Advancements	Young Professional Talk, IEEE Photonics Society Kolkata Chapter and IEEE Photonics Society CUSB Chapter at Institute of Radio Physics & Electronics, University of Calcutta. (IEEE MTT-S Speakers Bureau Program)	19 Dec 2023
32	Dr. Somak Bhattacharyya	High Frequency Communications: Innovations by Indians	One-day seminar organized by NDLI Local Chapter of RCCIIT along with Institution's Innovation Council of RCC Institute of Information Technology (RCCIIT) at RCCIIT Kolkata	21 Dec 2023
33	Dr. Somak Bhattacharyya	Metasurfaces Towards High Frequency Applications	TCS Research, IIT Kharagpur Research Park Kolkata (IEEE MTT-S Speakers Bureau Program)	22 Dec 2023
33	Dr. Somak Bhattacharyya	Recent Trends Towards High Frequency Communications: An Indian Perspective	One week Faculty Development Programme on "Recent Trends in High Frequency Communication and Next Generation Smart Systems" organized by Department of Electronics & Communication Engineering, Institute of Engineering & Management, Kolkata Saltlake Campus & IEM-IEDC (ECE) at IEM, Kolkata	1 Feb 2024
34	Dr. Somak Bhattacharyya	High Frequency Communication: Indian Contributions	IEEE MTT-S HITK Student Branch Chapter in association with IEEE AP-MTT Kolkata Chapter at Heritage Institute of Technology, Kolkata. (IEEE MTT-S Speakers Bureau Program)	2 Feb 2024
35	Dr. Somak Bhattacharyya	Some Recent Applications on Metasurfaces	IEEE Antennas and Propagation Society (AP-S) Student Branch Chapter (SBC), IIT Indore (Webinar)	15 Mar 2024
36	Dr. Atul Kumar	Vision of Developed India: Role of Futuristic Technologies	IEEE Communications society UP Section	02 Nov 2023
37	Dr. Atul Kumar	Importance of Futuristic Technologies: Next Generation Wireless Communication System	One Week Offline ATAL BASIC Faculty Development Programme, Rajkiya Engineering College, Sonbhadra	06 Dec 2023

S. No.	Name of Faculty Member	Topic of Lecture	Institution	Date
38	Dr. Atul Kumar	Importance of Futuristic Technologies: Next Generation Wireless Communication System	SERB Sponsored five days karyashala on Artificial Intelligence for smart Sensing and Internet of everything	10 Feb 2024
39	Dr. Atul Kumar	Integrating Sensing and Communication (ISAC) for 6G Networks	30th National Conference on Communications	29 Feb 2024
40	Dr. Atul Kumar	Integrating Sensing and Communication (ISAC) for 6G Networks	SERB Sponsored five days karyashala on Emerging Technologies for Beyond 5G Communication Networks	21 Mar 2024
41	Dr Oppili Prasad L	Microelectronics for Healthcare	Workshop on Wearable Devices and AI-ML trends and Technologies conducted by NIT-Trichy and Datanetiix Solutions Inc	20 Jul 2023
42	Dr Oppili Prasad L	Wearable Electronics and Healthcare: Perspectives on Circuit-Design, Signal Processing and Applications	IEEE Signal Processing Society SBC Technical Talk, IIT (BHU)	28 Oct 2023
43	Dr. Shivam Verma	Spintronic device and circuit simulation tools	One Week Workshop On "Emerging Trends in Nano and Spin-based Electronics Devices and their Application". FDP is organized by the School of Electronics Engineering at VIT-AP University, Amaravati,	15 Apr 2023
44	Dr. Shivam Verma	Spintronic device and circuit simulation tools	One Week Workshop On VLSI Device, Circuit and System Design Tools(Online). FDP is organized by the School of Electronics Engineering at VIT-AP University, Amaravati,	23 - 29 Jun 2023
45	Dr. Shivam Verma	FeFET based Neuromorphic computing	One-week online Faculty Development Program on "Exploring the Cutting-Edge Developments in VLSI Design" organized by Department of ECE, VNRVJIET, Hyderabad	18-22 Mar 2024
46	Dr. Om Jee Pandey	"Energy-Efficient and Latency-Aware Blockchain-Enabled Federated Learning for Edge Networks"	School of Electronics Engineering, Vellore Institute of Technology, Chennai	17 Mar 2024
47	Dr. Om Jee Pandey	"RIS-Assisted IoT Networks Using Machine Learning Frameworks"	Visvesvaraya National Institute of Technology (VNIT) Nagpur	16 Mar 2024
48	Dr. Om Jee Pandey	"Energy-Efficient and Latency-Aware Blockchain-Enabled Federated Learning for Edge Networks", and "RIS-Assisted IoT Networks Using Machine Learning Frameworks".	Indian Institute of Technology Patna,	15 Mar 2024
49	Dr. Om Jee Pandey	Energy-Efficient and Latency-Aware Blockchain-Enabled Federated Learning for Edge Networks", and "Small-World Models for IoT Applications".	National Institute of Technology Sikkim,	25 Feb 2024
50	Dr. Om Jee Pandey	Energy-Efficient and Latency-Aware Blockchain-Enabled Federated Learning for Edge Networks	National Institute of Technology Delhi	2 Feb 2024
51	Dr. Om Jee Pandey	"UAV-Assisted Optical Wireless Communication Solutions for IoT Networks"	Rajkiya Engineering College, Sonbhadra,	12 Jan 2024
52	Dr. Om Jee Pandey	"Energy-Efficient and Latency-Aware Blockchain-Enabled Federated Learning for Edge Networks".	Dr. B R Ambedkar National Institute of Technology, Jalandhar	6 Dec 2023

Visits abroad by faculty members

S. No.	Name of Faculty	Place of Visit	Duration	Fund Received From
1.	Dr. Somak Bhattacharyya	Sapporo, Japan	22-28 August, 2023	International Travel Support, SERB & CPDA
2	Kishor Sarawadekar	Tempe, Arizona, US	August 6-9, 2023	CPDA
3.	Dr. Shivam Verma	Penang, Malaysia	24-27 July 2023	CPDA

Honours and awards

S. No.	Name of Faculty Member	Details of Award
1	Dr. N. S. Rajput	Received the Certificate of Appreciation (2024) from the Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA), Government of India, in recognition of his innovative and exemplary leadership in the research and technology development in niche areas of Dark Patterns Detection and Mitigation, fostering ground breaking solutions and as the Convener, Dark Patterns Buster Hackathon (DPBH-2023).
2	Dr. Somak Bhattacharyya	Honorary Associate of Institute of Astronomy Space and Earth Science (IASES), Kolkata
3	Dr. Somak Bhattacharyya	Life Senior Member of Wireless, Antenna and Microwave Symposium (WAMS) Society
4	Dr. Somak Bhattacharyya	Exceptional Performance as Reviewer of IEEE Transactions on Antennas and Propagation, 2023
5	Dr. Atul Kumar	Received the Certificate of Appreciation (2024) from the Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA) in recognition of Nodal Officer from IIT (BHU), Varanasi for successfully organizing the intra-college Round – 1 and Round – 2 of Dark Patterns Buster Hackathon (DPBH-2023).
6	Dr Oppili Prasad L	Nominated by BIS, India as technical expert in Working Groups (WG-1, 4 & 8) of TC-124: Wearable Electronics Devices & Technologies Committee of IEC (International Electrotechnical Commission), the international organization for standards-activities in field of electronics
7	Dr Oppili Prasad L	Selected among 5-member delegation approved by Bureau of Indian Standards (BIS), Govt of India, to take part in Interim plenary meeting of International Electrotechnical Commission TC-124 (Wearable Electronic Devices and Technologies Committee), organized by Finland National Committee (SESKO) at Helsinki, Finland (virtual mode of participation)
8	Dr. Priya Ranjan Muduli	IEEE UP Section SPS Outstanding Student Branch Chapter Award and Activity-based Branch Incentive Award

Books, monographs authored/co-authored

S. No.	Name of Author/ Co- Author	Title	Publisher
1	Prof. Satyabrata Jit	Self-Powered Photodetector," Handbook of II-VI Semiconductor-Based Sensors and Radiation Detectors:	Springer
2	Prof. Satyabrata Jit	II-VI semiconductor-polymer nanocomposites and its gas sensing Properties" Handbook of II-VI Semiconductor-Based Sensors and Radiation	Springer
3	Prof. Satyabrata Jit	CdSe - based photodetectors for visible-NIR spectral region," Handbook of II-VI Semiconductor-Based Sensors and Radiation Detectors	Springer
4	Dr. Smrity Dwivedi	Antenna Array for reconfiguration,	IGI Global book
5	Dr. Priya Ranjan Muduli	Development and Implementation of an Efficient Deep Residual Network for ECG Classification	Springer
6	Dr. Priya Ranjan Muduli	A Novel Edge Detection Technique for Multi-Focus Images using Image Fusion	Springer
7	Dr. Om Jee Pandey	Incorporating Small-World Characteristics into LPWAN: A Comparative Analysis." In 5th World Conference on Artificial Intelligence: Advances and Applications (WCAIAA 2024)	Springer
8	Dr. N. S. Rajput	"Intelligent Monitoring of Disinfectants." In: Book Title "IoT, Big Data and AI for Improving Quality of Everyday Life: Present and Future Challenges. Studies in Computational Intelligence"	Springer
9	Dr. N. S. Rajput	"Advanced Data-Driven Approaches for Intelligent Olfaction." In Advanced Interdisciplinary Applications of Machine Learning Python Libraries for Data Science	IGI Global book

Editorial boards of journals

S. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Prof. Manoj Kumar Meshram	Founder and Managing Editor	International Journal of Advancement of Microwave Technology
2	Dr. Somak Bhattacharyya	Member	The Journal of Korean Institute of Communications and Information Sciences (J-KICS)
3	Dr. Om Jee Pandey	Associate Editor	IEEE Transactions on Network and Service Management (IEEE TNSM)
4	Prof. Satyabrata Jit	Associate Editor	IET Micro & Nano Letters andJournal of Electronic Materials
5	Prof. Satyabrata Jit	Editor	IETE Journal of Research (a joint publication of IETE & Taylor and Francis
6	Dr. Priya Ranjan Muduli	Associate Editor	IEEE Transactions on Instrumentation and Measurement

Design and Development Activities

New facilities added

S. No.	Details (Infrastructure, Equipments, etc.)	Value (in Lakhs of INR)
1	Creation and Installation of 5 G Lab	100
2	Two new washrooms constructed and two washrooms renovated in the department.	8
3	EDA Tool Support for VLSI Design Related Activities under MeitY's C2S Programme	N/A

Patents filed

S. No.	Name of Faculty Member	Title of Patent
1	Atul Kumar, Daljeet Singh, Hem Dutt Joshi, Ashutosh Kumar Singh, Teemu Myllylä, Sonam Jain	Air Interface for Integrated Sensing and Communication for 6G", Application No. 202311050528, June, 2023.
2	Prof. Satyabrata Jit	A Two Dimensional Photosensitive Metal Oxide Semiconductor (MOS) Capacitor
3	Prof. Satyabrata Jit	Extended Large Area Heterojunction Based Bio-Sensing Device
4	Dr. Smrity Dwivedi	Sectoral waveguide mode convertor used with high power microwave devices
5	Dr. Jaya Jha	GaN based Field Effect Transistor and a Complementary Device thereof
6	Dr. Om Jee Pandey	A Q-Learning based Heterogenous SW-LPWAN for Low Transmission Delay and Improved Energy-Efficiency

Research and Consultancy

Sponsored research projects

S. No.	Title	Period	Funding Agency	Amount (in lakhs of INR)	Co- ordinator
1	Design and Development of High Gain, Wide Bandwidth Steered Reconfigurable Reflectarray Antennas for 5G mmWave Applications	2022-2025	SERB	51.26	M. K. Meshram
2	Design and Development of Reconfigurable Reflectarray Antennas at X-band	2022-2024	RAC-ISRO	27.63	M. K. Meshram
3	Design and Development of Antenna for Surface Acoustic Wave Wireless Temperature Sensor	2022-2024	SSPL, DRDO	31.02	M. K. Meshram
4.	Design and Development of Implantable and Ingestible Antennas for Biomedical Applications	2022-2025	SERB	38.07	M. K. Meshram
5.	Knowledge Partnership for Digital Metrology (KPDM)	2022-2027	MoCA	150.0	Dr. N. S. Rajput
6	Development of graphene/CNT based sensors for space applications	2 years	ISRO RAC-S IIT (BHU)	29.62	Dr. Shivam Verma
7	Implementation of Terahertz Band Communication for Next-generation Wireless Networks	2 Years	SERB	23.67	Dr. Sanjeev Sharma
10	Erasmus + KA1 – Mobility of higher education students and staff supported: 6G Radio Access Network on joint sensing and communication technology in the context of I4.0	2022-2025	European Union	106.5	Dr .Atul Kumar

S. No.	Title	Period	Funding Agency	Amount (in lakhs of INR)	Co- ordinator
11	Development of Wearable Internet of Medical Things for Continuous Health Monitoring of Astronauts	2022-2025	SAC, ISRO, Department of Space, Govt. of India.	26.09	Dr. P.R. Muduli
12	Development of Non-Invasive Saliva Based Glucometer for Diabetes Management	2022-2025	SERB	23.48	Prof. S. Jit (Co-PI)
13	Design and Development of Composition Engineered Toxic-Free Organic-Inorganic Perovskite Quantum Dots Based Flexible Spectrum Tunable Photodetectors	2022-2025	SERB	42.90	Prof. S. Jit
14	Metasurface-based Sensor Devices for mm-wave and sub-terahertz Applications	2022-25	SERB	56.21	Dr. Somak Bhattacharyya
15	Metasurface-based various components for applications in microwave range and beyond	2023-26	ISRO	25.33	Dr. Somak Bhattacharyya
16	Development of Hand Telerehabilitation Platform for Diagnostic and Therapeutic Purposes in Physiotherapy	2022-25	SERB	21.28	Dr. Kishor Sarawadekar
17	Development of variable data rate CCSDS compliant Direct Digital Demodulator	2022-24	ISRO-RAC	24.52	Dr. Kishor Sarawadekar
18	Analysis and Design of Sub-Millimetre Wave Tuneable Gyrotron for DNP-NMR Spectroscopy Application	2021-2024	SERB	50.16	Dr. M.Thottappan
19	Developing a reliable and secure processing system for telemedicine in space using space-based Wireless sensor network (SB-WSN)	2024-2026	ISRO	27.85	Dr.Sonam Jain
20	Demonstration of room-temperature electroluminescence from 2D Semiconductor – Metal hybrid structures	2023-25	SERB	31.42	Dr. Ankit Arora
21	Exploring normally-on Ferroelectric FinFET devices for neuromorphic computing applications	2024-2027	SERB	6.6	Dr. Shivam Verma

Industrial consultancy projects

- Prof. Manoj Kumar Meshram, Nagar Nigam Ayodhya: 26 Lacs, 2023-24
- Dr. N. S. Rajput, U.P. Govt.: 27.61 Lacs, 2023-24
- Dr. Atul Kumar, Jio Platforms Limited, 88.10 Lacs+ GST, 2024-2026

Faculty members' participation with other universities under MoUs : Erasmus+ agreement with Politecnico di Milano, Italy

Research Publications

S. No.		No.
1	Total Number of Papers Published in Refereed International Journals	99
2	Total Number of Papers Presented in International Conferences	29
3	Total Number of Papers Presented in National Conferences	05

Refereed International Journals

1. Almalki, Faris A., Saeed H. Alsamhi, Radhya Sahal, Jahan Hassan, Ammar Hawbani, N. S. Rajput, Abdu Saif, Jeff Morgan, and John Breslin. "Green IoT for eco-friendly and sustainable smart cities: future directions and opportunities." Mobile Networks and Applications, 28, no. 1 (2023): 178-202. (I.F.: 3.8)
2. Shvetsov, Alexey V., Saeed Hamood Alsamhi, Ammar Hawbani, Santosh Kumar, Sumit Srivastava, Sweta Agarwal, Navin Singh Rajput, Amr A. Alammari, and Farhan Nashwan. "Federated Learning Meets Intelligence Reflection Surface in Drones for Enabling 6G Networks: Challenges and Opportunities," in IEEE Access, vol. 11, pp. 130860-130887, 2023. (I.F.: 3.9)
3. Kumar, Kanak, Navin Singh Rajput, Alexey V. Shvetsov, Abdu Saif, Radhya Sahal, and Saeed Hamood Alsamhi. "ID2S4FH: A Novel Framework of Intelligent Decision Support System for Fire Hazards." Fire, 6, no. 7 (2023): 248. (I.F.: 3.2)
4. Kumar, Kanak, Shiv Nath Chaudhri, Navin Singh Rajput, Alexey V. Shvetsov, Radhya Sahal, and Saeed Hamood Alsamhi. "An IoT-enabled E-Nose for remote detection and monitoring of airborne pollution hazards using LoRa network protocol." Sensors 23, no. 10 (2023): 4885. (I.F.: 3.9)

5. Srivastava, Sumit, Shiv Nath Chaudhri, Navin Singh Rajput, and Ashutosh Mishra. "A novel data-driven technique to produce multi-sensor virtual responses for gas sensor array-based electronic noses." Journal of Electrical Engineering, 74, no. 2 (2023): 102-108. (I.F.: 0.8)
6. Srivastava, Sumit, Shiv Nath Chaudhri, Navin Singh Rajput, Saeed Hamood Alsamhi, and Alexey V. Shvetsov. "Spatial upscaling-based algorithm for detection and estimation of hazardous gases." IEEE Access 11 (2023): 17731-17738. (I.F.: 3.9)
7. V. Tiwari, C. Pandey, SS Yadav, DS Roy, OJ Pandey, and LR Cenkeramaddi, "Maximizing Coverage and Energy Conservation in B5G Networks using Hexagonal Tiling to Deploy FT-S2ES" IEEE Open Journal of the Communications Society, DOI: 10.1109/OJCOMS.2024.3389591, Apr. 2024, (Accepted) (I.F.: 7.9)
8. NS Chilamkurthy, SA Hakeem, SK Tiwari, A Ghosh, LR Cenkeramaddi, and OJ Pandey, "Optimal Routing Protocol in LPWAN Using SWC: A Novel Reinforcement Learning Framework" IEEE Sensors Journal, DOI 10.1109/JSEN.2024.3378463, Mar. 2024 (Accepted), (I.F.: 4.3)
9. Bose, T., Suresh, A., Pandey, O.J., Cenkeramaddi, L.R. and Hegde, R.M., "Improving Quality-of-Service in Cluster-Based UAV-Assisted Edge Networks," accepted for publication in IEEE Transactions on Network and Service Management. (I.F.: 5.3)
10. Manpreet Kaur, Hem Dutt Joshi, Atul kumar, Maurizio Magarini, "DGT-based pulse shaping filter for Generalized Frequency Division Multiplexing system," Physical Communication, vol. 61, 2023, doi: https://doi.org/10.1016/j.phycom.2023.102227 (I.F.: 2.2)
11. V. Veera Babu, M. Thottapan, Smrity Dwivedi, "Design and PIC Simulation of Ka-Band Periodically Loaded High Gain Gyro-Twystron," IEEE Transactions on Electron Devices, 10.1109/TED.2022.3182297. (I.F.: 3.1)
12. S. K. Dubey, A Kumar, A Pandey, A Pathak, SK Srivastava, A Study of Sensitivity Improved Probe Using Hyperbolic Metamaterial for Optical Fiber SPR (OFSPR)-based Refractive Index Sensor, Plasmonics 17 (3), 1279-1291. (I.F.: 3.0)
13. Amit Kumar, M. Kumar and A. K. Singh, "Multiple-Input Multiple-Output Dual-band Dual-Circularly Polarized SIW Cavity-Backed Slot Antenna for Satellite and 5G Systems" International Journal of Electronics, Taylor &Fransis U.K, pp. 1-14, 2022, doi:10.1080/00207217.2022.2068671. (I.F.: 1.3)
14. S. Chowdhury, A. P. Singh, S. Jit, P. Venkateswaran, and D. Somvanshi, "p-WSe_2 Nanosheets/ n-WS_2 Quantum Dots/p-Si(2D-0D-3D) Mixed-Dimensional Multilayer Heterostructures Based High Performance Broadband Photodetector," IEEE Trans. Nanotechnology (Accepted; doi: 10.1109/TNANO.2024.3385834). (I.F.: 2.4)
15. A. Malekpoor, S. A. Hashemi and S. Jit, "Reversible Gates Using Quantum Phase Slip Junctions, Part A: Logical Reversible Design," IEEE Transactions on Applied Superconductivity, doi: 10.1109/TASC.2024.3381073 (Accepted). (I.F.: 1.8)
16. A. K. Dwivedi, S. Jit and S. Tripathi, "SnS_2 and ZnO Nanocomposite Prepared by Dispersion Method for Photodetector Application," in IEEE Transactions on Semiconductor Manufacturing, vol. 37, no. 1, pp. 129-136, Feb. 2024, doi: 10.1109/TSM.2023.3347606. (I.F.: 2.7)
17. J. S. Rana and S. Jit, "J. S. Rana and S. Jit, "A Low-Cost Solution-Processed PTB7-Based MSM Visible Photodetector," IEEE Trans. Electron Devices, vol. 71, no. 2, pp. 1208-1213, Feb. 2024, doi: 10.1109/TED.2023.3344547. (I.F.: 3.1)
18. S. Singh and S. Jit, "Thermally Grown MoSe2 Thin Film-Based n-MoSe2/p-Si Broadband Photodetector," IEEE Trans. Electron Devices, vol. 71, pp. 689-694, January 2024, doi: 10.1109/TED.2023.3339590. (I.F.: 3.1)
19. D. C. Upadhyay and S. Jit, "Tetrapod-Shaped CdSe Nanocrystals-Coated Multilayered Parallelepiped ZnO Structures-Based Dual-Wavelength Photodetector," IEEE Transactions on Electron Devices, Vol. 70, pp. 5745-5750, November 2023, doi: 10.1109/TED.2023.3314585. (I.F.: 3.1)
20. A. K. Dikshit, S. R. Pathipati, J. S. Rana and S. Jit, "Two-Dimensional Perovskite Nanoplatelets-Based Photodetectors for UV Light Detection," IEEE Transactions on Electron Devices, Vol. 70, pp. 5851-5855, November 2023, doi: 10.1109/TED.2023.3312228. (I.F.: 3.1)
21. A. K. Dwivedi, S. Jit and S. Tripathi, "High Responsivity PEDOT:PSS/SnS_2/MoS_2 Double- Heterostructure Based Organic-Inorganic Broadband Photodetector," IEEE Trans. Electron Devices, Vol. 70, no. 9, pp. 4694-4699, Sept. 2023, doi: 10.1109/TED.2023.3298317). (I.F.: 3.1)
22. A. P. Singh and S. Jit, "Performance Optimization of ZnO QDs/F8BT Heterojunction-Based UV–Visible Photodetectors Using MoOx Hole Transport Layer," IEEE Transactions on Electron Devices, Vol. 70(8), pp. 4268-4273, August 2023 doi: 10.1109/TED.2023.3285717. (I.F.: 3.1)

23. A. K. Dwivedi, S. Jit and S. Tripathi, "$WSe_2/Al_2O_3/SnS_2$ SIS Structure based Self Powered UV-Vis Photodetector," IEEE Photonics Technology Letters, Vol. 35(15), 805 – 808, August 2023 (DoI: 10.1109/LPT.2023.3281257). (I.F.: 2.6)
24. J. S. Rana, S. Das and S. Jit, "Highly Responsive Al/PTB7/Si/Al Vertical Structure Based White Light Photodetector using FTM Method," IEEE Photonics Technology Letters, Vo. 35(14), pp. 765 - 768 July 2023 (DoI: 10.1109/LPT.2023.3277030). (I.F.: 2.6)
25. A. Malekpoor, S. A. Hashemi and S. Jit, "Design of the Clockless Logic Gates based on Quantum Phase Slip Junction," IEEE Trans. Applied Superconductivity, Vol. 33, no. 6, pp. 1-9, Sept. 2023, Art no. 1701409. (I.F.: 1.8)
26. D. Somvanshi and S. Jit, "Advances in 2D Materials based Mixed-dimensional Heterostructures Photodetectors: Present Status and Challenges," Materials Science in Semiconductor Processing, Vol. 164, pp.107598:1-17, May 2023. (IF: 4.1).
27. H. Bist, A. P. Singh, S. Jit and H. Mishra, "Effect of concentration on the photophysics of solution of [6,6]-phenyl C_{61} butyric acid methyl ester (PCBM)in chloroform," Journal of Luminescence, Vol. 258, pp.119808:1-7, March 2023. (I.F.: 3.6]
28. V. Kumar, R. K. Upadhyay, D. Bano, S. Chandra, P. K. Yadav, D. Kumar, S. Jit, and S. H. Hasan, "Self-assembly of Cu TMA based Semiconducting fibrous Metallogels for fabrication of active electronic device with high Rectification Ratio," Materials Science & Engineering B, Vol. 291, pp.116359:1-6, May 2023. (I.F.: 3.6)
29. Ankit Verma, V. N. Mishra, Rajiv Prakash, "Air-Stable Highly Sensitive Self-Assembled P3HT/GQD Nanocomposite-Based Organic Thin-Film Transistor for Multiparametric H_2S Real-Time Detection at Room Temperature", IEEE Sensors Journal, vol.23, no.1, pp.127-134, 2023. (I.F.: 4.3)
30. Ankit Verma, V. N. Mishra, Rajiv Prakash, "Self-Assembled Au/P3HT, High-k Bilayer Dielectric-Based Solution Processed Low Voltage OTFT for Multiparametric Ammonia Sensor at Room Temperature", IEEE Transactions on Electron Devices, vol.70, no.1, pp.281-287, 2023. (I.F.: 3.1)
31. Ankit Verma, V. N. Mishra, Rajiv Prakash, "A Self-Aligned, Solution-Processed Low-Voltage Operated Organic Thin-Film Transistor for Ammonia Gas Sensing at Room Temperature", IEEE Sensors Journal, vol.23, no.6, pp.5561-5568, 2023. (I.F.: 4.3)
32. P. Kumar, V. N. Mishra and R. Prakash, "Low Voltage Operable Eco-Friendly Water-Induced LiOx Dielectric Based Organic Field Effect Transistor," in IEEE Electron Device Letters, vol. 44, no. 4, pp. 638-641, April 2023. (I.F.: 4.9)
33. A. Verma, S. Gupta, V. N. Mishra and R. Prakash, "A Low Voltage, Self-Oriented Organic Polymer Nanocomposite-Based Flexible TFT for Ammonia Gas Sensing at Room Temperature," in IEEE Transactions on Electron Devices, doi: 10.1109/TED.2023.3255835. (I.F.: 3.1)
34. A. Verma, P. Kumar, V. K. Singh, V. N. Mishra, and R. Prakash, "Introduction of graphene oxide nanosheets in self-oriented air-stable poly(3-hexylthiophene-2,5-diyl) to enhance the ammonia gas sensing of a p-channel thin film transistor," Sensors Actuators B Chem., vol. 385, p. 133661, Jun. 2023, doi: 10.1016/J.SNB.2023.133661. (I.F.: 8.4)
35. A. Verma, D. Kumar, V. N. Mishra and R. Prakash, "A Self-Assembled Polymer Nanocomposite-Based Low-Voltage White Light Phototransistor With UV-Cured Synthesized LaZrOx Dielectric," in IEEE Transactions on Electron Devices, doi: 10.1109/TED.2023.3274500. (I.F.: 3.1)
36. P. Kumar, V. N. Mishra and R. Prakash, "Highly Sensitive and Selective Room Temperature-Operated NO2 Sensor Based on Eco-Friendly Water Processed Low Voltage Operable OFET," in IEEE Sensors Journal, vol. 23, no. 12, pp. 12544-12551, 15 June15, 2023, doi: 10.1109/JSEN.2023.3271598. (I.F.: 4.3)
37. V. K. Singh, A. Verma, P. Kumar and V. N. Mishra, "Solution-Processed, Highly-Efficient Organic Field-Effect Transistor Based Hydrogen Sulfide Gas Sensor at Sub-ppm Regime," in IEEE Sensors Journal, vol. 23, no. 15, pp. 16600-16607, 1 Aug.1, 2023, doi: 10.1109/JSEN.2023.3288932. (I.F.: 4.3)
38. V. K. Singh and V. N. Mishra, "Solution Processed Highly Efficient H2S Gas Sensor With Sub-ppb Detection Limit Based on Self-Aligned Thin Film of PCPDTBT Decorated With CdS Nanoparticles," in IEEE Transactions on Electron Devices, vol. 70, no. 8, pp. 4351-4358, Aug. 2023, doi: 10.1109/TED.2023.3287509. (I.F.: 3.1)
39. P. Kumar, V. N. Mishra and R. Prakash, "Ultralow-Voltage Eco-Friendly Water-Induced LiOx/AlOx Bilayer Dielectric-Based OFET," in IEEE Transactions on Electron Devices, vol. 70, no. 8, pp. 4345-4350, Aug. 2023, doi: 10.1109/TED.2023.3285172. (I.F.: 3.1)
40. V. K. Singh and V. N. Mishra, "HfLaOx High-k Dielectric Based, Fully Solution Processed OFET H2S Gas Sensor at Sub-ppm Regime, Using Photoirradiated-SVA Annealed PCPDTBT/MoS2 Nanocomposite Thin Film," in IEEE Sensors Journal, vol. 23, no. 20, pp. 24239-24246, 15 Oct.15, 2023, doi: 10.1109/JSEN.2023.3312334. (I.F.: 4.3)

41. A. Verma, V. K. Singh and V. N. Mishra, "A Low-Voltage Operated Organic TFT-Based Inverter With Solution-Processed LiZnOx Dielectric," in IEEE Transactions on Electron Devices, vol. 70, no. 9, pp. 4815-4821, Sept. 2023, doi: 10.1109/TED.2023.3297557. (I.F.: 3.1)
42. V. Devarakonda, A Pandey, P. Chakrabarti , A proposed graphene-gated semiconductor terahertz detector, Optik, 288, 171204, 2023. (I.F.: 3.1)
43. S. M. Yadav, A Pandey, A Simulation Study of n-ZnO/Perovskite/p-Cu2SnS3 Based Self-Powered Photodetector: Design and optimization, Materials Research Innovations, 1-8, 2023. (I.F.: 4.8)
44. Purnendu Mishra and Kishor Sarawadekar, "Multiple-Hand 2D Pose Estimation from a Monocular RGB Image," IEEE Access, Early Access, DOI: 10.1109/ACCESS.2024.3376426. (I.F.: 3.9)
45. Bharat Bhushan Upadhyay and Kishor Sarawadekar, "A Low Cost FPGA Implementation of Retinex Based Low-Light Image Enhancement Algorithm," IEEE Transactions on Circuits and Systems--II: Express Briefs, Early Access, DOI: 10.1109/TCSII.2024.3361561. (I.F.: 4.4)
46. Sumit Kr. Yadav and Kishor Sarawadekar, "Robust Multi-Scale Weighting-Based Edge-Smoothing Filter for Single Image Dehazing," Pattern Recognition, Early Access, DOI:https://doi.org/10.1016/j.patcog.2023.110137. (I.F.: 3.9)
47. Tanushree Meena and Kishor Sarawadekar, "An eXplainable Self Attention Based Spatial-Temporal analysis for Human Activity Recognition," IEEE Sensors Journal, vol. 24, no. 1, pp. 635 – 644, January 2024. (I.F.: 4.3)
48. Tanushree Meena and Kishor Sarawadekar, "Seq2Dense U-Net: Analyzing Sequential Inertial Sensor data for Human Activity Recognition using Dense Segmentation Model," IEEE Sensors Journal, vol. 23, no. 18, pp. 21544 – 21552, September 2023. (I.F.: 4.3)
49. Bharat Bhushan Upadhyay and Kishor Sarawadekar, "VLSI Design of Saturation-based Image Dehazing Algorithm," IEEE Transactions on Very Large Scale Integration Systems, vol. 31, no. 7, pp. 959 – 968, July 2023. (I.F.: 2.8)
50. Sumit Kr. Yadav and Kishor Sarawadekar, "An Effective Scale-Aware Edge-Smoothing Weighting Constraint-Based Weighted Guided Image Filter for Single Image Dehazing," Circuits, Systems, and Signal Processing, May 2023. (I.F.: 2.3)
51. Sumit Kr. Yadav and Kishor Sarawadekar, "Effective Edge-Aware Weighting Filter-Based Structural Patch Decomposition Multi-Exposure Image Fusion for Single Image Dehazing," Multidimensional Systems and Signal Processing Journal, vol. 34, no. 2, pp. 543–574, June 2023. (I.F.: 2.5)
52. Sumit Kr. Yadav and Kishor Sarawadekar, "A New Robust Scale-Aware Weighting-Based Effective Edge-Preserving Gradient Domain Guided Image Filter for Single Image Dehazing," Journal of Signal Processing Systems, vol. 95, pp. 475–493, April 2023. (I.F.: 1.8)
53. Rahul Pal and Kishor Sarawadekar, "Distributed RIS-Assisted mmWave Multi-User MIMO Beamspace System," International Journal of Electronics and Communications, vol. 161, pp. 154560, March 2023. (I.F.: 3.2)
54. Pratibha Verma and M. Thottappan, "Design and Simulation Investigations of an X-Band Klystron-Like Relativistic Backward Wave Oscillator with Dual Modulation Cavities," IEEE Transactions on Electron Devices, vol. 71, no. 4, pp. xxxx-xxxx, April 2024 (10.1109/TED.2024.3375291). (I.F.: 3.1)
55. Gundu Venkatesh, S. P. Singh, and M. Thottappan, "A Novel Fast Roll-off Bandpass Frequency Selective Surface for Stealth Applications," Journal of Electromagnetic Waves and Applications, Taylor & Francis Online, vol. 38, no. 5, pp. 571-581, Feb. 2024 (10.1080/09205071.2024.2321279). (I.F.: 1.3)
56. Pratibha Verma, V Venkata Reddy and M. Thottappan,"Design and PIC Simulation of a Klystron-like RBWO with Dual Extraction Cavity," Asian Journal of Physics, vol. 32, no. 9-12, pp. 531-538, Dec. 2023.
57. V Veera Babu, Shyam Gopal Yadav, Smrity Dwivedi and M. Thottappan, "Design and Simulation Studies of a Ka-band Two-Cavity Gyro-Twystron Amplifier," Asian Journal of Physics, vol. 32, no. 9-12, pp. 539-544, Dec. 2023.
58. Pratibha Verma and M. Thottappan, "Design and Efficiency Enhancement of Klystron-like Relativistic Backward Wave Oscillator with Triple Cavity Extractor," IEEE Transactions on Electron Devices, vol. 70, no. 4, pp. 1929-1935, April 2023 (10.1109/TED.2023.3246434). (I.F.: 3.1)
59. Vineet Singh, Somak Bhattacharyya, and Rajan Agrahari, "A Low-Profile Tri-functional Metasurface towards Polarization Conversions and Absorption," accepted for publication in IEEE Antennas and Wireless Propagation Letters. (I.F.: 4.2)
60. Deepak Ram, Amit Kumar Singh, and Somak Bhattacharyya, "A Metasurface-based High Gain Circularly Polarized Patch Antenna with Wide Global Bandwidth," accepted for publication in Journal of Electromagnetic Waves and Applications. (I.F.: 1.3)

61. Nikhil Kumar, Sambit Kumar Ghosh, and Somak Bhattacharyya, "Thermally Switchable Metasurface for Controlling Transmission in the THz-gap," accepted for publication in Plasmonics. (I.F.: 3.0)
62. Nilotpal, P. Chakrabarti, and Somak Bhattacharyya, "Analysis of a double-sided metasurface structure for the design of multifunctional and directional insensitive devices," accepted for publication in IETE Journal of Research. (I.F.: 1.5)
63. Sougata Chatterjee, Yashwant Gupta, Sambit Kumar Ghosh, and Somak Bhattacharyya, "RFI Mitigation of Radio Astronomical Receiver using a Low-profile Metasurface-loaded Antenna," IEEE Transaction on Electromagnetic Compatibility, vol. 66, no. 1, pp. 108-117, Feb. 2024. (I.F.: 2.1)
64. Diptiranjan Samantaray, and Somak Bhattacharyya, "A Metasurface-backed Planar Low-Profile Dual-Band Monopole Antenna," Journal of Electromagnetic Waves and Applications, vol. 37, no. 7-9, pp. 884-897, 2023. (I.F.: 1.3)
65. Rajan Agrahari, Satyesh Singh, Diptiranjan Samantaray, Bambam Kumar, Somak Bhattacharyya, Manpuran Mahto, and Pradip Kumar Jain, "Triple-Band Metasurface Absorber for RF Energy Harvesting Applications," Microwave and Optical Technology Letters, vol. 65, issue 8, pp. 2252-2261, August 2023. (I.F.: 1.5)
66. S. Shekhar, M. Srinivasan, S. Kalyani and M. -S. Alouini, "Outage Probability Analysis of Uplink Cell-Free Massive MIMO Network With and Without Pilot Contamination," in IEEE Open Journal of the Communications Society, vol. 5, pp. 168-184, 2024. (I.F.: 7.9)
67. M. Srinivasan, J. Song, A. Grabowski, K. Szczerba, H.K. Iversen, M.N. Schmidt, D. Zibar, J. Schröder, A. Larsson, C. Häger, and H. Wymeersch, "End-to End Learning for VCSEL-based Optical Interconnects: State-of-the-Art, Challenges and Opportunities" Journal of Lightwave Technology, vol. 41, no. 11, pp. 3261-3277, 1 June1, 2023. (I.F.: 4.7)
68. A. Mishra, Y. Garg, OJ Pandey, M. Shukla, A. Vasilakos, and R. Hegde, "A Novel Resource Management Framework for Blockchain-Based Federated Learning in IoT Networks," IEEE Transactions on Sustainable Computing, DOI: 10.1109/TSUSC.2024.3358915, Jan. 2024, (Accepted), (I.F.: 3.9).
69. N. Sharma, P. Thota, T. Yuvaraj, S. Tripathi, and OJ Pandey, "OptRISQL: Towards Performance Improvement of Time-Varying IoT Networks Using Q-Learning," IEEE Transactions on Network and Service Management, DOI: 10.1109/TNSM.2024.3358835, Jan. 2024, (Accepted), (I.F.: 5.3).
70. Anjali, D. Singh, OJ Pandey, and HN Dai, "STCNN: Combining SMOTE-TOMEK with CNN for Imbalanced Classification of Alzheimer's Disease", IEEE Sensors Letters, DOI: 10.1109/LSENS.2024.3357196, Jan. 2024, (Accepted), (I.F.: 2.8).
71. Y. Liu, HN Dai, Q. Wang, OJ Pandey, Y. Fu, N. Zhang, D. Niyato, and CC Lee, "Space-Air-Ground Integrated Networks: Spherical Stochastic Geometry-Based Uplink Connectivity Analysis" IEEE Journal on Selected Areas in Communications, DOI: 10.1109/JSAC.2024.3365891, Dec. 2023, (Accepted), (I.F.: 16.4).
72. E. Kumari, M. Shukla, OJ Pandey, S. Yadav, "NeuroAid: Emotion-Based EEG Analysis for Parkinson's Disease Identification", IEEE Sensors Letters, DOI: 10.1109/LSENS.2023.3335226, Nov. 2023, (Accepted), (I.F.: 4.3).
73. AA, H. Dai, J. Kumar, and OJ Pandey, "AERed: An Autoencoder-decoder Dimensionality Reduction Method for Wearable-Based Human Activity Recognition" IEEE Sensors Journal, DOI: 10.1109/JSEN.2023.3323328, Oct. 2023 (Accepted). (I.F.: 4.3).
74. A. Shrivastava, UK Agrawal, MK Shukla, and OJ Pandey, "Neural Networks Based Phase Estimation and Symbol Detection for RIS-Assisted Wireless Communications" IEEE Communications Letters, DOI: 10.1109/LCOMM.2023.3323098, Oct. 2023, (Accepted), (I.F.: 4.1).
75. D. Kushwaha, M. Kalavadia, V. Hegde, and OJ Pandey, "Energy-Efficient and Latency-Aware Blockchain-Enabled Federated Learning for Edge Networks" IEEE Transactions on Circuits and Systems II: Express Briefs, DOI: 10.1109/TCSII.2023.3322340, Sep. 2023 (Accepted),(I.F.: 4.4).
76. A. Shukla, A. Sood, and OJ Pandey, "A Computationally-Efficient and QoS-Aware Data Offloading Framework for Biased Fog Networks" IEEE Transactions on Circuits and Systems II: Express Briefs, DOI: 10.1109/TCSII.2023.3319977, Sep. 2023 (Accepted), (I.F.: 4.4).
77. NS Chilamkurthy, N. Karna, V. Vuddagiri, SK Tiwari, A Ghosh, LR Cenkeramaddi, and OJ Pandey, "Energy-Efficient and QoS-Aware Data Transfer in Q-Learning-Based Small-World LPWANs" IEEE Internet of Things Journal, DOI: 10.1109/JIOT.2023.3304337, Aug. 2023 (Accepted), (I.F.: 10.6).
78. S. Tripathi, OJ Pandey, and R. Hegde, "Socially Aware Network Clustering for Throughput Maximization in Mobile Wireless Sensor Networks" IEEE Transactions on Network and Service Management, DOI: 10.1109/TNSM.2023.3294616, Jul. 2023, Early Access. (I.F.: 5.3).

79. N. Sharma, U. Agrawal, S. Shaurya, S. Mishra, and OJ Pandey, "Energy-Efficient and QoS-Aware Data Routing in Node Fault Prediction Based IoT Networks" IEEE Transactions on Network and Service Management, DOI: 10.1109/TNSM.2023.3268676, Apr. 2023, Early Access. (I.F.: 5.3).

80. N. Gupta, RS Yadav, RK Nagaria, A. Tripathi, and OJ Pandey, "Anchor-based Void Detouring Routing Protocol in Three Dimensional IoT Networks" Elsevier Journal on Computer Networks, Mar. 2023 (Accepted), Early Access, (I.F.: 5.6).

81. Jagadish Rajpoot, and Shivam Verma, "Area-Efficient Auto-Write-Terminate Circuit for NV Latch and Logic-In-Memory Applications," IEEE Trans. on Circuits and Systems II: Express Briefs, vol. 70, no. 7, pp. 2630-2634, 2023. (I.F.: 4.4)

82. Jagadish Rajpoot, Ravneet Paul, and Shivam Verma, "SPICE Based Compact Model for Voltage-induced Magnetocapacitance in Magnetic Tunnel Junctions," IEEE Trans. on Magnetics, vol. 59, no. 9, pp. 1-8, 2023. (I.F.: 2.1)

83. Ashok Kumar, Jagadish Rajpoot, and Shivam Verma, "Design Space Exploration and Power Optimization of STT MRAM using Trimmed Fin Asymmetric FinFET", Microelectronics Journal: Elsevier, vol. 149, no. 106238, pp. 1-9, 2024. (I.F.: 2.2)

84. V. Kumar and P. R. Muduli, "Attentive Bi-LSTM-Based Method for Noise Suppression in Ambulatory ECG Measurements," in IEEE Transactions on Instrumentation and Measurement, vol. 72, pp. 1-9, 2023, Art no. 2532409, DOI: 10.1109/TIM.2023.3330182. (I.F.: 5.6)

85. V. Kumar and P. R. Muduli, " Infimal convolution and AM-GM majorized total variation-based integrated approach for biosignal denoising," in Signal, Image and Video Processing, Springer Nature, 2023. (Accepted), DOI:10.1007/s11760-023-02902-7. (I.F.: 2.31)

86. P. R. Muduli, V. Kumar, "A Proximity Operator-Based Method for Denoising Biomedical Measurements." Circuits Syst Signal Process, Springer Nature, vol. 42, pp. 6253–6277 (2023), https://doi.org/10.1007/s00034-023-02400-8. (I.F.: 2.31)

87. N. Saidulu, A. Dasgupta, and P. R. Muduli, "RHLNet: Robust Hybrid Loss-based Network for Low-Dose CT Image Denoising," IEEE Trans. Instrumentation and Measurement, 2024, DOI: 10.1109/TIM.2024.3403187. (I.F.: 5.6)

88. A. Singh, S. Sharma, K. Deka, V. Bhatia "DL-based OTFS Signal Detection in Presence of Hardware Impairments," IEEE Wireless Communications Letters, 2023 (accepted). (I.F.: 6.3)

89. Rajkumar Jatav, Ravi Mali, Praveen Singh Rathore, Manoj Kumar Meshram, "A low-profile high-isolation endfire MIMO antenna based on spoof surface plasmon polaritons for X-band applications," AEU - International Journal of Electronics and Communications, Vol. 177, 2024, 155233, https://doi.org/10.1016/j.aeue.2024.155233. (I.F.: 3.2)

90. S. K. Srivastava and M. K. Meshram, "Comments on "Analysis and Design of Three-Layer Perfect Metamaterial-Inspired Absorber Based on Double Split-Serration-Rings Structure," IEEE Transactions on Antennas and Propagation, vol. 72, no. 4, pp. 3854-3857, April 2024, doi: 10.1109/TAP.2024.3371570. (I.F.: 5.7)

91. Gayatri Tangirala, Srinivasu Garikipati, Manoj Kumar Meshram, M K C Durbhakula, and V K Sharma, "Quad element luna-shaped UWB-MIMO antenna with improved isolation and gain using novel decoupling networks," Wireless Networks, 2024. https://doi.org/10.1007/s11276-024-036945. (I.F.: 3.0)

92. Rahul Dubey, Akanksha Singh, Saurabh Kumar Srivastava, Ajitesh, Manoj Kumar Meshram, "A dual wide-band ingestible antenna design for wireless capsule endoscopy," AEU - International Journal of Electronics and Communications, Vol. 172, 2023, 154935, https://doi.org/10.1016/j.aeue.2023.154935. (I.F.: 3.2)

93. Saurabh K. Srivastava, Rahul Dubey, and Manoj K. Meshram, "Design, Modeling and Analysis of Low Cross Polarization Level Low Radar Cross Section Conformal Ultra Wideband Absorber based on Resistive Metasurface," Progress In Electromagnetics Research M, Vol. 121, 147-156, 2023. (I.F.: 1.0)

94. Praveen Singh Rathore, Ravi Mali, Rajkumar Jatav, Manoj Kumar Meshram, "Integrated compact UWB and frequency reconfigurable antenna with high isolation for cognitive radio," AEU - International Journal of Electronics and Communications, Vol. 171, 2023, 154899, https://doi.org/10.1016/j.aeue.2023.154899. (I.F.: 3.2)

95. R. Jatav, R. Mali, and M. K. Meshram, "A Variable-Width Strip Dipole-Based Leaky-Wave Antenna Using Spoof Surface Plasmon Polaritons," Plasmonics 18, 1813–1823 (2023). https://doi.org/10.1007/s11468-023-01877-y. (I.F.: 3.0)

96. Akanksha Singh, Rahul Dubey, Ajitesh, Saurabh Kumar Srivastava, Manoj Kumar Meshram, "Circular polarization-agile and beam switching enabled reconfigurable cavity-backed antenna," AEU - International Journal of Electronics and Communications, Vol. 165, 2023, 154664, https://doi.org/10.1016/j.aeue.2023.154664. (I.F.: 3.2)

97. R. Dubey, S. K. Srivastava, A. Singh and M. K. Meshram, "Compact and Efficient Dual-Band Rectifier Using Modified T-Section Matching Network," IEEE Microwave and Wireless Technology Letters, vol. 33, no. 6, pp. 755-758, June 2023, doi: 10.1109/LMWT.2023.3248786. (I.F.: 3.0)
98. Kritika Singh, Smrity Dwivedi, "Breast Cancer Detection by Terahertz UWB Microstrip Patch Antenna Loaded with 6X6 SRR Array,"IETE Journal of Research, DOI: 10.1080/03772063.2023.2233474, 2023. (I.F.: 1.5)
99. Kritika Singh, Smrity Dwivedi, "Design and analysis of ultra-wideband microstrip patch antenna with various conductive materials for terahertz gap, SN Applied Sciences 6(5), DOI: 10.1007/s42452-024-05886-2, 2024. (I.F.: 2.6)

Proceedings of International Conferences

1. Chaudhri, S. N., A. Mishra, N. S. Rajput, Y. Mallikarjuna Rao, and M. V. Subramanyam. "Synergetic Effect of Complementary Nature of Hyperspectral and LiDAR Data for High Performance LULC Classification." In 2023 3rd International Conference on Intelligent Technologies (CONIT), pp. 1-6. IEEE, 2023.
2. Kumar, Dharmendra, Shiv Nath Chaudhri, and Navin Singh Rajput. "Air Quality Prediction and Monitoring Using Machine Learning-Based Forecasting Approach." In 2023 International Conference on IoT, Communication and Automation Technology (ICICAT), pp. 1-6. IEEE, 2023.
3. Kumar, Dharmendra, Shiv Nath Chaudhri, and Navin Singh Rajput. "A Machine Learning-Based Disinfectant Type, Concentration, and Usage Monitoring System for Real-World Scenarios." In 2023 International Conference on IoT, Communication and Automation Technology (ICICAT), pp. 1-6. IEEE, 2023.
4. Kommuju Sathwik, Diptiranjan Samantaray, and Somak Bhattacharyya, "A High-Gain Metasurface Antenna for Compact 5G Applications," in Wireless, Antenna & Microwave Symposium (WAMS 2024), Visakhapatnam, 29 February - 3 March, 2024.
5. Munasa Yuvaraju, Kamisetti Sasank, Diptiranjan Samantaray, Biswa Ranjan Swain, Nikhil Kumar, and Somak Bhattacharyya, "A Systematic LHCP Antenna Design Exploration for Smarter IoT Wireless Networks," in Wireless, Antenna & Microwave Symposium (WAMS 2024), Visakhapatnam, 29 February - 3 March, 2024.
6. Shivam Kumar, Sanjeev Sharma, Somak Bhattacharyya, and Rahul K. Hindustani, "Multiuser Precoded OFDM System over Nonlinear Power Amplifier," in Wireless, Antenna & Microwave Symposium (WAMS 2024), Visakhapatnam, 29 February - 3 March, 2024.
7. Kamisetty Sasank, Munasa Yuvaraju, Diptiranjan Samantaray, Biswa Ranjan Swain, Deepak Ram, and Somak Bhattacharyya, "Metasurface-Integrated Flexible Antenna with Enhanced Bandwidth for Wearable IoT Devices," in 8th International Conference on Computers and Devices for Communication (CODEC 2023), Kolkata, India, 14-16 December, 2023.
8. Sayantani Datta, Sougata Chatterjee, Chittajit Sarkar, and Somak Bhattacharyya, "A Wide Angularly Stabile Metasurface-based Band Pass Filter in Ka Band," in 8th International Conference on Computers and Devices for Communication (CODEC 2023), Kolkata, India, 14-16 December, 2023.
9. Nitin Manoj, Sakshi Singh, Somak Bhattacharyya, and Rajan Agrahari, "Multifunctional Metasurface Based Wideband Cross-Polarizer and Narrowband Absorber," in 8th International Conference on Computers and Devices for Communication (CODEC 2023), Kolkata, India, 14-16 December, 2023.
10. Kommuju Sathwik, Biswa Ranjan Swain, Somak Bhattacharyya, and Diptiranjan Samantaray, "A Compact High-Gain Metasurface Antenna for 5G Applications," in 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 10-14 December, 2023.
11. Deepak Ram, Amit Kumar Singh, and Somak Bhattacharyya, "Wideband High Gain Metasurface-Based Circularly Polarized Patch Antenna," in 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 10-14 December, 2023.
12. Sougata Chatterjee, Yashwant Gupta, and Somak Bhattacharyya, "A Wideband Low Profile Metasurface Based Folded Transmitarray Antenna (FTA)," in 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 10-14 December, 2023.
13. Kirti, Shivam Verma, and Somak Bhattacharyya, "A High-Gain Ku-Band Low Noise Amplifier (LNA) With Ultra-Low Noise Figure," in 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 10-14 December, 2023.

14. Sambit Kumar Ghosh, and Somak Bhattacharyya, "Broadband Tunable and Angularly Stable Circular Polarization Conversion in THz-Gap Using Graphene Metasurface," in 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 10-14 December, 2023.
15. Somak Bhattacharyya, and Sambit Kumar Ghosh, "Recent Advancements of Graphene-based Metasurfaces in Terahertz Frequencies," (Invited Paper) in URSI General Assembly and Scientific Symposium 2023 (URSI GASS 2023), Sapporo, Japan, 19-26 August, 2023.
16. Diptiranjan Samantaray, and Somak Bhattacharyya, "A Flexible Dual-Band Metasurface Antenna for Biomedical Applications," (Invited Paper) in URSI General Assembly and Scientific Symposium 2023 (URSI GASS 2023), Sapporo, Japan, 19-26 August, 2023.
17. Sneha Mukhopadhyay, Nikhil Kumar, Sambit Kumar Ghosh, and Somak Bhattacharyya, "A Polarization Insensitive Dual-functional Vanadium Dioxide (VO_2)-based Metasurface Structure in the Terahertz Gap," in Wireless, Antenna & Microwave Symposium (WAMS 2023), Gandhinagar, 7-10 June, 2023.
18. Diptiranjan Samantaray, Ansuman Shubham, Sambit Kumar Ghosh, Smrity Dwivedi and Somak Bhattacharyya, "A Graphene Patch Antenna with Improved Performance for THz Applications," in Wireless, Antenna & Microwave Symposium (WAMS 2023), Gandhinagar, 7-10 June, 2023.
19. Anton Krause, Alexandros Palaios, Atul Kumar, Philipp Schulz, Gerhard Fettweis, "An Improved Data Collection Framework for Enabling ML-based QoS Prediction for Vehicular Communication," in 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding, 2023.
20. Singh, Daljeet, Theresa Eleonye, Lukasz Surazynski, Hany Ferdinando, Atul Kumar, Hem Dutt Joshi, Mariella Särestöniemi, and Teemu Myllylä. "Preliminary Studies on mm-Wave Radar for Vital Sign Monitoring of Driver in Vehicular Environment." In Nordic Conference on Digital Health and Wireless Solutions, pp. 480-493. Cham: Springer Nature Switzerland, 2024.
21. Daljeet Singh; Atul Kumar; Hem Dutt Joshi; Ashutosh Kumar Singh; Mariella Sarestoniemi; Teemu Myllylä; Maurizio Magarini,"A Novel Adaptive Spreading Waveform for Integrated Sensing and Communication ", in 4th International Symposium on Joint Communications & Sensing (JC&S), 2024.
22. Tanushree Meena and Kishor Sarawadekar, "Seq2Dense U-Net: Analysing Sequential Inertial Sensor data for Human Activity Recognition using Dense Segmentation Model," IEEE Sensors Journal, vol. 23, no. 18, pp. 21544 – 21552, September 2023.
23. Jagadish Rajpoot, Meghna Gupta, and Shivam Verma, "Enhancing the Reliability of Hybrid MTJ/CMOS Circuits with Auto Write Termination" in Proc. 30th IEEE International Symposium on the Physical and Failure Analysis of Integrated Circuits (IPFA), Penang, Malaysia, 24-27 July 2023.

Proceedings of National Conferences

1. Daljeet Singh; Atul Kumar; Hem Dutt Joshi; Ashutosh Kumar Singh; Mariella Sarestoniemi; Teemu Myllylä; Maurizio Magarini, "A Novel Multicarrier Modulation for Integrated Sensing and Communication in Sub-THz Band," 2024 National Conference on Communications (NCC), Chennai, India, 2024.
2. R. Mali, R. Jatav, P. S. Rathore, R. Bharati, U. Singh and M. K. Meshram, "Design of 1-bit High Gain Reflectarray Antenna using Dual Reradiating Element," 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 2023, pp. 1-4, doi: 10.1109/MAPCON58678.2023.10463939.
3. R. Mali, R. Jatav, P. S. Rathore, R. Bharati and M. K. Meshram, "High Gain Wideband 16×16 Reflectarray Antenna for 5G and mm-Wave Application," 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 2023, pp. 1-5, doi: 10.1109/MAPCON58678.2023.10464177.
4. P. S. Rathore, R. Mali, R. Jatav and M. K. Meshram, "A dual-band notched UWB antenna with a slot and a parasitic resonator," 2023 IEEE Microwaves, Antennas, and Propagation Conference (MAPCON), Ahmedabad, India, 2023, pp. 1-5, doi: 10.1109/MAPCON58678.2023.10463940.
5. S. Tripathi, OJ Pandey, R Hegde, "Optimal Data Transfer over RIS-Assisted Edge Networks Using Coordinated 3D Beamforming" In 2023 Twenty Ninth National Conference on Communication (NCC), pp. 1-6. IEEE, 2023.

Brief Details of Articles from the Department with maximum no. of Citations in last 5 years

Since 2019:

1. Almalki, F.A., Alsamhi, S.H., Sahal, R., Hassan, J., Hawbani, A., Rajput, N.S., Saif, A., Morgan, J. and Breslin, J., "Green IoT for eco-friendly and sustainable smart cities: future directions and opportunities." Mobile Networks and Applications, 28(1), pp.178-202, 2023. (Citations: 204)
2. Alsamhi, S.H., Shvetsov, A.V., Kumar, S., Shvetsova, S.V., Alhartomi, M.A., Hawbani, A., Rajput, N.S., Srivastava, S., Saif, A. and Nyangaresi, V.O., "UAV computing-assisted search and rescue mission framework for disaster and harsh environment mitigation." Drones, 6(7), p.154, 2022. (Citations: 133)
3. Diptiranjan Samantaray, and Somak Bhattacharyya, "A Gain-Enhanced Slotted Patch Antenna Using Metasurface as Superstrate Configuration," IEEE Transactions on Antennas and Propagation, vol. 68, issue 9, pp. 6548-6556, September 2020. (Citations: 94)
4. Sambit Kumar Ghosh, Vinit Singh Yadav, Santanu Das, and Somak Bhattacharyya, "Tunable Graphene Based Metasurface for Polarization-Independent Broadband Absorption in Lower Mid Infrared (MIR) Range," IEEE Transactions on Electromagnetic Compatibility, vol. 62, issue 2, pp. 346-354, April 2020. (Citations: 87)
5. Arun Kumar Saurabh, Manoj Kumar Meshram, "Compact Sub-6 GHz 5G-Multiple-Input-Multiple-Output Antenna System with Enhanced Isolation", International Journal of RF and Microwave Computer-Aided Engineering, vol. 30, issue 8, pp. e22246, 2020. (Citations: 56)

Distinguished Visitors

1. Prof. Mahesh Abegaonkar, IIT Delhi
2. Prof. Animesh Biswas, IIT Kanpur
3. Prof. Rajesh M Hegde, IIT Kanpur
4. Dr. Sandeep Chaturvedi, GAETEC, Hyderabad
5. Prof. Z. Shen, NTU Singapore
6. Prof. Nagendra P Pathak, IIT Roorkee
7. Dr. Sanmoy Bandyopadhyay, ARIES, Nainital
8. Prof. S. S. Prabhu, TIFR
9. Dr. Tarendra Lakhankar, The City College of the City University of New York

6. Other activities

Indian Faculty visits in the Department

1. Prof. Mahesh Abegaonkar, IIT Delhi
2. Prof. Animesh Biswas, IIT Kanpur
3. Prof. Rajesh M Hegde, IIT Kanpur
4. Prof. Nagendra P Pathak, IIT Roorkee
5. Prof. S. S. Prabhu, TIFR

Foreign Faculty Visits in the Department

1. Prof. Z. Shen, NTU Singapore
2. Prof. Maurizio Magarin, Politecnico di Milano, Milan, Italy

Any other Information:

We are thrilled to share about the resounding success story of the Dark Patterns Buster Hackathon (DPBH-2023), a national level event, which spanned four months (Oct.26, 2023 to Mar.15, 2024), organised in four rounds. This hackathon has been organised under the Project "Knowledge Partnership for Digital Metrology (KPDM)," and was funded separately with INR 68.75 Lacs, by the Ministry of Consumer Affairs (MoCA), Government of India, with Dr. N. S. Rajput, as the Principal Investigator and Convener, across the country.

This event has also been showcased by the Ministry of Consumer affairs (MoCA), GOI, in the United Nations Conference on Trade and Development (UNCTAD), held on Feb.02, 2024 and was attended by 156 Country representatives, as the most innovative and niche intervention towards detection and mitigation of dark patterns on e-commerce digital platforms to create a more ethical digital environment.

Here's a snapshot of our collective efforts and achievements:

Round 1: We kickstarted a movement on Oct.26, 2023, mobilizing over 1.5 Lacs students from more than 140 colleges, putting a spotlight on the critical need to identify and address dark patterns in digital interfaces. Our role in rallying these students was pivotal in setting the stage for what was to be an awe-inspiring display of talent and determination.

Round 2: We witnessed the participation of over 4,000 students, who formed 875+ teams across 70+ colleges, nationwide, showcasing our commitment to making the digital world a fairer place.

Round 3: The Grand Finale held from February 16-18, 2024, was a testament to the zeal that this cause has ignited. A total of 575 students across 176 teams engaged passionately in the competition, with 75 additional students attending out of sheer enthusiasm—some even undertaking train journeys exceeding 50 hours. The event not only featured insightful presentations but also attracted media attention, significantly boosting awareness among students and the general public.

Round 4: We celebrated the innovative spirit by awarding the best five teams with a total cash prize of INR 21 Lakhs on Mar.15, 2024 on the World Consumer Rights Day, at Mumbai, India and graced by Shri Piyush Goel, the Minister This moment also allowed us to express our heartfelt gratitude to all stakeholders for their support and cooperation.

In recognition of our contributions and the tremendous impact we have made:

- Dr. N. S. Rajput has received the Certificate of Appreciation (2024) from the Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA) in recognition of his innovative and exemplary leadership in the research and technology development in niche areas of dark patterns detection and mitigation fostering ground breaking solutions and as the Convener, Dark Patterns Buster Hackathon (DPBH-2023).
- Dr. Atul Kumar has received the Certificate of Appreciation (2024) from the Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA) in recognition of Nodal Officer from IIT (BHU), Varanasi for successfully organizing the intra-college Round – 1 and Round – 2 of Dark Patterns Buster Hackathon (DPBH-2023).
- Dr. Priya Ranjan Muduli has received the Certificate of Appreciation (2024) from the Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs (MoCA) in recognition of his innovative methods and expertise in cutting-edge technologies for societal benefit and for being the Jury Member at the institute level in Dark Patterns Buster Hackathon (DPBH-2023).

Key Instruments

1. Photoluminescence (PL) measurement setup (F980) from Edinburgh Photonics, UK. This setup can provide PL from 200-800 nm.

2. **Vaccum evaporation and deposition systems** (FL 300 and BC 300) from Hind High vac, Bangalore, India. These setup works with e-beam evaporation (FL 300) and thermal evaporation (FL 300 and BC 300) for depositing thin films.

3. An **''anechoic chamber''** ("an-echoic" meaning non-reflective, non-echoing or echo-free) is a room designed to completely absorb reflections of either sound or electromagnetic waves. They are also often isolated from waves entering from their surroundings. **(Anechoic Chamber with 6 axis position for RF Characterization (up to 20GHz))**

4. **Handheld Vector Network Analyzer** with measurement facility up to 44 GHz. The microwave characterization of the device under test can be performed at any location as the instrument is portable in nature.

13. Department of Mechanical Engineering

Complete Name of Department: Department of Mechanical Engineering

Year of Establishment: 1919

Head of the Department: Prof. Santosh Kumar w.e.f. 02.08.2021

Brief Introduction of the Department:

The Department of Mechanical Engineering came into existence in 1919 under the leadership of Professor Charles A. King, the first Head of the Department and Principal of the erstwhile Banaras Engineering College. Over the last hundred years, the department has grown fourfold to become the largest department in IIT (BHU), Varanasi. The post-graduate and doctoral program in the department is well-established and infrastructural facilities exist for studies and research for a range of specialisations such as Machine Design, Thermal & Fluid Engineering, Production Engineering and Industrial Management. The ME curriculum emphasizes on developing industry-based engineers who contribute to the nation's growth and command respect in society. A dedicated pool of faculty members helps students to learn in a technological and multidisciplinary environment. Advance computational facility and well-equipped laboratories aid in the motto of department. The department encourages students to participate in various competitions related to technology and innovation.

Major areas of research

Fracture mechanics, Vibrations and Dynamic Analysis, Machine Design, Tribology, Composite Materials, High-Temperature Wear and Lubrication, Surface Engineering, Computational Mechanics, FEM, MEMS, Smart Materials and Structures including Nanostructures, Structural Health Monitoring, Optical Fibre Sensing, Shape Memory Alloys, Heat Transfer, Multiphase Flow, Droplet Atomisation, Bio-Fluid Dynamics, Fluid Machines, CFD, Porous-Media Flow, Microgravity Fluid Physics, Refrigeration, Air-conditioning, Alternate Fuels and Renewable Energy, Wind & Solar Energy, Climate Modelling, Microfluidics, Metal Forming/Joining, Machining, Micro-Machining, Welding engineering & Technology, 3D-4D-5D Printing & Additive Manufacturing, CAD-CAM, Robotics, Manufacturing Automation, Unconventional Manufacturing, Powder Metallurgy, Rapid Tooling, Metal Foams, Next-Generation Bio-Implants, Reverse Engineering, Design of Production Systems, Operations Research, Optimization, DOE, Logistics & Supply Chain Management, Agriculture 4.0, Location Science.

Infrastructure

S. No.	Particulars	Number
1	No. of Classrooms	11
2	No. of Lecture Halls	05
3	No. of Laboratory	20
4	No. of Computers available for students in the Department	275

Area of the Department (in square meters): 11,728 m^2

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	B. Tech	198	196	197	196	29
2	M. Tech	48	27			
3	Ph. D (Under Institute Fellowship)	26	10	25	17	13
4	Ph. D (Under Project Fellowship)	-	-	-	03	01
5	Ph. D (Under Sponsored Category)	01	01	02	02	02

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	A. Joshita, V. Jahnavi, A. Kowsik, A.R. Vighnesh, I. Siva	20134036 20135015 20135014 20135012 20135050	AIMTDR 2023	08-10 December 2023 IIT (BHU) Varanasi	Self
2	P. Abid Singh, B. Ganesh, J. Aravind, K. Ram Prathab,	21135043 21135066 21134013 21134021	AIMTDR 2023	08-10 December 2023 IIT (BHU) Varanasi	Self
3	Mayank Srivastava	20131510	ISHMT-ASTFE Heat and Mass Transfer Conference	14-17 Dec 2023, IIT Patna	Institute
4	Kartik Kumar	21131008	ISHMT-ASTFE Heat and Mass Transfer Conference	14-17 Dec 2023, IIT Patna	Institute
5	Mayank Srivastava	20131510	Conference on Fluid Mechanics and Fluid Power (FMFP)	20-22 Dec 2023, IIT Jodhpur	Institute
6	Ankur Kumar	21131005	10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP)	Dec 2023, IIT Jodhpur	IIT (BHU)
7	Ankur Kumar	21131005	27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference	Dec 2023, IIT Patna	IIT (BHU)
8	Shivram Pathak	20135116	10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP)	Dec 2023, IIT Jodhpur	IIT (BHU)
9	Pammi Raj Gupta		ISHMT -2023	14-16 Dec,2023	IIT(BHU)
10	Basudeb Rajak	17131007	9th International & 30th All India Manufacturing Technology, Design and Research Conference (AIMTDR 2023)	December 08-10, 2023 Dept. of Mech.Engg., IIT(BHU)	Self
11	Basudeb Rajak	17131007	One-day Workshop (Hybrid Mode) on "Powders for Additive Manufacturing"	December 11, 2023 Dept. of Mech.Engg., IIT(BHU)	Self
12	Basudeb Rajak	17131007	"Short Term Course on Composites in Defense Sector"	February 27- March 03, 2023" I-DAPT Hub Foundation IIT (BHU) Varanasi	Self
13	Navneesh Kumar Sonkar	22131501	Multiscale Modeling in Solid Mechanics (ISAM-sponsored research workshop)	13th-14th July 2023, IIT (BHU)	RSG
14	Gulshan Verma	19131002	12th International conference on "Sustainable development through Tribology" TRIBOINDIA 2023	5th-7th October 2023 NIT Srinagar	RSG + STGS
15	Gaurav Upadhyay	21101501	AIMTDR Conference	7-9 December, 2023 IIT BHU, Varanasi	IIT BHU
16	Gaurav Upadhyay	21101501	Y20 meet under G20 India Presidency	18 August, 2023 Rudraksh, Varanasi	Self

Names of scholars/students who won Convocation/InstituteDay prizes

Sl. No.	Name of Student	Name of Prize	Prize awarded by
1.	Mathuri Mani Deep	I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Decision Sciences and Engineering Examination, 2023	IIT (BHU), Varanasi
2.	Rohit Kumar Singh	I.I.T.(B.H.U.) Varanasi Medal for standing First at the M.Tech. in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
3.	Rohit Kumar Singh	Prof. (Dr.) Mahendra Kumar Jain Nyayacharya Gold Medal for securing highest CPI at the M.Tech. in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
4.	Siddharth Pundir	S.K. Memorial Gold Medal for standing First position at the M.Tech. in Mechanical Engineering (Machine Design) Examination, 2023	IIT (BHU), Varanasi
5.	Vikas	BENCO-64 Gold Medal and Cash Prize Rs. 25000/- for best thesis at the M.Tech. in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
6.	Amit Kumar	I.I.T.(B.H.U.) Varanasi Medal for standing First at the 5- Year I.D.D. (B.Tech.-M. Tech.) in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
7.	Deshmukh Shubham Hemchandra	I.I.T.(B.H.U.) Varanasi Medal for standing First at the B.Tech. in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
8.	Deshmukh Shubham Hemchandra	Prince of Wales Medal for standing First at the B.Tech. in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
9.	Deshmukh Shubham Hemchandra	Sudhir Kumar Sharma Memorial Gold Medal for securing highest marks in B.Tech. Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
10.	Deshmukh Shubham Hemchandra	CRS Iyengar Memorial Gold Medal for securing highest marks in B.Tech. 4-Year Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
11.	Deshmukh Shubham Hemchandra	Late Prof. Manoranjan Sengupta Platinum Jubilee Merit Award Rs. 1000/= cash for securing highest marks in B.Tech. in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi
12.	Akanksha Verma	Smt. Indira Tripathi Gold Medal for securing highest CPI among the girl students at the B.Tech. in Mechanical Engineering Examination, 2023	IIT (BHU), Varanasi

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
PROFESSORS			
1.	Prof. Santosh Kumar PhD 13831	2000	• Metal forming • Additive & unconventional manufacturing • Product design & development
2.	Prof. A. P. Harsha PhD 16722	2004	• Tribology • Material tribology Design
3.	Prof. Sandeep Kumar PhD 17343	1999	• Computational mechanics • Wave propagation • CAD
4.	Prof. S. K. Sinha PhD 17364	1993	• CNC
5.	Prof. Rajesh Kumar PhD 17318	2002	• Tribology • MEMS • Reliability
6.	Prof. Prasant Shukla PhD 16723	2000	• Fluid mechanics • Heat transfer
7.	Prof. Pradyumna Ghosh PhD 16801	2007	• Microgravity fluid physics • Heat transfer • CFD
8.	Prof. S. K. Shukla PhD 18130	2005	• Thermal engineering • Renewable energy • Alternate fuels
9.	Prof. Rajnesh Tyagi PhD 17341	2001	• Solid lubricating composites and tribology • Surface modification for wear reduction • High temperature wear of composites and coatings

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
10.	Prof. S. K. Panda PhD 17390	2005	• Failure analysis and reliability design • Finite element analysis • Impact dynamics and ballistics
11.	Prof. Prabhas Bhardwaj PhD 16720	2008	• CMS • SCM • TQM
12.	Prof. Rakesh Kumar Gautam PhD 18239	2009	• Composite materials • Tribological properties of composite materials and alloys • Bio-Tribology
13.	Prof. Jahar Sarkar PhD 17388	2006	• Heat transfer • Thermodynamics • Airconditioning
ASSOCIATE PROFESSORS			
1.	Dr. Mohd Zaheer Khan Yusufzai PhD 16657	2012	• Welding • Friction stir welding • Material characterization
2.	Dr. Meghanshu Vashista PhD 16721	2010	• Machining • Grinding • Welding
3.	Dr. S. S. Mondal PhD 17339	2005	• Thermal and fluid sciences
4.	Dr. Arnab Sarkar PhD 17252	2012	• Wind climatology • Renewable energy • Microfluidics
5.	Dr. Debashis Khan PhD 18139	2007	• Solid mechanics • Fracture mechanics • Finite element method
6.	Dr. Om Prakash Singh PhD 50061	2006	• CFD • Heat and mass transfer • Renewable energy
7.	Dr. J. V. Tirkey PhD 16724	2008	• SI and CI Engine: experimental and simulation • Alternate fuel: Biodiesel, Bioethanol, Producer gas • Life cycle analysis: energy, economy and emission of alternate fuel.
8.	Dr. Cherian Samuel PhD 16798	2005	• Industrial management • Operations • Supply chain management
9.	Dr. N. Mallik PhD 17253	2005	• Smart materials and structures • Vibration Damping • Structural health monitoring
10.	Dr. Amit Tyagi PhD 17268	2011	• Machine design
11.	Dr. U. S. Rao PhD 17269	2013	• Modelling and simulation • Micro-machining • Machining,
12.	Dr Rashmi Rekha Sahoo PhD 17335	2017	• IC engine • Waste to energy • Alternate fuels • Nanofluid
ASSISTANT PROFESSORS			
1.	Shri P. C. Mani MTech 18214		• Tribology • Maintenance engineering
2.	Dr. Amitesh Kumar PhD 50073	2010	• Cryotherapy • Fluid flow and heat transfer • CFD

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
3.	Dr. Anubhav Sinha PhD 50239	2016	• Atomization and spray • Gas turbine • Combustion
4.	Dr. Binita Pathak PhD 50238	2018	• Fluid instabilities • Biofluid dynamics
5.	Dr. Saurabh Pratap PhD 50255	2016	• Maritime logistics • E-commerce platform • Blockchain
6.	Dr. Joy Prakash Misra PhD 50256	2014	• Machining science • Advanced & hybrid machining processes • Advanced joining techniques
7.	Dr. Akhilendra Pratap Singh PhD 50260	2017	• Advanced low temperature combustion • Optical diagnostics with special reference to engine endoscopy and PIV • Combustion diagnostics
8.	Lakshay PhD 50270	2018	• Applied mathematical modelling • Operations research • Simulation
9.	Srihari Dodla PhD 50271	2015	• Multiscale material modelling • Crystal plasticity • Texture evolution
10.	R Santhosh PhD 50274	2016	• Combustion • Laser diagnostics • CFD
11.	Pawan Sharma PhD	2019	• Additive manufacturing • Powder Metallurgy • 3D printing
12.	G.M. Karthik PhD 50320	2017	• Additive manufacturing, • Materials joining • Deformation Behaviour of Materials

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1.	Sri Manas Ranjan Das Post-Graduation	Superintendent, 50156	23/05/2023
2.	Sri Rajeev Ratan Sahaya MBA	Junior Assistant,50186	06/03/2018
3.	Mrs. Salini Gupta Post-Graduation	Junior Assistant, 50394	28/12/2023
4.	Sri Satya Prakash Diploma in Mechanical Engineering	Sr. Tech. Superintendent, 18017	20/01/2007
5.	Sri Barmeshwar Rai Graduation	Technical Superintendent, 13975	12/10/1988
6.	Sri Hari Shankar Diploma in Computer in Office Management	Technical Superintendent, 13982	08/01/1997
7.	Sri V.P. Srivastava Graduation (B.Sc.)	Technical Superintendent, 13983	15/10/1998
8.	Sri Ranjeet Sharma High School	Jr. Tech. Superintendent, 13986	12/10/1998
9.	Sri Rajendra Kumar Intermediate (Science)	Jr. Tech. Superintendent, 18062	22/02/2007
10.	Sri Nand Lal ITI	Jr. Tech. Superintendent, 18055	21/02/2007
11.	Sri Anil Kr. Singh ITI	Jr. Tech. Superintendent, 18060	20/02/2007

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
12.	Sri Surendra Pratap Yadav Intermediate (Sci.)	Sr. Technician 18610	05/08/2008
13.	Sri Dinesh Kumar Graduation (B.Sc.)	Sr. Technician, 18614	11/08/2008
14.	Sri Sunil Kr. Bardhan ITI, Diploma in Mechanical Engg.	Sr. Technician, 18613	05/08/2008
15.	Sri Shambhu Prasad Post-Graduation (M.P.Ed.)	Sr. Technician, 18611	05/08/2008
16.	Sri Ravi Prakash Singh ITI (Draftsman)	Sr. Technician, 18612	06/08/2008
17.	Ms. Saroj K. Patel M.A. (Sociology), ITI	Sr. Technician, 19271	09/02/2011
18.	Sri Barmeshwar Prasad Intermediate	Sr. Technician, 19597	11/07/2012
19.	Sri Anupam Mishra Graduation (B.Sc.), ADCA	Sr. Technician, 19600	11/07/2012
20.	Shambhu Prasad Singh ITI (Diesel Mechanic)	Junior Technical Superintendent 13985	12/10/1998
21.	Sri Shiva Krishna Pandey B.Tech	Junior Technical, 50356	14/11/2023
22.	Sri Sandeep Pathak B.Tech	Junior Technical, 50414	06/02/2024

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

Sl. No.	Coordinator	Title	Period
1	Prof. S. Kumar, Dr. M.Z. Khan Dr. M. Vashista, Dr. J.P. Misra Dr. P. Sharma, Dr. G.M. Karthik	Hands-on Training Workshop on part fabrication using 3D printing	24-30 July 2023
2	Dr. G.M. Karthik, Dr. J.P. Misra	03 Days Hands-on Training on Metallography Practices	14-16 March, 2024
3	Prof. Santosh Kumar Dr. Pawan Sharma Dr. G. M. Karthik	Hands-on training workshop on part fabrication using 3D printing	29/05/2023 to 04/06/2023
4	Dr. Pawan Sharma Dr. G. M. Karthik	One-Day Workshop (Hybrid mode) Powders for Addiϴve Manufacturing	11/12/2023
5	Santosh Kumar	Digital Manufacturing of Parts using Stereolithography based Additive Manufacturing	19th – 25th June, 2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1.	Dr. G.M. Karthik	Advances in Laser & Arc Cladding Technologies (ALACT) 2023	03-04 November, 2023
2.	Dr. G.M. Karthik	1st Mechanical Sciences Young Investors Meet	08-10 March, 2024
3.	Dr. G.M. Karthik	National Symposium of Research Scholars on Metallurgy and Materials	09-10 March, 2024
4.	Dr. Meghanshu Vashista	2nd International conference on environmental pollution abatement & disaster management (ICEPADM-2024),	28-30 March, 2024, and SKIT Jaipur (Online)
5.	Dr. Meghanshu Vashista	Short Term Course on Advances in Composite Materials: Design Manufacturing, & Applications (ACM-DMA: 2023)	June 28-July 02, 2023 and at MNNIT Allahabad,
6.	Dr. Mohd Zaheer Khan Yusufzai	2nd International conference on environmental pollution abatement & disaster management (ICEPADM-2024),	28-30 March, 2024, and SKIT Jaipur
7.	Anubhav Sinha	10th International Hydrogen and Fuel Cell Conference (IHFC)	Dec 2023, Varanasi

Sl. No.	Name of Faculty Member	Title	Period and Venue
8.	Anubhav Sinha	10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP)	Dec 2023, IIT Jodhpur
9.	Anubhav Sinha	27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference	Dec 2023, IIT Patna
10.	Anubhav Sinha	Workshop on Drops, Sprays and Atomization	Jan 2024, IIT Madras
11.	Anubhav Sinha	International Workshop on "Sustainable Energy, Power and Propulsion"	Jan 2024, IIT Kanpur
12.	Anubhav Sinha	Mechanical Sciences Young Investigators Meet (MSYIM 2024)	Mar 2024, IIT Kanpur
13.	Prashant Shukla	Indian Aerosol Science and Technology Association (IASTA) Conference	Navi Mumbai, Maharashtra, India December 12-14, 2023
14.	Dr. Jeewan V. Tirkey	Valorisation of agriculture waste biomass to engine application	National workshop on Recent advance in Agricultural Engineering & Technology for Doubling Farmers Income (RAAETDFI-23) (on line mode), organised by BHU-Varanasi and National agriculture Development cooperative Ltd. (NADCL) Baramulla, J&K on-20-9-2023
15.	Dr. Jeewan V. Tirkey	Valorization of waste biomass by gasification for use in IC engines	VIII International Conference on Sustainable Energy and Environmental Challenges (VIII SEEC), Malaviya National Institute of Technology Jaipur, on 5-12-2023
16.	Dr Arnab Sarkar	10th National Conference on Wind Engineering (NCWE 2024)	March 15-16, 2024, Vellore Institute of Technology, Chennai
17.	Dr Arnab Sarkar	9th Nanotech and Nanomaterials Research Conference (Nano Rome 2023)	June 12-14, 2023 Online

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1.	Dr. G.M. Karthik	Strategies to develop high strength metal additive parts	IIT Madras	27.10.2023
2.	Dr. G.M. Karthik	Heterostructure Materials through Laser Processing	IIW Jamshedpur	03.11.2023
3.	Dr. G.M. Karthik	Strategies to develop high strength metal additive parts	Mechanical Engineering, IIT Kanpur	08.03.2024
4.	Dr. G.M. Karthik	Additive Manufacturing	Materials Science and Engineering, IIT Kanpur	09.03.2024
5.	Dr. Meghanshu Vashista	Keynote talk on "Pollution free technique for material characterization" (Online)	SKIT, Jaipur	29.03.2024
6.	Dr. Meghanshu Vashista	Expert lecture "Advancement in Grinding of Composite Materials"	Department of Mechanical Engineering of Motilal Nehru National Institute of Technology Allahabad, Prayagraj	01.07.2023
7.	Dr. Mohd Zaheer Khan Yusufzai	Keynote talk on "Pollution free welding"	SKIT, Jaipur	29.03.2024
8.	Anubhav Sinha	Hydrogen Safety	IIT Kanpur / IIT Delhi	21.01.2024
9.	Anubhav Sinha	Combustion and Spray	IIT Kanpur	10.03.2024
10.	Prashant Shukla	High Temperature Aerosol Facility at IIT(BHU)	Indira Gandhi Centre for Atomic Energy (IGCAR), Tamil Nadu, 603102	26-27 Oct 2023
11.	Pradyumna Ghosh	A novel Approach for Patient Treatment Planning of Localized Cancer	American Society of Thermal and Fluid Engineering Conference, University of Maryland, College Park (Virtual Mode)	May 2023

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
12.	Dr. Pawan Sharma	Metal 3D Printing: Benefits and applications	Government Engineering College, Gopalganj	11.01.2024
13.	Dr. Pawan Sharma	Metal Additive Manufacturing	NIT Rourkela	20.02.2024
14.	Dr. Pawan Sharma	Post Processing Techniques for Additive Manufacturing	IIT Patna	29.07.2023
15.	Dr. Pawan Sharma	Powder based Additive Manufacturing	IIT Indore	29.06.2023
16.	Rakesh Kumar Gautam	Powder Metallurgy Processing and Tribological Behaviour of Titanium Alloys for Biomedical Implant Applications	ASM Chapter Chennai, 4th Conference and Expo 2023 on Heat Treatment and Surface Engineering" (HT&SE 2023), Chennai Trade Centre, Chennai, India	28-30 Sep 2023
17.	Rajnesh Tyagi	Role of Tribology in Sustainable Development	CIPET: IPT-Ahmedabad	March 14, 2024
18.	AP Harsha	Bio-tribology	Indian Institute of Science Bangalore.	13-17 June, 2023
19.	Dr Arnab Sarkar	Estimation of Enhancement Factors for Wind Loading due to Extreme Wind Climate	Vellore Institute of Technology, Chennai	March 16, 2024

Honours and awards

Sl. No.	Name of Faculty Member	Details of Award
1.	Dr Rashmi Rekha Sahoo	Listed in World Top 2% Scientist 2023 (Rank 4 in IIT BHU)
2.	Prof. Jahar Sarkar	Recognized in Top 2% World Scientists, 2023 (29th overall Indian rank and 1st Indian rank in Mechanical Engineering)
3.	Prof. Jahar Sarkar	National Advisory Board member in Int Conf Advances Renewable Green Energy Tech (ICARGET), GGV Bilaspur, 7-8 Dec 2023
4.	Prof. Jahar Sarkar	Ranked 17 among top scientists of Mechanical Engineering in India, 2024
5.	Arnab Sarkar	Best Teacher Award from IIT (BHU), Varanasi under Post Graduate Category

Fellowships of academic and professional societies

Sl. No.	Name of Faculty Member	Details of Fellowship
1.	Dr. Jeewan Vachan Tirkey	International Society for Energy Environment and Sustainability (no. 23018), life member
2.	Dr. Cherian Samuel	Fellow, Institution of Engineers
3.	Dr Arnab Sarkar	Research Excellence Fellowship from 1994 Alumni of IIT (BHU), Varanasi

Books, monographs authored/co-authored

Sl. No.	Name of Author/Co-Author	Title	Publisher
1.	Gagan Bansal, Rakesh Kumar Gautam, Joy Prakash Misra, Chandra Kishore, Abhilasha Mishra, Akarsh Verma	Evaluation of Mechanical and Thermal Properties of Thermosetting Polymer Composites "Study of Dynamic Mechanical And Creep-recovery Behavior of Polymer Composites: Overview, Effect of Cross-linking And Mathematical Modeling." Page-53-68, Book Chapter.	Elsevier, ISBN: 9780443190094. eBook ISBN: 9780443190100
2.	Dileep Pathote, Dheeraj Jaiswal, Vikrant Singh, C.K. Behera, and R.K. Gautam	Tribology for Energy, Environment, and Society, Wear behavior of Tantalum coated 316L SS by DC Magnetron Sputtering for orthopedic applications Book Chapter	Springer Nature Singapore, 2024
3.	Gagan Bansal, Rakesh Kumar Gautam, Joy Prakash Misra, Abhilasha Mishra	Coating Materials, Coating Methods for Hydroxyapatite - A Bioceramic Material, Part of the Materials Horizons: From Nature to Nanomaterials book series (MHFNN), pp 279–302, Book Chapter	Springer, Singapore, 2023
4.	Santosh Kumar	Textbook on "Manufacturing Engineering", AICTE Technical book for 2nd year Diploma 3rd semester	AICTE
5.	Singh, P.K., Kumar, S., Verma, G.K., Jain, P.K.	Book chapter: Post-processing techniques of additively manufactured Ti-6Al-4V alloy: A complete review on property enhancement	CRC Press

Editorial boards of journals

Sl. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1.	Prof. Jahar Sarkar	Member	Energy Engineering
2.	Prof. Jahar Sarkar	Member	International Journal of Applied Engineering Research
3.	Prof. Jahar Sarkar	Member	American Journal of Engineering and Applied Sciences
4.	Dr Arnab Sarkar	Editor	Frontiers in Built Environment
5.	Rajnesh Tyagi	Associate Editor	Friction

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1.	Prof. Jahar Sarkar	A film for daylight radiative cooling and a method of preparation thereof
2.	Prof. Prashant Shukla	Carbon Nanotube Filter for Toxin Removal from Cigarette Smoke
3.	Jeewan Vachan Tirkey, Shailendra Kumar Shukla	A Thermally Efficient Over-expansion Stroke based Engine
4.	Shailendra Kumar Shukla, Jeewan Vachan Tirkey	An Improved solar still assembly for purification of raw water
5.	Dr. Pawan Sharma	A method of preparing a 3D printing metallic ink and a product there of
6.	Santosh Kumar and Md Meraz	A Low-Cost Scalable Tabletop Tube Hydroforming Machine
7.	Santosh Kumar and Yogesh Kumar	Robot assisted high speed incremental sheet hydroforming machine

Research and Consultancy

Sponsored research projects *(Ongoing only)*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1.	Development of Tungsten heavy alloy hybrid structure using microwave sintering for long rod kinetic energy penetrators	2023-2026	DRDO	63.9	Dr. G.M. Karthik
2.	Experimental investigation of stability limits, NOx emissions and blowout phenomenon of ammonia-hydrogen-nitrogen-air mixtures in a non-premixed swirl combustor	Nov 2022-Oct 2024	SERB	31.7	R Santhosh
3.	Development of ORC technology for waste heat utilization for the generation of electricity	03.02.2020 – 31.03.2024	BRNS, Mumbai	29.0	Prof. Jahar Sarkar
4.	Transparent thermal regulating radiative coating development for smart windows	20.03.2024 – 20.03.2027	SERB, New Delhi	47.0	Prof. Jahar Sarkar
5.	Development of advanced nanocrystalline coatings and LASER cladding system for repair work related to HEMMs and other structural components	2021-2024	NCL, Singraulli	85.8	Dr. Meghanshu Vashista (PI)
6.	Development of Friction Stir Welding for repair work of high temperature materials like EN-24 steel	2021-2024	NCL, Singraulli	53.9	Dr. Mohd Zaheer Khan Yusufzai (PI)
7.	Blowoff Dynamics of Afterburner Flame	2022-25	DRDO (AR&DB)	110.0	Anubhav Sinha
8.	Graphite Aerosol studies in High Temperature Aerosol Facility for Nuclear Reactor Applications	Dec 2022- Dec 2025 (Three Years)	Department of Atomic Energy (DAE), GoI	40.5	Prof Prashant Shukla
9.	On the augmentation of heat transfer from the external downward facing convex surface of calendria vessel with nano-texturing	June 2022 – March 2025	BRNS	37.0	Prof. Pradyumna Ghosh
10.	Development of catalytic integrated air-steam gasifier for the gasification of agriculture waste and valorization of gasified fly ash on concrete work	15 Nov. 2023-2026	DST	40.9	Dr. Jeewan Vachan Tirkey

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
11.	Development and assessment of printability of indigenous Additive Manufacturing (AM) grade metal and alloy powders	2024-2028	DRDO	1990.7	Dr. Pawan Sharma
12.	Design and development of an indigenous inert gas atomization-based powder production equipment	2024-2028	DRDO	623.7	Dr. Pawan Sharma
13.	Development of high-performance fully 3D printed lithium (Li)-ion battery system using advanced Cu-Zn alloy-based ordered porous current collectors with deposited Li as anode and ordered porous Li iron phosphate as cathode	2024-2027	SERB, DST	64.0	Dr. Pawan Sharma
14.	Development of stealth drones with camouflaging features for border surveillance using advanced designing and 4D printing	2023-2025	I-DAPT-HUB FOUNDATION, TIH IIT (BHU)	20.0	Dr. Pawan Sharma
15.	Improving oxidative resistance of Carbo-graphite materials to be used in fabrication of mechanical seals for aero-engines	Dec 2023 to Dec 2025	Aeronautics Research & Development Board (AR&DB), DRDO, New Delhi	47.2	Rajnesh Tyagi
16.	High temperature tribological studies of nanocomposite/multilayer coatings for dry sliding applications. Scheme for Promotion of Academic and Research Collaboration	31 Jan 2024 to 31 Jan 2026	Ministry of Education, Government of India	59.5	AP Harsha
17.	Manufacturing of Complex Titanium Assembly Part for Missiles using Fabrication, Simulation Testing Prototyping studies	2 Year(s) 6 Month(s)	DRDL Hyderabad	47.5	Santosh Kumar
18.	Vacuum cum ultrasonic assisted warm incremental sheet forming of Titanium Alloys: Process development and experiments	2 years	SERB	38.0	Santosh Kumar
19.	Assessment of Structural Vulnerability through Characterisation of Tornado for a NPP Site	2020-2024	BRNS, Mumbai	32.4	Dr Arnab Sarkar
20.	Pathology on a Spinning Disc	2020-2024	MHRD	94.1	Dr Arnab Sarkar
21.	Assessment of Vulnerability of Structures in Regard to Cyclonic Wind Loads	2021-2024	BIS	16.8	Dr Arnab Sarkar
22.	Prediction of Dose-Volume Histograms of Organs-at-Risk in Prostate Cancer Radiation Therapy using Machine Learning	2022-2024	I-DAPT-HUB Foundation, IIT (BHU), Varanasi	3.5	Dr Arnab Sarkar
23.	Development of a Multiplex Portable Spinning Disc for Effective Monitoring of Women's Health during Different Stages of Pregnancy	2021-2024	DST	72.9	Dr Arnab Sarkar
24.	A Novel Meso-Micro Scale Coupling Approach for Wind Resource Assessment	2023-2025	SERB (with GE)	37.3	Dr Arnab Sarkar
25.	Hybrid Solar Wind Driven Combined Heat and Power System using Organic Rankine Cycle	2023-2026	CST, UP	9.4	Dr Arnab Sarkar

Faculty members' participation with other universities under MoUs *(Ongoing only)*

Research Publications

Sl. No.		No.
1	Total Number of Papers Published in Refereed International Journals	132
2	Total Number of Papers Presented in National Conferences	30
3	Total Number of Papers Presented in International Conferences	0

Refereed International Journals

1. Kim E.S., Park J.M., Karthik G.M., Kim K.T., Yu J.H., Lee B.J., Kim H.S. (2023) Local composition detouring for defect-free compositionally graded materials in additive manufacturing. Materials Research Letters. 11: 586-594.
2. Cyril S., Damodaram R., Karthik G.M., Koteswara Rao S.R. (2023) Friction deposition additive manufacturing of alloy 718: Effect of post-heat treatment on microstructures and mechanical properties. International Journal of Advanced Manufacturing Technology. 128: 3901–3919.
3. Jeong S.G., Ahn S.Y., Kim E.S., Kang S.H., Yoo S.H., Ryu J.Y., Chun J.H., Karthik G.M., Kim H.S. (2023) Liquation cracking in laser powder bed fusion-fabricated Inconel718 of as-built, stress-relieved, and hot isostatic pressed conditions. Materials Science and Engineering A. 888: 145797.
4. Neminathan P.V., Damodaram R., Karthik G.M., Gopinath K. (2024) Tensile and low cycle fatigue behavior of dissimilar friction welds of alloy 718 / alloy 720Li. Journal of Materials Engineering and Performance. 33: 3221–3236.
5. Jeong S.G., Kim E.S., Kwon H., Ahn S.Y., Choe J., Karthik G.M., Heo Y.U., Kim H.S. (2024) Tailoring deformation-induced martensitic transformation through cellular engineering in laser powder bed fusion processed 316L stainless steel. Materials Science and Engineering A. 898: 146383.
6. Deshmukh S, Santhosh R. (2023) Solar-assisted gasification of agriculture residues for green hydrogen production. Bioresource Technology Reports. 22: 101506.
7. Chaturvedi S, Santhosh R, Mashruk S, Yadav R, Valera-Medina A. (2023) Prediction of NOx emissions and pathways in premixed ammonia-hydrogen-air combustion using CFD-CRN methodology. Journal of the Energy Institute. 111: 101406.
8. SK Gaur, RR Sahoo, J Sarkar, (2024) Numerical Investigation on Assessing the Influence of Diverse-Shaped Hybrid Nanofluids on Thermal Performance of Triple Tube Heat Exchanger, Powder Technology, Elsevier.
9. U Srivastava, RR Sahoo, (2024) Analysis of energy and exergy of Eutectic phase change material solidification for various configuration-based triplex tube, Thermal Science and Engineering Progress, Elsevier.
10. U Srivastava, RR Sahoo (2024) Energy and exergy investigation of a eutectic phase change material for a triplex tube thermal energy storage with various configurations, Materials Today Communications, Elsevier.
11. J Sarkar, R R Sahoo, (2024) Experiment on Heat Exchanger Using Innovative Coils and Phase Change Material/MXene Nanofluids, Journal of Thermophysics and Heat Transfer, 1-10.
12. R Rai, V Kumar, RR Sahoo, (2024) Investigation of energy, exergy, and emission performance of turbulators inserts heat exchanger with ternary hybrid nanofluid coolant, Heat Transfer Research 55.
13. SK Gaur, RR Sahoo, J Sarkar, (2024) Thermo-hydraulic performance investigation of triple tube heat exchanger with MXene-based various shape hybrid nanofluids,Journal of Thermal Analysis and Calorimetry
14. C Yadav, RR Sahoo, (2024) Comparative study of thermophysical properties of Low-Grade phases change materials with nano Additives-Based phase change materials.Materials Today: proceedings, Elsevier.
15. RR Sahoo, J Sarkar (2024) Experimental study on hydrothermal characteristics of shell and tube heat exchanger using phase change material-based hybrid nanofluid, Heat and Mass Transfer
16. K Srivastava, RR Sahoo, (2024) Experimental and Numerical study on thermal performance of new envelope and triangular vortex generators with different pitch and angle of attack Thermal Science and Engineering Progress, Elsevier.
17. R Rai, V Kumar, RR Sahoo, (2024) Energy, Exergy-Emission Performance Investigation of Heat Exchanger with Turbulators Inserts and Ternary Hybrid Nanofluid,Heat Transfer Research.
18. R Rai, RR Sahoo, (2024) Diesel engine operational and emissions attributes optimization through Taguchi–Grey experiment design: exploring the impact of Al2O3–CNT impregnated orange peel biodiesel Journal of Thermal Analysis and Calorimetry, 1-16.

19. SK Gaur, RR Sahoo, J Sarkar, (2024) Numerical investigation on thermohydraulic and exergy performance enhancement for triplex concentric tube heat exchanger using MXene nanofluids, International Journal of Energy and Water Resources, Springer.

20. K Srivastava, RR Sahoo, (2023) Thermal, exergetic, and performance analysis of dissimilar-shaped nanoparticles hybrid nanofluid for flow across mini channel heat sink Journal of Thermal Analysis and Calorimetry (In Press).

21. V Kumar, RR Sahoo (2023) Design Optimization, Thermohydraulic, and Enviro-Economic Analysis of Twisted Perforated Tape Insert-Based Heat Exchanger With Nanofluid Using Computational Fluid Dynamics, ASME, J. Heat Mass Transfer 145, 011901 (15).

22. V Kumar, RR Sahoo (2023) Preheating Effects on Compression Ignition Engine Through Waste Heat Recovery Using THNF-Based Radiator Coolant: An Experimental Study Journal of Thermal Science and Engineering Applications 14 (12), 121004.

23. V Kumar, RR Sahoo (2023) Experimental investigation on Thermo-hydraulic performance of radiator with preheating effects on engine performance from the waste heat using THNF coolant Journal of Thermal Analysis and Calorimetry. (In Press)

24. Sahu M, Sarkar J, Chandra L. (2023) Experimental thermal-hydraulic characteristics of single-phase natural circulation loop using water-based hybrid nanofluids, International Journal of Thermal Sciences, 187: No. 108198.

25. Yadav VK, Sarkar J, Ghosh P. (2023) Thermodynamic, economic and environmental assessments of a novel solar-driven combined cooling and power system, Journal of Cleaner Production, 402: No. 136791.

26. Srivastava M, Sarkar J, Sarkar A, Maheshwari NK, Antony A. (2023) 4E analysis and optimization of novel ejector-enhanced organic Rankine cycles by introducing new economic models, Thermal Science and Engineering Progress, 41: No. 101855.

27. Bijarniya JP, Sarkar J, Tiwari S, Maiti P. (2023) Development and experimental performance characteristics of composite coated daytime radiative water cooler, Science and Technology for the Built Environment, 29(6): 606-617.

28. Upadhyay S, Chandra L, Sarkar J. (2023) New insights in turbulent heat transfer with oil and hybrid nano-oils, subject to discrete heating, for parabolic trough absorbers, ASME Journal of Heat and Mass Transfer, 145(8): No. 083901.

29. Bijarniya JP, Sarkar J, Tiwari S, Maiti P. (2023) Development and degradation analysis of novel three-layered sustainable composite coating for daytime radiative cooling, Solar Energy materials and Solar Cells, 257: No. 112386.

30. Yadav VK, Sarkar J, Ghosh P. (2023) Thermodynamic, economic and environmental analyses of novel concentrated solar-PV-thermal integrated combined power, cooling and desalination system, Desalination, 563: No. 116721.

31. Srivastava M, Sarkar J, Sarkar A, Maheshwari NK, Antony A. (2023) Techno-economic and 4E comparisons of various thermodynamic power cycles for low-medium grade heat recovery, Process Safety and Environmental Protection, 178: 528-539.

32. Sahu M, Sarkar J, Chandra L. (2023) Experimental study on energy-exergy performance of single-phase natural circulation loop using mono/hybrid nano-oils, International Journal of Thermal Sciences, 194: No. 108554.

33. Kumar K, Sarkar J, Mondal SS. (2024) Assessment of newly-designed hybrid nanofluid-cooled micro-channeled thermal management system for Li-ion battery, ASME Journal of Electrochemical Energy Conversion and Storage, 21(1): No. 011011.

34. Kumar K, Sarkar J, Mondal SS. (2024) Analysis of ternary hybrid nanofluid in microchannel-cooled cylindrical Li-ion battery pack using Multi-Scale Multi-Domain framework, Applied Energy, 355: No. 122241.

35. Yadav VK, Bijarniya JP, Sarkar J, Ghosh P. (2024) Techno-economic assessment of solar-driven ejector refrigeration system assisted with daytime radiative condenser, Energy Conversion and Management, 301: No. 118051.

36. Sahoo RR, Sarkar J. (2024) Experimental study on hydrothermal characteristics of shell and tube heat exchanger using phase change material-based hybrid nanofluid, Heat and Mass Transfer, 60(3): 519-533.

37. Yadav VK, Sarkar J, Ghosh P. (2024) Performance optimization and multi-objective analysis of an innovative solar-driven combined power and cooling system, Energy and Buildings, 307: No. 113943.

38. Diwakar V, Sharma A, Yusufzai M Z K and Vashista M (2023) Measurement and Analysis of Magnetic Properties in IS 2062 Steel and AISI D2 Tool Steel Via Non-destructive Testing. MAPAN. https://doi.org/10.1007/s12647-023-00637-x.

39. Diwakar V, Sharma A, Chaudhari A, Yusufzai M Z K and Vashista M (2023) Modeling and Simulation of Thermal Behaviour and Clad Geometry Evaluation during Laser Cladding. NanoWorld J 9(S1): S380-S384. https://doi.org/10.17756/nwj.2023-s1-074

40. Awale A S, Srivastava A, Kumar A, Yusufzai M Z K and Vashista M (2023) Magnetic non-destructive evaluation of microstructural and mechanical characteristics of hardened AISI H13 die steel upon sustainable grinding. Journal of Manufacturing Processes. 103:193-206

41. Chaudhari A, Sharma A, Yusufzai M Z K and Vashista M (2023), Experimental analyses into dry ultrasonic vibration-assisted grinding of difficult-to-machine tool steel with alumina wheel, Journal of Materials Engineering and Performance. 32 (11):4860-4870

42. Diwakar V, Sharma A, Chaudhari A, Yusufzai M Z K and Vashista M (2023), Prediction of the efficient heat flux to get an accurate thermal and clad geometry characteristic during laser cladding" Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, https://doi.org/10.1177/09544089231216436

43. Diwakar V, Sharma A , Yusufzai M Z K and Vashista M (2024) Analysis of the Thermal Residual Stress and Parametric Simulation in Laser Cladding Using COMSOL Multiphysics, Journal of Materials Engineering and Performance https://doi.org/10.1007/s11665-024-09390-x

44. Raja A R, Vashista M and Yusufzai M Z K (2023) Influence of friction stir welding speed on Barkhausen Noise emission from steel, Physics of Metals and Metallography, Springer, 124 (13)

45. Mahto M K, Kumar A., Vashista M and Yusufzai M Z K (2023) Effect of tool offset distance variation and mechanical property evaluation for effective cladding of copper to steel by friction stir cladding, Journal of Manufacturing Processes. 96:161-175.

46. Mahto M K, Kumar A, Vashista M and Yusufzai M Z K (2023), Corrosion behaviour of copper cladded steel produced using multi pass friction stir welding process, CIRP Journal of Manufacturing Science and Technology, 47:244-259

47. Chaudhari A, Sharma A, Yusufzai M Z K and Vashista M (2023), The grindability performance and measurement of surface functional parameter capabilities of difficult-to-machine tool steel under tangential ultrasonic-vibration-assisted dry grinding, Machining Science and Technology. 27(3):268-291

48. Kumar A, Kumar N, Mahto M K, Yadav S D, Vashista V and Yusufzai M Z K (2023), Impression creep behaviour of different zones of pulsed gas tungsten arc welded Ti-6Al-4V alloy, Materials Today Communications, 36

49. Kumar A, Mahto M K, Vashista M and Yusufzai and M Z K,(2024) Analysis of Electrode Tip Angle Variation on Weld Geometry, Distortion, and Hardness in Commercially Pure Titanium Welded Using Pulsed-Gas Tungsten Arc Welding, Journal of Materials Engineering and Performance, https://doi.org/10.1007/s11665-024-09387-6

50. Sinha, A. (2023). Effect of injector geometry in breakup of liquid jet in crossflow–insights from POD. International Journal of Multiphase Flow, 167, 104497.

51. Parasuram, I. V. L. N., & Sinha, A. (2024). Investigating wake structures in flow past oscillating cylinder using proper orthogonal decomposition. Sādhanā, 49(1), 79.

52. Srinivasan, B., & Sinha, A. (2024). Primary breakup of liquid jet—Effect of jet velocity profile. Physics of Fluids, 36(3).

53. A. K. Jha, P. Shukla, P. Ghosh (2023) Investigation of free convection flow around near horizontal surfaces using particle image velocimetry, Physics of Fluids 35, 054107 (2023), https://doi.org/10.1063/5.0142979

54. Pramod Kumar Vishwakarma, Sumit Kumar Pandey, Anshu Kumar Singh, Sunil Kumar Yadav, P. Shukla, Sanny Rathore, Kirpa Ram, Preeti S. Saxena, Rajiv Giri and Anchal Srivastava (2023) Thermally Stable, Thin, Ultralight, Reusable and Flexible Multiwalled Carbon Nanotube Membranes for Removal of Heavy Metals, Poycyclic Aromatic Hydrocarbons and Particulates from Coal Smoke", ACS Applied Nano Materials, 2023, 6, 14, 12957–12967, https://doi.org/10.1021/acsanm.3c01682

55. Gupta P R, Ghosh P, Sarkar J. (2023) Effects of probe parameters on radio-frequency ablation of localized liver cancer using a personalized patient treatment planning. Thermal Science and Engineering Progress 46, 102236

56. Jha A K, Shukla P, Ghosh P. (2023) Investigation of free convection flow around near horizontal surfaces using particle image velocimetry, Physics of Fluids 35, 054107

57. Kumar N, Ghosh P, Shukla P (2024) Boiling Heat Transfer Performance of pure water on Binary Oxide based Nanoparticles coatings, ASME journal of Heat and Mass Transfer 146(3), 033001

58. Kumar N, Ghosh P, Shukla P, Tandon R (2024) Effects of composite coatings on pool boiling performance characteristics in demineralized water, Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 09544089241230880

59. Kumar N, Ghosh P, Shukla P, Effect of composite coatings on surface characteristics and boiling heat transfer performance in a pool of water, Journal of Thermal Analysis and Calorimetry 149 (2), 671-685

60. Gupta V, Mishra P, Mishra D, Ghosh P (2024) Analysis of Heat Flux Quenching of a SS-316L Rod Using Nanofluids Heat Transfer Engineering, 1-11.

61. Tiwari SK, Ghosh P, Chopra M, Das S (2024), Numerical solution of nonlinear diffusion advection Fisher equation by fourth-order cubic B-spline collocation method ZAMM-Journal of Applied Mathematics and Mechanics/Zeitschrift für Angewandte Mathematik und Mechanik, e202300621 3

62. Reetu Raj, Jeewan Vachan Tirkey, Priyaranjan Jena, Lawalesh Prajapati (2024). Comparative analysis of Gasifier-CI engine performance and emissions characteristics using diesel with producer gas derived from coal–briquette-coconut shell-mahua feedstock and its blends. The International Journal-Energy, 293: 130708

63. Priyaranjan Jena, Jeewan Vachan Tirkey, Reetu Raj, Lawalesh Prajapati (2024). Effect of Propane blending with Grape wood Producer gas on SI Engine performance and optimization. Applied Thermal Engineering, 242: 122480.

64. Priyaranjan Jena, Jeewan Vachan Tirkey (2023). Power and efficiency improvement of SI engine fueled with boosted producer gas-methane blends and LIVC-miller cycle strategy: Thermodynamic and optimization studies. The International Journal-Energy, 289: 130068.

65. Priyaranjan Jena, Jeewan Vachan Tirkey (2023). Efficiency improvement investigation through Miller cycle strategy for SI engine operating on stoichiometric producer gas and methane blends. Thermal Science and Engineering Progress, 47: 102309.

66. Reetu Raj, Jeewan Vachan Tirkey (2023). Techno-economic assessment of sugarcane bagasse pith-based briquette production and performance analysis of briquette feed gasifier-engine system. Journal of Environmental Management, 345: 118828.

67. Reetu Raj, Jeewan Vachan Tirkey, Deepak Kumar Singh (2023). Parametric optimization and performance evaluation of gasifier-CI engine on dual fuel and dual feed material gasification. International Journal of Ambient Energy, 45 (1): 2268114.

68. Deepak Kumar Singh, Reetu Raj, Jeewan Vachan Tirkey, Priyaranjan Jena, Prakash Parthasarathy, Gordon Mckay, Tareq Al-Ansari (2023). Progress and utilization of biomass gasification for decentralized energy generation: An Outlook & Critical review. Environmental Technology Reviews 12 (1): 1-36.

69. Priyaranjan Jena, Reetu Raj, Jeewan Vachan Tirkey, Ajeet Kumar (2023). Experimental analysis and optimization of CI engine Performance using Waste Plastic Oil and Diesel fuel blends. Journal of the Energy Institute 109: 101286.

70. Reetu Raj, Jeewan Vachan Tirkey, Deepak Kumar Singh, Priyaranjan Jena (2023). Co-gasification of waste triple feed-material blends using downdraft gasifier integrated with dual fuel diesel engine: An RSM-based comparative parametric optimization. Journal of the Energy Institute 109:101271

71. Reetu Raj, Deepak Kumar Singh, Jeevan Vachan Tirkey (2023). Gasifier-Engine performance analysis using Co-gasification of Mahua wood waste and Saw-dust briquette blend: An experimental and optimization approach. Biomass Conversion and Biorefinery,1-14.

72. Reetu Raj, Jeevan Vachan Tirkey, Priyaranjan Jena (2023). Gasification of Briquette, Mahua wood, and Coconut shell and application to CI engines: Comparative Performance and Optimisation Analysis. Industrial Crops & Products, 199(1): 116758.

73. Priyaranjan Jena, Reetu Raj, Jeevan Vachan Tirkey (2023). Thermodynamic performance study and RSM based optimization of SI engine using sewage sludge producer gas blend with methane. The International Journal-Energy 273:127179.

74. Reetu Raj, Deepak Kumar Singh, Jeevan Vachan Tirkey (2023).Performance Simulation and Optimization of SI engine fueled with Peach biomass-based producer gas and propane blend. Thermal Science and Engineering Progress, 41:101816.

75. Reetu Raj, Deepak Kumar Singh, Jeevan Vachan Tirkey (2022). Co-gasification of Plastic waste blended with coal and biomass: A Comprehensive Review, Environmental Technology Reviews, 12 (1): 614-642.

76. Tripathi, Vivek Mani, Pawan Sharma, and Rajnesh Tyagi. “Development of a high particle loading novel copper ink for the fabrication of a three-dimensional hierarchical porous structure using direct ink writing and sintering.” Journal of Porous Materials (2024): 1-15.

77. Sharma, Pawan. "Simulation Model for the Corrosion Behavior of Additively Manufactured Iron in Electrolytic Environment Using COMSOL Multi-physics." (2023).

78. Singh, Garvit, Shailendra Kumar, and Pawan Sharma. "A Novel Hybrid Additive Manufacturing Methodology for the Development of Ti6Al4V Parts." Journal of Materials Engineering and Performance (2023): 1-15.

79. Roushan A., Rao U. S., Sahoo P., Patra K. and Rawat S.S.(2023) Wear behavior of AlTiN coated WC tools in micromilling of Ti6Al4V alloy using vegetable oil-based nanofluids. Tribology International 188: 108825.

80. Shakil, A., Gautam, R. K., & Rao, U. S. (2023). Synthesis and Characterization of Mg/MgO Composites through a Cost-Effective Sintering Approach. Journal of Materials Engineering and Performance, 1-12.

81. M Singh, S Dodla, RK Gautam (2024) Mechanical and tribological properties of CNTs coated aramid fiber-reinforced epoxy composites. Composites Part A: Applied Science and Manufacturing 179, 108061.

82. Gagan Bansal, Rakesh Kumar Gautam, Joy Prakash Misra, Abhilasha Mishra (2024) Tribological behavior of silver-doped eggshell-derived hydroxyapatite reinforcement in PMMA-based composite. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications. 14644207241240623.

83. Savita Kumari, Rajat Kumar Mishra, Shama Parveen, Sarvesh Kumar Avinashi, Ajaz Hussain, Saurabh Kumar, Monisha Banerjee, Jitendra Rao, Rupesh Kumar, Rakesh Kumar Gautam, Chandkiram Gautam (2024) Fabrication, structural, and enhanced mechanical behavior of MgO substituted PMMA composites for dental applications. Scientific Reports (Nature Publishing Group UK) 14:2128: https://doi.org/10.1038/s41598-024-52202-4.

84. Rupesh Kumar, RK Gautam (2024) Development of Ti-10Nb alloy by powder metallurgy processing route for dental application. Journal of Biomedical Materials Research Part B: Applied Biomaterials. 112, e35338.

85. Asgar Shakil, Rakesh Kumar Gautam, Uppu Srinivas Rao (2023) Synthesis and Characterization of Mg/MgO Composites through a Cost-Effective Sintering Approach. Journal of Materials Engineering and Performance. 1-12.

86. Sudhakar Behera, Rakesh Kumar Gautam, Sunil Mohan, Anupam Tiwari (2023) Mechanical, Water absorption and Tribological properties of Epoxy Composites filled with waste Eggshell and Fish scale Particles. Progress in Rubber Plastics and Recycling Technology. 39, 387-403.

87. Savita Kumari, Ajaz Hussain, Sarvesh Kumar Avinashi, Rajat Kumar Mishra, Jitendra Rao, Sudhakar Behera , Rakesh Kumar Gautam, Chandkiram Gautam (2023) Enhanced physical and mechanical properties of resin added with aluminum oxyhydroxide for dental applications. Ceramics International: 49 (19), 31412-31427.

88. Bansal, G., Gautam, R. K., Misra, J. P. and Mishra A (2023). Physiomechanical, Flowability, and Antibacterial Characterization of Silver-Doped Eggshell-Derived Hydroxyapatite for Biomedical Applications. Journal of Material Engineering and Performance. 1-15. https://doi.org/10.1007/s11665-023-08696.

89. Sudhakar Behra, R.K.Gautam, Sunil Mohan, Arghya Chattopadhay (2023) Mechanical and tribological properties of chemically modified jute/epoxy composites. Plastics, Rubber and Composites, 52(7), 402–414.

90. Anurag Kumar Pandey, Avinash Kumar, Rupesh Kumar, Rakesh Kumar Gautam, C.K. Behera (2023) Tribological performance of SS 316L, commercially pure Titanium, and Ti6Al4V in different solutions for biomedical applications. Materials Today: Proceedings: 78, A1-A8.

91. Nautiyal H., Singh S., Gautam R.K.S., Goswami R., Khatri O P., Verma P., and Tyagi R. (2024) The state of art on lubrication in space environments. Physica Scripta, Vol. 99, No. 2, 022003.

92. Mahto N. K., Shafali Km., Tyagi R., Sharma O.P., Khatri O. P., Sinha S. K. (2023) Friction and wear of Ni3Al-based composites containing Ag and Cu modified hBN at elevated temperatures. Wear, Volumes 530–531, 205065

93. Gautam R K S., Tripathi V M., Gautam J K., Jha P., Sahab S., Tyagi R., Nautiyal H. (2023) Investigations of high temperature synergetic tribological behaviour of HVOF deposited Ni-based metallic coating with self-lubricating ceramic phase (h-BN). Surface and Coatings Technology, 473 130041.

94. Mahto N K., Tyagi R., Sinha S K., and Kaur, M. (2023) Evaluation of lubrication potential of Ni3Al -WS2-Cu-doped hBN self-lubricating hybrid composites. Tribology International, Volume 189, 108898.

95. Singh A K., Atheaya D., Tyagi R., and Ranjan V. (2023) Friction and wear behavior of atmospheric plasma sprayed NiMoAl-Ag-hBN coatings at elevated temperatures. Surface & Coatings Technology, 466, 129650

96. Gautam R K S., Tyagi R., Singh S., Ali S., Kumar S., and Nautiyal H. (2023) Evaluation of tribological characteristics for HVOF deposited Ni based self-lubricating coatings with different h-BN composition. Surface & Coatings Technology 464, 129549.

97. Mahto N K., Tyagi R., and Sinha S.K. (2023) Synergistic Effect of Ag and WS2 on High Temperature Tribological Performance of Ni3Al Based Composites. Tribology International, 183, 108408.

98. Verma P., Tyagi R., and Mohan S. (2023) Effect of Microstructure, Impact Velocity and Angle on Erosive Wear of Medium Carbon, Dual Phase and Fully Martensitic Steels. Wear, 518–519, 204645.

99. Kumar, Homender, Harsha AP, and Sooraj Singh Rawat. "Tribological evaluation of PAO 100 oil-based lithium greases with chemically functionalized nanoadditives." Lubrication Science 35, no. 7 (2023): 528-548.

100. Gulshan Verma, Harsha, A. P., and O. P. Khatri. "The Effect of Spherical Hybrid Silica-Molybdenum Disulfide on the Lubricating Characteristics of Castor Oil." J. Tribol 145 (2023): 121701-1.

101. Rawat, Sooraj Singh, and A. P. Harsha. "The lubrication effect of different vegetable oil-based greases on steel-steel tribo-pair." Biomass Conversion and Biorefinery 14, no. 2 (2024): 1993-2005.

102. Verma, G., Harsha, A.P., Goshwami, R.N. et al. Performance Study of Graphene-Zinc Oxide Hybrid Nanolubricants under Various Test Conditions. J. of Materi Eng and Perform (2024). https://doi.org/10.1007/s11665-024-09234-8

103. Chowdhury P. and Bhandary D. (2023) Evolution, Stability, and Applicability of Surfactant Aggregates in Targeted Delivery. Journal of Physical Chemistry B. 127(13): 3001–3009.

104. Raj A. and Samuel C. (2023) Application of TISM for analysis of barriers influencing healthcare waste management sector: A case study, International journal of Healthcare management, 16(3), 445-459

105. Raj A. Mishra V. Tanksale A and Samuel C., (2023), Solving hospital waste management problem in a developing country-a case of Varanasi city in India, Facilities.

106. Raj A and Samuel C. (2023), A study of barriers in healthcare waste management sector, International journal of Envt and waste management, 32(2), 165-183

107. Singh R, Chouksey, Tanksale A.N. and Samuel C. (2023), A strategic model for closed loop SC network design for Omni-channel retailing, Intnl journal of Logistic

108. Ravi Prakash Singh, Santosh Kumar, Sarang Pande, Sachin Salunkhe, Adham E. Ragab, Pankaj Kumar Singh, Md Meraz and J. Paulo Davim, Robot-Assisted Cold Metals and Warm Incremental Sheet Forming of Aluminium Alloy 6061: A Comparative Study, Metals 2023, 13 (3), 568.

109. Ravi Prakash Singh, Santosh Kumar, Pankaj Kumar Singh, Md Meraz, Ashutosh Kumar Srivastwa, Sachin Salunkhe, Hussein Mohamed, Emad Abouel Nasr, Ali K. Kamrani, A Mathematical Model for Force Prediction in Single Point Incremental Sheet Forming with Validation by Experiments and Simulation, Processes, 2023.

110. Pankaj Kumar Singh, Santosh Kumar and Pramod Kumar Jain, Surface Integrity of Cryogenically Finished Additively Manufactured and Conventional Ti-6Al-4V Alloys, Metals- Open Access Metallurgy Journal, 13(4), 693, 2023 (DOI:10.3390/met13040693).

111. Pankaj Kumar Singh, Santosh Kumar, Pramod Kumar Jain and Uday Shanker Dixit, Effect of Build Orientation on Metallurgical and Mechanical Properties of Additively Manufactured Ti-6Al-4V Alloy, Journal of Materials Engineering and Performance, 2023 (DOI:10.1007/s11665-023-08218-4).

112. Pankaj Kumar Singh, Santosh Kumar, Pramod Kumar Jain and Uday Shanker Dixit, Effect of Heat Treatment on Electrochemical Behavior of Additively Manufactured Ti-6Al-4 V Alloy in Ringer's Solution, Journal of Materials Engineering and Performance, 2023 (DOI: https://doi.org/10.1007/s11665-023-08636-4).

113. Santosh Kumar, Meshram Himanshu Dheeraj, Pankaj Kumar Singh, Ravi Prakash Singh, Md Meraz, Pramod Kumar Jain, Development of a Clay 3D Printing Pen, Advances in Additive Manufacturing and Metal Joining: Proceedings of AIMTDR 2021, (2023), 91-104 (https://doi.org/10.1007/978-981-19-7612-4_8)

114. Ashutosh Kumar Srivastwa, Santosh Kumar, and Pankaj Kumar Singh, Force estimation in Flow Forming of Al6101 T6 stepped cylinder-Experimental Analysis and Mathematical modelling, Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering. (2023)

115. Ravi Prakash Singh, Santosh Kumar, Pankaj Kumar Singh, Md Meraz, Sachin Salunkhe, Advancements in robot-assisted incremental sheet hydroforming: a comparative analysis of formability, mechanical properties, and surface finish for rhomboidal and conical frustums, International Journal of Intelligent Robotics and Applications, (2024), 1-13

116. A.S. Wali; Amit Tyagi. (2023) Experimental investigation of surface-mounted optical fibre strain sensor using neural network analysis. International Journal of Materials and Structural Integrity, Vol.15 No.1, pp.1 - 14.

117. Srivastava, Mayank, Jahar Sarkar, Arnab Sarkar, N. K. Maheshwari, and A. Antony. "Thermo-economic feasibility study to utilize ORC technology for waste heat recovery from Indian nuclear power plants." Energy 298 (2024): 131338.

118. Yadav, H. K., Yadav, S., Gupta, M. N., Sarkar, A., & Sarkar, J. (2024). Diurnal variations in wind power density analysis for optimal wind energy integration in different Indian sites. Sustainable Energy Technologies and Assessments, 64, 103744.

119. Kumar, D., Ram, R., & Sarkar, A. (2024). A smartphone enabled low-cost portable centrifuge integrated with a simple paper-based device for the estimation of plasma-albumin concentration. Microchemical Journal, 197, 109822.

120. Ram, R., Kumar, D., Paik, P., & Sarkar, A. (2023). A simple and low-cost paper-based device for simultaneous determination of hematocrit and hemoglobin levels in point-of-care settings. Physics of Fluids, 35(12).

121. Singh, R. K., & Sarkar, A. (2023). Pyrolysis of torrefied crop residue: Optimization using response surface methodology and benefits of bio-char in co-combustion with coal. Industrial Crops and Products, 199, 116786.

122. Srivastava, M., Sarkar, J., Sarkar, A., Maheshwari, N. K., & Antony, A. (2023). Techno-economic and 4E comparisons of various thermodynamic power cycles for low-medium grade heat recovery. Process Safety and Environmental Protection, 178, 528-539.

123. Gautam, N., Verma, R., Ram, R., Singh, J., & Sarkar, A. (2024). Development of a biodegradable microfluidic paper-based device for blood-plasma separation integrated with non-enzymatic electrochemical detection of ascorbic acid. Talanta, 266, 125019.

124. Gautam, N., Chattopadhyay, S., Kar, S., & Sarkar, A. (2023). Real-time detection of plasma ferritin by electrochemical biosensor developed for biomedical analysis. Journal of Pharmaceutical and Biomedical Analysis, 235, 115579.

125. Saha, S., Prasath, S. S., Arun, B., Kalita, S. J., Elavarasan, N., Adhya, D. G., Sarkar, A. & Mallick, I. (2023). ICON-P–A double-blind evaluation of quality improvements with individualized CONstraints from low-cost knowledge-based radiation therapy planning in prostate cancer. Technical Innovations & Patient Support in Radiation Oncology, 26, 100206.

126. Gautam, N., Ram, R., Bishnoi, V., & Sarkar, A. (2023). A low-cost and disposable capillary-based paper sensor for measuring blood-plasma viscosity using a smartphone app. Microfluidics and Nanofluidics, 27(6), 41.

127. Sanyal, A. P., Mohanty, S., & Sarkar, A. (2023). Application of recycled aggregates generated from waste materials towards improvement in acoustical and thermal conductivity of concrete. Materials Today: Proceedings.

128. Pareta, A. S., Singh, P. K., Sarkar, A., & Panda, S. K. (2023). Quasi-static indentation damage mechanics of PU foam core reinforced with fly ash particulate. Journal of Cellular Plastics, 59(1), 47-63.

129. Gupta, M.N., Sarkar, J., & Sarkar, A. (2023). Estimation of Cyclonic Factor (k4) – Guidelines. Indian Standard IS 18315.

130. Srivastava, M., Sarkar, J., Sarkar, A., Maheshwari, N. K., & Antony, A. (2023). 4E analysis and optimization of novel ejector-enhanced organic Rankine cycles by introducing new economic models. Thermal Science and Engineering Progress, 41, 101855.

131. Kumari, A and Kumar, A, (2023) Enhancement of heat transfer by flowing turbulent jet on a linearly decaying (LD) wavy wall, International Communications in Heat and Mass Transfer

132. Kumari, A and Kumar, A, (2023) Characterising the effect of sinusoidal wall amplitude on turbulent wall jet flow parameters, Journal of Fluids Engineering

Proceedings of National Conferences

1. Upadhyay S, Chandra L, Sarkar J. Nanofluids for solar thermal process heating applications (SWC23_ABS_P6521), ISES Solar World Congress, 30 October - 04 November 2023, New Delhi, India.

2. Srivastava M, Sarkar J, Sarkar A. Comparative energy-exergy analysis of ejector integration in ORC by optimization method for medium temperature heat sources (No. IHMTC-420), 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference, December 14-17, 2023, IIT Patna, India.

3. Kumar K, Sarkar J, Mondal SS. CFD analysis of microchannel nanofluid cooled lithium-ion battery thermal management system applying MSMD model (No. IHMTC-435), 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference, December 14-17, 2023, IIT Patna, India.

4. Srivastava M, Sarkar J, Sarkar A. Optimization and energy-exergy comparison of conventional modifications in ORC technology for electricity generation (MIS–134), 10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP), December 20-22, 2023, IIT Jodhpur, India.

5. Awale A., Diwakar V., Sharma A., Yusufzai M. Z. K., Vashista M., (2023) The Evaluation of Mechanical and Magnetic Properties of Hot Die Steel after Sustainable Grinding using Barkhausen Emission Technique, 9th International & 30th All India Manufacturing Technology, Design & Research Conference AIMTDR 2023 December 08-10, 2023, Department of Mechanical Engg., IIT BHU

6. Vashisth A., Yusufzai M. Z. K., Vashista M., Barkhausen Noise – A eco-friendly technique for material characterization, 2nd International conference on environmental pollution abatement & disaster management (ICEPADM-2024), 28-30 March, 2024, Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) Jaipur

7. Gupta S. K., Chauhan K. S., Vashista M., Yusufzai M. Z. K., (2023) Improvement of weld properties by friction stir processing, 9th International & 30th All India Manufacturing Technology, Design & Research Conference AIMTDR 2023 December 08-10, 2023, Department of Mechanical Engg., IIT BHU (MZK)

8. Mahto M. K., Kumar A., Vashista M., Yusufzai M. Z. K. (2023), Deposition of thick copper on steel substrate using friction stir welding and its characterization International Congress (IC-2024) of the International Institute of Welding, 22nd to 24th January 2024, at the Bangalore International Exhibition Centre (BIEC), Bangalore. (MZK)

9. Kumar P., Rai P., Kumar N., Yusufzai M. Z. K., Saxena D., Singh B., Design and Development of High-performance wear resistant tooth point assembly for excavators working in open cast coal mines of NCL, International Conference on Opencast Mining & Sustainability (ICOMS 2023), at NCL, Singrauli, M.P. (MZK)

10. Kumar, A., and Sinha, A.,(2023) Hydrogen jet Injection in Crossflow Configuration, 10th International Hydrogen and Fuel Cell Conference (IHFC), Hydrogen Association of India, Dec 2023, Varanasi.

11. Kumar, A., Jee, M., Balaji, S., and Sinha, A.,(2023) DNS of Jet Breakup for Diesel, Biodiesel and Ethanol Blends, 10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP), Dec. 2023, IIT Jodhpur.

12. Sen, N., Kumar, A. and Sinha, A., (2023) Piezoelectric Fan for Cooling of Electronic Devices – Effect of Fan Configuration and Oscillation Frequency, 10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP), Dec. 2023, IIT Jodhpur

13. Pathak, S., Dwivedi, S., Kumar, A., and Sinha, A., (2023) Vortex Shedding past a Triangular Bluff body with Secondary Airflow: Role of Air Velocity and Temperature, 10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP), Dec. 2023, IIT Jodhpur

14. Pathak, S., Kumar, A., and Sinha, A., (2023) Investigating Vortex Shedding Past a V-Gutter: Effect of Included Angle and Inlet Velocity, 10th International and 50th National Conference on Fluid Mechanics and Fluid Power (FMFP), Dec. 2023, IIT Jodhpur

15. Kumar, A., Chauhan, V., and Sinha, A., (2023) Dispersion of Cough Droplets in an Enclosed Environment – Effect of Ambient Airflow, 27th National and 5th International ISHMT-ASTFE Heat and Mass Transfer Conference, Dec. 2023, IIT Patna

16. Priyaranjan Jena, Jeewan Vachan Tirkey, Reetu Raj, Lawalesh Prajapati (2022). Quasi-dimensional thermodynamic performance and emission modelling for dual-fuel SI engine operation using waste-based producer gas and methane. International Conference on Mechanical Engineering & Technology (ICMET-2024) March 1-3, 2024, at Mechanical Engineering Deptt, NIT, Kurukshetra, Haryana.

17. Priyaranjan jena, Jeewan Vachan Tirkey, Reetu Raj, Lawalesh Prajapati (2023). Thermodynamic performance and emissions analysis of dual fuelled SI engine using sewage waste-based producer gas and methane. International Conference on Recent Trends in Sustainable Mining and Green Energy Evolution (RTSMGEE 2023) on 3–5 November 2023 at IIT(BHU) Varanasi.

18. Rajak, B., Rao, U.S., Gautam, R.K., Pandey, A.K. (2024). Dry Sliding Wear Behavior of TiB2 Embedded Functionally Graded Aluminum Composite Processed by Centrifugal Casting Technique. pp 245–257, India Trib-2022, Held from 12 December 2022 to 14 December 2022. IIT Delhi.

19. Bansal, G., Gautam, R. K., Misra, J. P. and Kishore, C. (2023). Wettability and Physiothermal Analysis of Eggshell-Derived Silver-Doped Hydroxyapatite, 2nd International Conference on Aspects of Materials and Mechanical Engineering (ICMME-2023), Held from 13th to 24th October 2023, GLA University, Mathura, U.P. India.

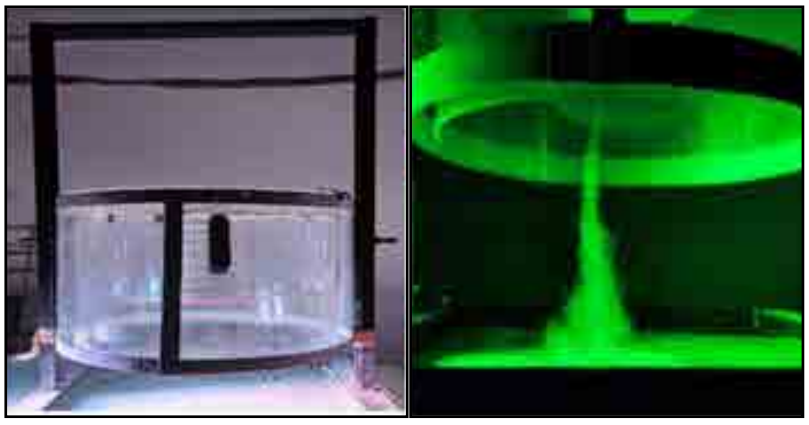
20. Bansal, G., Gautam, R. K., Misra, J. P. and Mishra, A. (2023), Characterization of Poly (methyl methacrylate)/ Silver-Doped Hydroxyapatite Dip Coating on Ti6Al4V. All India Manufacturing Technology, Design, and Research Conference (AIMTDR-23), Held from 8th to 10th December 2023, IIT (BHU) Varanasi.
21. Singh, P.K., Kumar, S. and Jain, P.K., Effect of heat treatment on wear behaviour of laser-powder bed fusion processed Ti-6Al-4V Alloy (Oral presentation, Triboindia 2023 held at NIT Srinagar). International Conference on Tribology with Theme: sustainable development through tribology. (5-7 October 2023)
22. Govind Kumar Verma, Santosh Kumar, and Pramod Kumar Jain, Rheology of Silicon Nitride Colloidal Suspension for Direct Ink Writing, ICEECG, 2023, CGCRI Kolkatta
23. Sankata Tiwari, Santosh Kumar, and Md Imteyaz Ahmad, Additive manufacturing of Alumina Ceramic Via Direct Ink Writing and Rapid Sintering, ICEECG, 2023, CGCRI Kolkatta
24. Santosh Kumar, AIMTDR 2023 at IIT BHU, Inaugural talk to Participants- for AIMTDR2023 at IITBHU, 08/12/2023.
25. Sankata Tiwari, Santosh Kumar, Md Imteyaz Ahmad, and Govind Kumar Verma. Additive manufacturing of Stainless steel 316L by Fused deposition modelling, AIMTDR, IIT (BHU), Varanasi (December, 2023)
26. Pankaj Bothra, Sankata Tiwari, Santosh Kumar, Govind Kumar Verma. 3D printing of Clay ceramics using Direct Ink Writing (DIW) technique, AIMTDR, IIT (BHU), Varanasi (December, 2023)
27. Govind Kumar Verma, Santosh Kumar, Pramod Kumar Jain, and Sankata Tiwari. Direct Ink Writing of Medical Grade Silicon Nitride: A review of material, method, applications and challenges, AIMTDR, IIT (BHU), Varanasi (December, 2023)
28. Govind Kumar Verma, Santosh Kumar, and Pramod Kumar Jain. Rheology of silicon nitride suspension for biomedical applications fabricated by direct ink writing, CerAP 2024, IIT Roorkee
29. Sankata Tiwari, Santosh Kumar, and Md Imteyaz Ahmad. Additive manufacturing of Metal Dispersed Alumina Via Direct Ink Writing, CerAP 2024, IIT Roorkee
30. Gupta M.N., Sarkar A., (2024) , Estimation of Enhancement Factors for Wind Loading due to Extreme Wind Climate, 10th NCWE-2024, Held from 15th to 16th March 2024, VIT Chennai.

Distinguished visitors

Sl. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1.	Dr. Rajesh Bhagat, Lecturer, University of Cambridge	5-Jan-2024	Talk and lab visit
2.	Prof. RV Ravikrishna, IISc, Professor, Bangalore	7-Oct-2023	Talk and lab visit
3.	Prof. R I Sujith, Professor, IIT Madras	10-Aug-2023	Talk and lab visit

Key Instruments

Induction heating based boiling test rig



Tornado Simulator and Formation of Tornado

14. Department of Metallurgical Engineering

Complete Name of Department: Department of Metallurgical Engineering

Year of Establishment: 1923

Head of the Department: Prof. Sunil Mohan (w.e.f: January 01, 2021)

Brief Introduction of the Department

The Department of Metallurgical Engineering, established in the year 1923 has pioneered metallurgical education and research in the country. The far-sighted vision of Mahamana Pandit Madan Mohan Malaviyaji has helped this Department to attain such a distinction. This is now a part of IIT (BHU). The UG programme began in the year 1923 itself and the first ever undergraduate and doctoral degrees in metallurgy in the country were awarded by this Department in the years 1927 and 1955 respectively. This is also one of the first two Departments in the country to confer a postgraduate degree in metallurgy in the year 1959. The undergraduate programme was set on a firm foundation by the first Head of the Department, Professor Nagardas Purushottam Gandhi. The postgraduate programme was nurtured by the second Head of the Department, Professor Daya Swarup. Professor Tanjore Ramachandra Anantharaman, the third Head of the Department, established a fine research school of metallurgy, firmly rooted in exemplary traditions and ensured all-round growth and high profile image of the Department. Subsequently, illustrious successive Heads of the Department have continued to do their utmost to enhance the levels of excellence that the Department is known for. The Department celebrated its Golden Jubilee in the year 1973, Diamond Jubilee in 1983, Platinum Jubilee in the year 1998 and Centenary Year in the 2023 in a befitting manner. The current faculty strength consists of 9 Professors, 6 Associate Professors and 11 Assistant Professors.

Major areas of Research of the department

1. Microstructural, Structural and Chemical Characterization
2. Mechanical Behavior, Deformation Processing and Failure Analysis
3. Phase Equilibria and Phase Transformation
4. Non-Equilibrium Processing of Advanced Materials
5. Ultra-Fine Grained and Nano-Structured Material
6. Recycling of Metallurgical and E-Waste
7. Design and Development of Advanced Steels
8. Tribology and Surface Engineering
9. Thermodynamics and Kinetics of Metallurgical Processes
10. Advanced Structural and Functional Materials
11. Corrosion fatigue and hot corrosion

Infrastructure

S. No.	Particulars	Number
1	No. of Classrooms	04
2	No. of Lecture Halls	03
3	No. of Laboratory	10 labs + 1 workshop + 1 Centre
4	No. of Computers available for students in the Department	50
5	Conference Hall	01

Unique Achievement / Preposition of the Department

The Department of Metallurgical Engineering has so far produced 2849 graduates, 789 postgraduates (including M. Tech. dual degree) and 215 Ph.D. degree holders. The first one is a record for any Metallurgy Department in the country. The outstanding research contributions of the Department culminated in its recognition as a Centre of Advanced Study (CAS) in Metallurgy by the UGC in 1980, the first-ever Engineering Department to be so recognized in the country and the first one in our University. The Department is also recognized as a Centre for Quality Improvement Programme of MHRD/AICTE from the year 1981. The Department has received special assistance under the COSIST programmes of UGC and also as a National Electron Microscopy Facility (NELMIF) from DST in 1982. The Department has a unique distinction of receiving

special assistance under CAS for four consecutive phases. The Ministry of Steel, Govt. of India approved setting up Advanced Research Centre for Iron and Steel, in the Department in project mode (2016-2021). Ministry of Railways, Govt. of India has also sanctioned Rs. 5 Crore for setting up Malaviya Chair for Railways Technology with Department as its nodal centre.

Members of the staff, research scholars and students have won a very large number of awards and distinctions in recognition of their outstanding contributions. These include Medals, Prizes, Awards and Fellowships from many prestigious national and international professional societies and other organizations. Some of the above recognitions include to John Taylor Gold Medal, Henry C. Sorby Award, Henry Marion Howe Medal, Alexander von Humboldt Fellowships, Al Kharazmi Award, S.S. Bhatnagar Prizes of CSIR, S.S. Bhatnagar Medal of INSA, Platinum Medal, Tata Gold Medal and Prizes, G.D. Birla Award, National Metallurgists' Day Awards of IIM, MRSI Medals, Young Metallurgists' Awards, INSA Medals for Young Scientists, ISCA Young Scientist Awards, Young Engineer Award of IE(I), Dr. R.H. Kulkarni Memorial Fellowships, Prof C.N.R. Rao Award, ASM-IIM visiting lectureship award, besides several best paper Awards. The faculty members have the distinction of receiving Fellowships of various professional societies such as Indian National Science Academy (INSA), International Academy of Sciences (IASc), The National Academy of Sciences, India (NASI), The Indian National Academy of Engineering (INAE), Asia Pacific Academy of Materials (APAM), The Indian Institute of Metals (IIM), The Institution of Engineers India-IE(I), The Electron Microscope Society of India (EMSI), West Bengal Academy of Science and Technology (AScT).

1. Academic Programmes offered

New Courses Introduced

S. No.	Course Code	Course name	Course credit
1	MT-584	Extraction of Metals from Lunar Resources	9

Students on Roll

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1.	B. Tech/B.Arch	75	92	79	86	--
2.	Dual Degree	24	26	23	28	22
3.	M. Tech/ M. Pharm	13	07	--	--	--
4.	Ph. D (Under Institute Fellowship)	5	9	5	8	23
5.	Ph. D (Under Project Fellowship)	--	--	1	--	--
6.	Ph. D (Under Sponsored Category)	--	--	--	1	--

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

S. No.	Name of Student	Roll No.	Conference/ Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Chinmaya Mohapatra	22141002	International Conference Magnetic Materials and Applications (ICMAGMA 2023)	Dec 4-6, 2023 Hyderabad	IIT BHU
2	Ishu Yadav	20141507	International Conference on Translational Materials for Sustainable Technology	01-04 Feb, 2024 Department of Physics IIT BHU Varanasi	Self-Funded
3	Deepak Sachan,	18141501	IIM-ATM-2023	November 22-24, 2023, KIIT-Bhubaneswar Odisha	IIT BHU
4	Pushpa Gautam	18141006	RECYCLE 2023, 4th International conference on waste management	18 and 19 May 2023-IIT Guwahati	NPGMM Trust
5	Moti Krishna Bhatt	22142002	NMD ATM 2023	22nd - 24th November 2023 KIT Bhubaneswar	IIT (BHU)
6	Moti Krishna Bhatt	22142002	METCENT 2023	26th October 2023 IIT (BHU)	IIT (BHU)
7	Moti Krishna Bhatt	22142002	NSRS 2024	10th March 2024 IIT Kanpur	Self-funded
8	Dhruva Mehrotra	22142007	Workshop "Numerical modeling and simulations in manufacturing technologies"	17-19 May 2023 IIT (BHU)	Self-funded

S. No.	Name of Student	Roll No.	Conference/ Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
9	Dhruva Mehrotra	22142007	Workshop "Multiscale Modelling in solid mechanics"	13-14 July 2023 IIT BHU	Self-funded
10	N. S. Anuraag	18141504	International Conference Magnetic Materials and Applications (ICMAGMA 2023)	Dec 4-6, 2023 Hyderabad	IIT BHU
ABROAD					
1	Pushpa Gautam	18141006	International conference on solid waste 2023- waste management in circular economy and climate resilience (ICSWHK 2023)	31 May- 3 June 2023 (online mode) Hongkong Baptist University and Zhejiang University	NA

Names of students/scholars who got prizes and awards outside the Institute

S. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Shri Mohit	21145050	Gold in Animation event	23 December 2023, Online Event	IIT KHARAGPUR
2	Pushpa Gautam	18141006	Best Poster Presentation	7-8 July, 2023	27th International Conference on Non-ferrous metals (ICNFM-2023), Ranchi, India organized by Corporate Monitor, in association with Jawaharlal Nehru Aluminium Research Development and Design centre and MECON
3	Pushpa Gautam	18141006	Awarded best oral presentation on the theme "Electronic waste" in the	Feb 11-12, 2024 IIT (BHU), Varanasi	3rd International Conference on Management and Recycling of Metallurgical Waste "MetWaste-2024"
4	Saptarshi Mukherjee	17141502	Best Oral Presentation award	March 9-10th, 2024 IIT Kanpur	National Symposium of Research Scholars (NSRS-2024) on Metallurgy and Materials

Names of scholars/students who won Convocation/Institute Day prizes

S.No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1	Shri Kushagra Tyagi	21142006	I.I.T.(B.H.U.) Varanasi Medal	IIT (BHU)
2	Ms. Saumya Sanjay Shukla	18144013	I.I.T.(B.H.U.) Varanasi Medal	IIT (BHU)
3	Shri Swarnendu Das	19145076	I.I.T.(B.H.U.) Varanasi Medal	IIT (BHU)
4	Shri Swarnendu Das	19145076	The Bishan Das Basil Medal	Alumni
5	Shri Swarnendu Das	19145076	Swarnamma Memorial Gold Medal	Alumni
6	Shri Swarnendu Das	19145076	Shri Aditya Kumar Awasthi Endowment Award	Alumni
7	Ms. Vippagunta Lahari	19145085	Smt. Indira Tripathi Gold Medal	Alumni
8	Ms. Vysyaraju Riya	19145090	Ms. Indira Ananthachari Endowment Fund Prize	Alumni
9	Ms. Ishika Bansal	19145035	Ms. Indira Ananthachari Endowment Fund Prize	Alumni
10	Shri Chennuru Krishna Mohan	19145026	Ms. Indira Ananthachari Endowment Fund Prize	Alumni

Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization
Professors			
1.	Prof. R.K. Mandal (Ph.D.) (13849)	1990	Quasicrystals, Nanostructured Materials, Phase Transformations, Microstructural Evolution
2	Prof. N.K. Mukhopadhyay (Ph.D.) (13853)	1990	Physical Metallurgy of Complex Metallic Alloys, Nanomaterials, Mechanical Alloying, Electron Microscopy, Nanoindentation.
3	Prof. Sunil Mohan (Ph.D.) (13857)	1990	Metal-Matrix Composites, Tribology of composites, Erosion in steels, Transport processes

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization
4	Prof. (Smt.) N.C. Santhi Srinivas (Ph.D.) (13851)	1999	Mechanical Metallurgy, Deformation and Fracture; Phase Transformations; Fatigue of Advanced Structural Materials; Failure Analysis; Advanced Steels; Additive Manufacturing
5	Prof. B.N. Sarma (Ph.D.) (13852)	2001	Computational Thermodynamics, Integrated Computational Materials Engineering
6	Prof. K.K. Singh (Ph.D.) (18188)	2010	Extractive Metallurgy, Recycling of electronic waste, aluminium dross, Archaeo-metallurgy
7	Dr. C.K. Behera (Ph.D.) (16732)	2007	Extractive Metallurgy, Experimental Thermo-lead free solder, nitrogen steel
8	Dr. N.K. Prasad (Ph.D.) (18221)	2007	Physical Metallurgy, Magnetic Materials, Nanomaterials and Biomaterials
9	Dr. Kausik Chattopadhyay (Ph.D.) (18241)	2008	Mechanical Metallurgy, Structure-Property Relationship of Materials, Oxidation of Metals and Alloys, Powder Metallurgy, Fatigue & Fracture, Severe Plastic deformation, Biomaterials
Associate Professors			
1	Dr. R. Manna (Ph.D.) (16805)	2008	Heat Treatments of Metals, Ultra Fine Grained Metals, Severe Plastic Deformation, Phase Transformation, Design and Development of Advanced Steels, and Crystallographic Texture
2	Dr. G.S. Mahobia (Ph.D.) (18287)	2013	Corrosion-Fatigue, Hot corrosion, Iron and Steel making, Welding Metallurgy, Metallurgical failure analysis
3	Dr. Joysurya Basu (Ph.D.) (50054)	2005	Electron Microscopy, Energy and Electronic Materials, Complex Structures and Phase Transformation in Metals and Ceramics
4	Dr. Vikas Jindal (Ph.D.) (18229)	2014	Computational Thermodynamics, Advanced Materials
5	Dr. J.K. Singh (Ph.D.) (18194)	2015	Foundry Metallurgy, Transport Phenomena
6	Dr. Ashok Kumar Mondal (Ph.D.) (50218)	2009	Mechanical behaviour of materials, Light metals, alloys (mostly magnesium alloys) and composites - Processing, microstructural characterization and evaluation of mechanical behaviour, High temperature deformation behaviour (Creep)
Assistant Professors			
1.	Dr. Bratindranath Mukherjee (Ph.D.) (50180)	2010	Nanomaterials for Energy Applications
2.	Dr. Randhir Singh (Ph.D.) (50214)	2009	Extractive/Electro-Metallurgy, Fuel Cells and Batteries, Hydrogen Production
3.	Dr. Surya Deo Yadav (Ph.D.) (50230)	2016	Development of new steels. Modelling the microstructural evolution during creep and hot deformation, Flow stress and Creep strain modelling
4.	Dr. Subhasis Sinha (Ph.D.) (50232)	2017	Microstructure, crystallographic texture, mechanical behaviour and thermo-mechanical processing of metals and alloys
5.	Dr. Sudipta Patra (PhD) (50251)	2019	Stainless Steel, Industrial processing of metals, Alloy steel development, Structure-Property correlation, Thermomechanical Processing, Microstructure & texture, Industrial failure analysis, Steel making, Waste utilization
6.	Dr. Sree Harsha Nandam (PhD) (50282)	2019	Metallic glasses, Mechanical Behaviour, Aluminum metal foams, Precipitation Kinetics
7.	Dr. Deepak Kamble (PhD) (50291)	2019	Magnetic and magnetocaloric alloys, Thermomagnetic materials & devices, Functional materials for energy applications, multiferroics
8.	Dr. Lakhindra Marandi (PhD) (50292)	2021	Mechanical Behavior of Materials, Shape memory alloys, Additive Manufacturing, Nanoindentation
9.	Dr. Praveen Sathiyamoorthi (PhD) (50295)	2016	Plastic deformation behavior, Superplasticity, Development of high performance alloys, Materials for extreme environments
10.	Dr. Sake Narayanswamy (PhD) (50422)	2021	Thermomechanical processing, Additive Manufacturing, Crystallographic Texture, Electron Microscopy, Deformation behavior of materials
11.	Dr. Ameya Krishna Kadrolakar (On Contract) (PhD) (FAC-VF30)	2020	Extractive and Process Metallurgy

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Dr. Sankara Rao L. (Ph.D.)	Senior Technical Officer (18828)	21/01/2021
2	Shri Lalit Kr. Singh (B.E.)	Sr. Technical Superintendent (19262)	14/02/2011
3	Shri Arun Prakash (M.A.)	Sr. Technical Superintendent (14047)	18/02/1995
4	Dr. Ashutosh Dubey (M.Sc., Ph.D.)	Sr. Technical Superintendent (18754)	22/12/2008
5	Shri J.P. Minz (Intermediate)	Sr. Technical Superintendent (14109)	26/05/1990
6	Shri Kamala Prasad (Intermediate)	Technical Superintendent (14116)	15/10/1998
7	Shri Rana Pratap Yadav (Intermediate)	Technical Superintendent (14117)	16/10/1998
8	Shri Chhote Sh Sri Chhote Lal (ITI)	Technical Superintendent (18053)	21/02/2007
9	Shri Setu Prasad (High School)	Technical Superintendent (14222)	16/05/2007
10	Shri Ashok Kr. Mishra (B.A.)	Technical Superintendent (10227)	16/05/2007
11	Shri Binod Kr. Pathak (ITI)	Technical Superintendent (12492)	18/05/2015
12	Shri Rajendra Prasad Yadav (B.A.)	Jr. Technical Superintendent (18618)	05/08/2008
13	Shri Shashi Kant Pandey (M.Sc.)	Jr. Technical Superintendent (18619)	05/08/2008
14	Shri Samish Kr. Singh (M.A.)	Jr. Technical Superintendent (18620)	05/08/2008
15	Shri Sunil Kumar (Intermediate)	Jr. Technical Superintendent (18616)	06/08/2008
16	Shri Anjani Kr. Singh (B.A.)	Jr. Technical Superintendent (18638)	06/08/2008
17	Shri Mahendra Narain Mishra (ITI)	Jr. Technical Superintendent (18639)	05/08/2008
18	Shri Kamlesh Mishra (Intermediate)	Jr. Technical Superintendent (18617)	12/08/2008
19	Shri Ram Ashre (Intermediate)	Sr. Technician (14109)	10/09/1996
20	Shri Sushil Kumar (B.Sc.)	Sr. Technician (19604)	13/07/2012
21	Shri Jugendra Pal Singh Baghel (M.Tech)	Jr. Technician (50354)	14/11/2023
22	Shri Gaurav Shivpratap Singh (B.Tech.)	Jr. Technician (50421)	10/04/2024
23	Shri Rishabh Tiwari (B.Tech, MBA)	Senior Assistant (50092)	08/05/2017
24	Shri Arvind Kumar Yadav (BSc)	Junior Assistant (50389)	10/01/2024

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

S. No.	Coordinator	Title	Period
1	Dr. Randhir Singh	International Conference on Management and Recycling of Metallurgical Waste (MetWaste-2024)	11-12 February 2024
2.	Dr. G.S. Mahobia	International Conference on Metallurgical Engineering and Centenary Celebrations (METCENT 2023)	26-28 October 2023

Special lectures delivered by faculty members in other institutions

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	N.K. Mukhopadhyay	Delivered "Dr. Daya Swarup Memorial Lecture-2023"	77th Annual Technical Meeting, The Indian Institute of Metals (IIM), KIIT, Bhubaneswar, India	22nd to 24th November 2023
2	R. Manna	Improving mechanical properties of Fe-20Mn-10Al-1C low-density steel by multiaxial forging	International Conference on Metallurgical Engineering and Centenary Celebrations (METCENT 2023), Dept. of Met Engg, IITBHU, Varanasi	26-28 Oct, 2023
3	R Manna	Design and Development of Lightweight Steel for Armour Applications	International Conference on Metallurgical Engineering and Centenary Celebrations (METCENT 2023), Dept. of Met Engg, IITBHU, Varanasi	26-28 Oct, 2023
4	R. Manna	Microstructure and Mechanical Properties of Bulk Nanostructured Bainitic Steels	International Conference on Metallurgical Engineering and Centenary Celebrations (METCENT 2023), Dept. of Met Engg, IITBHU, Varanasi	26-28 Oct, 2023
5	N.C. Santhi Srinivas	Mechanical behaviour of maraging steel processed by powder bed fusion via laser beam (PBF-LB) in different build orientations	THERMEC-2023, International Conference on Processing & Manufacturing of Advanced Materials: Processing, Fabrication, Properties, Applications, TU Wien, Vienna, AUSTRIA.	2-7 July, 2023
6	N.C. Santhi Srinivas	Mechanical Behaviour of Additive Manufactured Maraging Steel	29th International Conference on Processing and Fabrication of Advanced Materials (PFAM-29) at IIT Tirupati	September 06-08, 2023
7	N.C. Santhi Srinivas	Ratcheting Fatigue Behaviour of Advanced Structural Materials	International Conference and Centenary Celebrations (METCENT 2023), IIT(BHU), Varanasi.	26- 28th October 2023
8	N.C. Santhi Srinivas	Mechanical Behaviour of Maraging Steel Processed by Powder Bed Fusion	77th Annual Technical Meeting, The Indian Institute of Metals (IIM), KIIT, Bhubaneswar, India	22nd to 24th November 2023
9	G.S. Mahobia	Delivered invited talk in a Workshop and Training Program on Advances in Corrosion technology and Prevention (ACTP-2023)	ACTP-2023 IMMT Bhubaneswar	20-21 July 2023
10	A.K. Mondal	Delivered an invited talk at the 'International Conference on Fundamental and Industrial Research in Materials'	iConFIRM 2023 IIT Ropar	12-14, Dec 2023
11	Joysurya Basu	Delivered invited talk in THERMEC-2023, International Conference on Processing & Manufacturing of Advanced Materials: Processing, Fabrication, Properties, Applications	THERMEC-2023, International Conference on Processing & Manufacturing of Advanced Materials: Processing, Fabrication, Properties, Applications, TU Wien, Vienna, AUSTRIA.	2-7th July, 2023
12	Surya Deo Yadav	Delivered invited talk in THERMEC-2023, International Conference on Processing & Manufacturing of Advanced Materials: Processing, Fabrication, Properties, Applications	THERMEC-2023, International Conference on Processing & Manufacturing of Advanced Materials: Processing, Fabrication, Properties, Applications, TU Wien, Vienna, AUSTRIA.	2-7 July, 2023

Visits abroad by faculty members

S. No.	Name of Faculty Member	Country Visited	Date of Leaving India	Date of Returning India	Purpose of Visit	Funding from
1	Prof. N.C. Santhi Srinivas	Austria	01/07/2023	09/07/2023	To attend THERMAC-2023	IIT (BHU)
2	Dr. Joysurya Basu	Austria	03/07/2023	14/07/2023	Collaborative research and to attend THERMAC-2023	IIT (BHU)
3	Dr. Joysurya Basu	South Korea	11/09/2023	20/09/2023	20th International Microscopy Congress	IIT (BHU)
4	Dr. Surya Deo Yadav	Austria	03/07/2023	14/07/2023	Collaborative research and to attend THERMAC-2023	IIT (BHU)
5	Dr. Subhasis Sinha	USA	10/10/2023	20/10/2023	IIM-ASM North America Visiting Lectureship Award Program-2023	IIT (BHU)

Honours and awards

S. No.	Name of Faculty Member	Details of Award
1	Prof. Kamalesh K. Singh	Invited in 2022, 2023, and 2024 by Technology Development Board of DST Govt of India to review project proposals in area of electronic waste recycling.
2	Prof. Kamalesh K. Singh	Invited as domain expert for experience sharing on heavy metal toxicity March 2024, Ministry of Health
3	Prof. Kamalesh K. Singh	Invited to express opinion on critical metals issue, May 2024, Ministry of Mines
4	Dr. Bratindranath Mukherjee	EMSI Excellence in Microscopy Award-2023 (Material Science)
5	Prof. (Smt.) N.C. Santhi Srinivas	Expert member, AICTE Expert Visit committee, All India Council for Technical Education, 2023-todate
6	Prof. N.K. Mukhopadhyay	Dr Daya Swarup Memorial Lecture 2023
7	Prof. N.K. Mukhopadhyay	Convener, IIM-ASM North America Visiting Lectureship Award Program (2023)
8	Prof. N.K. Mukhopadhyay	Convener & Member Sectional committee member (Section VIII), INAE (2023)
9	Prof. N.K. Mukhopadhyay	Monitoring Committee for Fast Track Translation (FTT) and Fast Track Commercialization (FTC) projects (4M),
10	Prof. N.K. Mukhopadhyay	Commission of 'Aperiodic Crystal' of International Union of Crystallography (IUCr,UK)
11	Prof. N.K. Mukhopadhyay	International Advisory Board (IAB) on 'Quasicrystals' (IQC series of conference)
12	Prof. (Smt.) N.C. Santhi Srinivas	Member, Programme Advisory Committee (PAC) on Materials, Minerals and Mining, Science and Engineering Research Board, Department of Science and Technology (SERB-DST), New Delhi, India.

Fellowships of academic and professional societies

S. No.	Name of Faculty Member	Details of Fellowship
1	Prof. N.K. Mukhopadhyay	Fellow of the Indian National Science Academy (INSA) (FNA), (2023).
2	Dr. Joysurya Basu	Fellow of Electron Microscope Society of India (EMSI) Award (Material Science) (2023)

Books, monographs authored/co-authored

S. No.	Name of Author/Co- Author	Title	Publisher
1	Dr. Sudipta Patra, Dr. Subhasis Sinha, Dr. Deepak K & Dr. G.S. Mahobia	Proceedings of the International Conference on Metallurgical Engineering and Centenary Celebration METCENT-2023, 26-28 October, Varanasi, India,	Springer Nature, ISBN - 979-981-99-6862-6
2	Prof. Kamalesh K. Singh	Edited Materials Today; Proceedings for International Conference on Management and Recycling of Metallurgical Wastes-MetWaste-2023	Science Direct, Elsevier.
3	Dr. G.S. Mahobia, Prof. B.N. Sarma & Dr. Vikas Jindal	International Conference on Metallurgical Engineering and Centenary Celebration - METCENT-2023, 26-28 October, Varanasi, India	Souvenir cum Abstract book IIT (BHU)

Editorial boards of journals

S. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Prof. R.K. Mandal	Member	CMC-Transtech.
2	Prof. N.K. Mukhopadhyay	Associate Editor	Journal of Alloys and Metallurgical Systems (JALMES)(Elsevier) (2023).
3	Prof. N.K. Mukhopadhyay	Executing Guest Editor	Special Volume on High Entropy Alloys (2024)
4	Prof. N.K. Mukhopadhyay	Guest Editor	Bulletin of Materials Science, (Published by Indian Academy of Science) (as a guest Editor) for a special volume on Materials Conclave of MRSI of Annual Meeting 2023, BHU Varanasi.
5	Prof. N.K. Mukhopadhyay	Guest Editor	Special volume, Journal of Materials Science (Springer) (2023).
6	Prof. N.K. Mukhopadhyay	Editor	Transaction of the Indian Institute of Metals
8	Prof. N.K. Mukhopadhyay	Editor	Journal of The Institution of Engineers (India): Series D.
9	Prof. N.K. Mukhopadhyay	Reader	Metallurgical and Materials Transactions A (Springer, USA).
10	Prof. Sunil Mohan	Member	International Journal of Metals
11	Dr. Praveen Sathiyamoorthi	Editorial Committee Member	Metals and Materials International, Springer

Design and Development Activities

New facilities added

S. No.	Details (Infrastructure, Equipments, etc.)	Value (in Lakhs of Rupees)
1.	Microprocessor based Temperature Controller up to 1500^{0}C.	2,40,000.00
2.	High Temperature Furnace for Instron	3,00,000.00
3.	High Temperature Extensometer for Instron	5,00,000.00

Patents filed

S. No.	Name of Faculty Member	Title of Patent
1.	N.K. Mukhopadhyay	A Method of Preparing a Metal Alloy-Quasicrystal Composite and a Product thereof (no:202411016352; March 2024).
2.	N.K. Mukhopadhyay	A Dual-phase non-equiatomic High Entropy Alloy and a Method of Preparation thereof (no:202311061309; Sept 2023).

Research and Consultancy

Sponsored research projects

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
1	Development of Functionally Graded Armour Composites (FGACs) Materials	2020-2023	ARMREB, DRDO	91.66	Dr. Vikas Jindal (PI), Dr. Kausik Chattopadhyay
2	High Performance Rare Earth Free Nanocomposite Permanent Magnets for Advanced Motors and Alternative Energy Applications	2020-2023	SERB, DST, DST, Govt. of India	56.90	Dr. N.K. Prasad (PI), Dr. C. Upadhyay (SMST, IIT-BHU)
3	In-situ microscopy study of age hardening in dispersion strengthened cast magnesium alloys and its ex-situ correlation with mechanical properties.	2020-2023	SERB, DST, DST, Govt. of India	37. 36	Dr. A.K. Mondal (PI), Prof. N.K. Mukhopadhyay, Dr. Joysurya Basu
4	Development of low-cost b-Ti alloy for biomedical applications	2020-2024	SERB	40.50	Dr. Kaushik Chattopadhyay (PI)
5	Mechanical Behaviour of Advanced High Strength Steel Processed by Additive Manufacturing	2020-2024	SERB	39.48	Prof. N. C. Santhi Srinivas (PI), Dr. K.Chattopadhyay, Dr Gururaj Telasung (ARCI), Dr.K.Divya (ARCI)

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
6	Stability of nanostructure and residual stress developed through ultrasonic shot peening in superalloy IN718 at elevated temperatures	2020-2023	NRB, DRDO	28.86	Dr. Kaushik Chattopadhyay (PI)
7	Development of Functionally Graded Armor Composites (FGACs) Materials	2020-2023	ARMREB, DRDO	91.66	Dr. Vikas Jindal (PI), Dr. Kausik Chattopadhyay (Co-PI)
8	Emergent Phases in 20 Quantum Hetrostructures	2020-2025	DST-Nanomission	500.00	Dr. Joysurya Basu (PI) – IIT (BHU), Dr. A. Singh-IISc Bangalore, Dr. V. Kochat, Dr. P. Sahu and Dr. B. Lahiri – IIT KGP
9	Creep and corrosion behaviour of novel MRI230D magnesium alloy with nanoparticles additions	2020-2023	CSIR, New Delhi, India	18.08	Dr. Ashok Kumar Mondal (PI), Dr. Kausik Chattopadhyay
10	Atomic Scale Electron Microscopy, FIST Engineering Sciences (Level III)	2020-2025	SERB, DST, DST, Govt. of India	990	Dr. J. Basu (PI), Prof. R.K. Mandal, Prof. N.K. Mukhopadhyay, Dr. R. Manna, Dr. A.K. Mondal and Dr. B. Mukherjee
11	Development of a unified physical model for hot deformation and creep to support the development of high temperature materials	2019-2024	DST (Inspire)	35.00	Dr. Surya Deo Yadav (PI)
12	Chemical recycling of electronic waste for sustainable livelihoods and material consumption in India	2021-2023	GCRF-EPSRC UK	GBP 47529.88	Prof. Kamalesh K. Singh (PI), Prof. Jason and Dr Carole of Edinburgh University
13	Effect of composition and microstructure on mechanical properties of 7-9%Ni steel for LNG tanker and Naval application.	2021-2023	DST SERB	32.00	Dr. Sudipta Patra (PI)
14	Development of high strength Vanadium added steel for heavy gauge plate.	2022-2025	Vanitec UK limited	USD 112307	Dr. Sudipta Patra (PI) Dr. J.Basu (Co-PI)
15	Microstructural tailoring to develop biocompatible Cr-FeMo-Nb-Ti based high entropy alloys for medical applications.	2022-2024	DST SERB	30.62	Dr. Subhasis Sinha (PI)
16	Microstructure and crystallographic texture dependence of cyclic deformation and corrosion behaviour in extruded Mg-Al-Zn-Sn alloys	2023-2026	CSIR	39.5	Dr. Subhasis Sinha (PI), Dr. A.K. Mondal (Co-PI), Prof. N.K. Mukhopadhyay (Co-PI)
17	Study on effect of temperature and mean stress on fatigue strength of turbine aero foil alloy	2021-2025	Gas Turbine Research Establishment (GTRE) – Bangalore	281.90	Dr. G.S. Mahobia (PI)
18	Development of industrial waste as mold material for sustainable development in developing countries	2021-2024	DST SERB	27.19	Dr. Jayant Kumar Singh (PI)
19	Designing metallic glass composites with immiscible elements as allying elements for improved plasticity	2022-2025	SERB	33.1	Dr. Sree Harsha Nandam (PI)
20	Design, development, and microstructural engineering of ultra- strong maraging medium entropy alloys	2023-2026	SERB	41.58	Dr. Praveen Sathiyamoorthi (PI), Dr. Joysurya Basu (Co-PI)
21	Enhancement of cryogenic tensile properties in Fe medium entropy alloy by utilizing transformation induced plasticity effect	2022-24	IIT (BHU) Seed Grant	10.00	Dr. Praveen Sathiyamoorthi (PI)
22	Structure-property correlation in creep-resistant squeeze-cast Mg-Al-Ca-Mn alloy-based nanocomposites	2023-2026	SERB-DST	43.725	Dr. A.K. Mondal (PI)
23	Development and optimization of functionally graded magnetocaloric materials	2022-2025	Institute Seed Grant	10	Dr. Deepak Kamble (PI)

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
24	Development and Processing of magnetocaloric thin sheets for enhanced thermomagnetic energy harvesting applications	2022-2024	SERB-DST	31.99	Dr. Deepak Kamble (PI)
25	Vinod Ghai Centenary Centre for E-Waste Management and Recycling	2023	Alumni Support	380.00	Prof. K.K. Singh (PI)
26	Design and development of maraging based medium entropy alloys using additive manufacturing.	2024-2027	DRDO	120.00	Dr. Praveen Sathiyamoorthi (PI)
27	Development of W-Ni-Co alloys and modelling the deformation behaviour employing the computational approaches	2024-2027	DRDO	454.57	Dr. Surya Deo Yadav (PI), Prof. Santhi Srinivas & Dr. Kaushik Chattopadhyay
28	Development of aluminium composite powders for additive manufacturing	2024-2027	DRDO	80.32	Dr. Sree Harsha Nandam (PI)
29	Development of LI0-FeNi (tetrataenite, ordered phase) for permanent magnet applications	2024-2027	SERB	48.78	Dr. N.K. Prasad (PI), Dr. Deepak Kamble
30	Development and assessment of Printability of Indigenous Powders for Additive Manufacturing, Group I: Superalloys. Group II: Refractory High Entropy Alloys	2024-28	DRDO	1990.71	PI (Group I): Professor N.C. Santhi Srinivas, Co-PI: Prof. K. Chattopadhyay, PI (Group II): Dr. Subhasis Sinha, Co-PI: Professor N.C. Santhi Srinivas

Industrial consultancy projects

The Department maintains a close interaction with major private sector industries of the region, with public sector undertakings and national R&D laboratories. Major beneficiaries of consultancy, testing services as well as Refresher Courses for executives, include DMRL, DRDL, VSSC, BHEL, HINDALCO, Tata Steel, JAMIPOL, Northern Coalfields Ltd, NTPC, Railways etc. and the small scale industries of Varanasi region.

S. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
1.	Dr Sudipta Patra (PI), Dr GS Mahobia Dr JK Singh, Dr Randhir Singh, Prof. KK Singh, Prof S.Mohan	Achieving metallurgical and mechanical properties (including successful non-destructive testing results) of forged wheel as per in compliances with IRS R-19-93 Part II, rev 5	RINL, Lalganj (2023)	33,74,800.00
2.	Prof Mukhopadhyay (PI), Prof. N.C. Santhi Srinivas, Prof. R.K. Mandal, Dr. R. Manna, Dr. K. Chattopadhyay, Dr. J. Basu	Microstructural characterization and mechanical behaviour of AM alloys and composites	Raytheon Intelligence & Space, USA (2023-26)	20,69,763.00
3.	Dr. G.S. Mahobia (PI), Dr. Sudipta Patra, Dr. Subhasis Sinha	Development of 75 feet tall hollow cast bronze statue of a pair of human hand in “NAMASTE” posture at NAMO Ghat, Varanasi	Matu Ram Art Centre Pvt. Ltd., Gurgaon, Haryana (2024)	2,77,300.00
4.	Dr. Sudipta Patra (PI), Dr. Subhasis Sinha (Co-PI), and Dr. Rampada Manna (Co-PI).	Development of 20Cr5Al Grade	Jindal Stainless Limited (2024)	7,46,940.00
5.	Dr. Praveen Sathiyamoorthi (PI)	Development of compositionally complex allovs for laser cladding on top zone caster rolls	Tata Steel Ltd (2024)	37,20,000.00

Research Publications

S. No.		No.
1	Total Number of Papers Published in Refereed International Journals	80
2	Total Number of Papers Presented in International Conferences	04

Refereed International Journals

1 R. Trivedi , Bhumika , R. Tandon, G. Mishra, R. Singh, J. K. Singh, G. S. Mahobia, A. Chauhan, SAR Sarma, A.Ghosh, A. Karmakar, and S. Patra, Study of strength and toughness in pearlitic wheel steel via microstructural alteration, Materials Today Communications, (39) 2024,109255

2 Rajat Gupta, Yagnesh Shadangi, Kausik Chattopadhyay, Anil Kumar Chaubey, Nilay Krishna Mukhopadhyay, "Advance processing of cluster-free CNT reinforced 6082 Al matrix nanocomposites: influence of mechanical milling and cryomilling", Advances in Materials and Processing Technologies, 1-19, 2024.

3 Jaydeep Vishwakarma, RS Rajpurohit, G Sudhakar Rao, K Chattopadhyay, NC Santhi Srinivas, "Low cycle fatigue behaviour of additive manufactured maraging steel: Influence of build orientation and heat treatment", Materials Letters, (350), 134943, 2023.

4 Yagnesh Shadangi, Shradha Bhatt, Priyatosh Pradhan, Archana Tiwari, Ajay Tripathi, Kausik Chattopadhyay, Nilay Krishna Mukhopadhyay, Structure, electrical and thermal transport properties of Sn reinforcedAl-Cu-Fe quasicrystalline matrix composite prepared by mechanical milling and subsequent annealing, Journal of Alloys and Compounds, (960), 170586, 2023.

5 Sandeep Kumar Gupta, R Manna, Kausik Chattopadhyay, Effect of Austempering Time on Electrochemical and Immersion Corrosion Behaviour of High Carbon, Carbide-Free Nanostructured Bainitic Steel in an Aqueous 3.5% NaCl, Metals and Materials International, (29) 9, 2533-2555, 2023.

6 Jaydeep Vishwakarma, K Chattopadhyay, NC Santhi Srinivas, Influence of build orientation and aging on corrosion behaviour of 18Ni300 maraging steel produced via Powder Bed Fusion using Laser Beam (PBF-LB), Materials Today Communications, (35), 105825, 2023

7 Ameya Kadrolkar, Aart Overbosch, Pieter Koopmans, Brahma Deo, Fundamental aspects of dissolution of lime into steelmaking slags, Transactions of Indian Institute of Metals, 10.1007/s12666-024-03322-y

8 S. Kumar, A. Linda, Y. Shadangi, V. Jindal, Influence of micro-segregation on the microstructure, and microhardness of MoNbTaxTi(1-x)W refractory high entropy alloys: Experimental and DFT approach, Intermetallics. 164 (2024) 108080. https://doi.org/10.1016/j.intermet.2023.108080.

9 S. Kumar, A.K. Thakur, V. Jindal, K. Muralidharan, A Neural Network Driven Approach for Characterizing the Interplay Between Short Range Ordering and Enthalpy of Mixing of Binary Subsystems in the NbTiVZr High Entropy Alloy, J. Phase Equilibria Diffus. 44 (2023) 520–538. https://doi.org/10.1007/s11669-023-01055-x.

10 Electropulsing of Low-Density Duplex Steel for Strengthening and Ductilization by Microstructural Refinement, Rajavarapu Pavan Kumar, N.C. Santhi Srinivas, R. K. Pandey and R Manna, J. Mater. Processing Technology, 329(2024)118423, p1-17, 4-2024, IF 6.3

11 A modified Johnson-Cook model to determine plastic flow behavior of Fe-30Mn-9Al-0.8 C low-density steel during warm multiaxial forging, Hemant Kumar, Manish Tiwari, R. Manna, Debashis Khan, Materials Today Communications 38 (2024) 108270, 1-2024, IF3.8

12 Solid Particle Erosive behaviour of Hypo-eutectoid and Hyper-eutectoid Bainitic Steel, P. C. Mani, R. Manna and A. P. Harsha, J Mater Sci and Mech Eng (JMSME), 11(2024)10-16, 1-2024

13 Evaluation of Johnson–Cook material model parameters for Fe–30Mn–9Al–0.8C low-density steel in metal forming applications, Hemant Kumar, R. Manna, and Debashis Khan, J Mater Sci, 58(2023)8118-8129, IF 4.5

14 Effect of austempering time on bainite plate thickness and variant selection in a high carbon low alloy steel, D. Bhuyan, G. V. S. Sastry, S. Patra, S. K. Pradhan and R. Manna, Materials Characterization, 200(2023)112923, published 14-4-2023, IF 4.7

15 Effect of austempering time on electrochemical and immersion corrosion behaviour of high carbon, carbide-free nanostructured bainitic steel in an aqueous 3.5% NaCl Sandeep Kumar Gupta, R. Manna, and Kausik Chattopadhyay, Metals and Materials International, 29(2023)2533–2555, IF 3.451

16 Rajavarapu Pavan Kumar, N.C. Santhi Srinivas, R.K. Pandey, R. Manna, Electropulsing of low-density duplex steel for strengthening and ductilization by microstructural refinement, Journal of Materials Processing Technology, Volume 329, 2024,118423, ISSN 0924-0136

17 Prerna Mishra, N. C. Santhi Srinivas, and Vakil Singh, A Comparative Study of Ratcheting Fatigue Behavior of Modified 9Cr–1Mo Steel and Inconel 617 Alloy at Homologous Temperature of 0.42, Steel research international, (2024), 95, 2300281.

18 P. Mishra, N.C.Santhi Srinivas. & V.Singh, V. Pre-ratcheted Tensile Properties of Nickel Base Alloy IN-617 at RT. Transactions of Indian Institute of Metals, (2024) 77, 931–939.

19 Jaydeep Vishwakarma, RS Rajpurohit, G Sudhakar Rao, K Chattopadhyay, N.C. Santhi Srinivas, Low cycle fatigue behaviour of additive manufactured maraging steel: Influence of build orientation and heat treatment, Materials Letters, (2023), 350,134943.

20 Prerna Mishra, N. C. Santhi Srinivas, Vakil Singh, Preratcheted Tensile Properties of Nickel Base Alloy IN617 at RT, Transactions of Indian Institute of Metals, (2023)

21 Jaydeep Vishwakarma, K. Chattopadhyay, N.C. Santhi Srinivas, Influence of build orientation and aging on corrosion behaviour of 18Ni300 maraging steel produced via Powder Bed Fusion using Laser Beam (PBF-LB), Materials Today Communications, Volume 35, (2023), 105825, ISSN 2352-4928.

22 B Mondal, S Sinha, J Reed, HS Lee, KJ Doherty, RS Mishra, Effect of backing plate on microstructure and properties of friction stir welded 2195-O alloy, Scripta Materialia 241 (2024) 115899.

23 S.K. Vasantham, E. Boltynjuk, S.H. Nandam, E.B. Eguiarte, H. Fuchs, H. Hahn and M. Hirtz, Nanoscale confinement of dip-pen nanolithography written phospholipid structures on Cu-Zr nanoglasses, Advanced Materials Interfaces, (2023) 2300721

24 Sourav Ganguly, A.K. Mondal, Improved damping behavior of squeeze-cast AZ91-Ca-Sb magnesium alloy with nano-SiC particles additions, Materials Today Communications, Volume 37, December 2023, 106904. Impact Factor: 3.8

25 S. K Gupta, K. Sudarshan, A. Balhara, S. K. Shaw, J. Bahadur, N. K. Prasad, Highly uniform microsphere of broadband near-infrared-emitting Ba(Hf1-xCrx)O3 perovskite phosphors, Solid State Comm., 2024, 380, 115443.

26 D. Kumar, N.S. Anuraag, C. Mohapatra, U. Kumar, D. Sarkar, Vasundhara M., I. Sinha and N. K. Prasad, High entropy alloy/oxide nanocomposites as highly efficient Fenton and photo-Fenton catalysts for p-nitrophenol degradation, Cera. Inter., 2024, 50, 12146-12157.

27 S. K. Gupta, A. Balhara, S. K. Shaw, N. K. Prasad, K Sudarshan, SrHfO3:Cr3+ Perovskite Microcubes for RareEarthFree NIRI Light Emission, J. Elect. Mat., 2023, 1-8.

28 S. Pradhan, N. Jatav, N. S. Anuraag, I. Sinha and N. K. Prasad, Magnetic Ni@C nano-adsorbent for methyl orange removal from water, Environmental Science and Pollution Research, 2023, 30, 118634-646.

29 N. S. Anuraag, S. K. Shaw, C. Upadhyay, and N. K. Prasad, Mechanochemical synthesis of MnBi/Fe3C@C exchange coupled hard magnetic nanocomposites, J. Solid State Chem. 2024, 329, 124403.

30 S. Pradhan, N. S. Anuraag, S. K. Shaw, A. Gangwar, K. Sandeep Rao, A. Sharma, B. P. Mandal and N. K. Prasad, MnNCN@C nanocomposite as an electrode for Li-ion battery, Mat. Sc. Engg. B, 2023, 298, 116894.

31 A. K. Yadav, H. Tripathi, A. Bastia, P. Singh, A. K. Dubey, N.S. Anuraag, N. K. Prasad, C. Rath, Synergistic effect of CoFe2O4–85S nano bio-glass composites for hyperthermia and controlled drug delivery, Materialia, 2023, 32, 101884.

32 S. K. Shaw, J. Kailashiya, S. K. Gupta, C. L. Prajapat, Sher Singh Meena, D. Dash, P. Maiti and N. K. Prasad, Mesoporous Fe3O4 nanoparticle: A prospective nano heat generator for thermo-therapeutic cancer treatment modality, J. Magn. Magn. Mater. 2023, 578, 170817.

33 C. K. Srivastav, N. S. Anuraag, A. K. Pandey, N. K. Prasad and D. Khan, Design, preparation and study of microstructure, phase evolution and thermal stability of Ti-Co0.35-Cr0.35-Nb-Zr nanocrystalline HEA for biomedical applications, Mat. Tod. Comm. 2023, 35, 105557.

34 Ultrastructure of precipitates in Cu-modified Q&T steels and its effect on tensile responses, Kapildev Sharma, Arnab Sarkar, Chetan Kadgaye, Pritam Banerjee, Kaustav Barat, Sudipta Patra, Anish Karmakar, Materialia, 2024.

35 Comprehensive study on the through-process Goss texture evolution in Fe-3.78 wt.%Si grain oriented electrical steel, Vipul Jain, Piyush Kumar, Sumanta Bagui, Chandan Halder, Sudipta Patra, Abhijit Ghosh, Materials Chemistry and Physics, 309, 2023.

36 Effect of martensite twins on local scale cleavage crack propagation in a medium carbon armor grade steel, Ankita Bhattacharya, Rakesh Kumar Barik, Supriya Nandy, Mainak Sen, T.S. Prithiv, Sudipta Patra, Rahul Mitra, Debalay Chakrabarti, Abhijit Ghosh, Materialia, Vol 30, 2023.

37 Recrystallization Kinetics, Precipitate Evolution and Grain Refinement of Nb Stabilized Ferritic Stainless Steel for Producing Thicker Plate/Strip Industrially, Metallurgical and materials transaction A, Pranabananda Modak, Kushagra Tyagi, Debalay Chakrabarti, Rahul Mitra & Sudipta Patra, Vol.54, 2023.

38 Effect of austempering time on bainite plate thickness and variant selection in a high carbon low alloy steel, D. Bhuyan, G.V.S. Sastry, S. Patra, S.K. Pradhan, R. Manna, Material characterisation, Vol. 200, 2023.

39 Role of Cerium on the Intricacies of Deformed State and Softening Mechanisms of Low-Carbon Steels C Kadgaye, MS Ansari, SM Hasan, S Patra, SK Nath, A Karmakar, Steel Research International, 2300291, 2024

40 Yadav, Dharmendra Kumar; Shadangi, Yagnesh; Yadav, Surya D; Sinha, Subhasis; Development of a high strength, low density and corrosion resistant novel FeCrMoNb1. 5Ti0. 5 complex concentrated alloy, Materials Today Communications, 35, 105521, 2023

41 Kumar, Nilesh; Yadav, Surya D; Modelling the creep curves of RAFM steel employing a dislocation density reliant model, Materials Today: Proceedings, 74, 910-915, 2023

42 Kumar, Adarsh; Kumar, Nilesh; Mahto, Mithlesh Kumar; Yadav, Surya D; Vashista, Meghanshu; Yusufzai, Mohd Zaheer Khan; Impression creep behaviour of different zones of pulsed gas tungsten arc welded Ti-6Al-4V alloy, Materials Today Communications, 36, 106722, 2023

43 Kumar, Nilesh; Yadav, Surya Deo; Microstructure Based Flow Stress Modelling of Superalloy 718, Solid State Phenomena, 353, 103-108, 2023

44 Kamal, Anurag; Shukla, Anoop Kumar; Shinde, Vijay M; Yadav, Surya D; Effect of Mo addition on interfacial microstructure and mechanical property of SiC joint brazed by an Ni–Si filler, Journal of the American Ceramic Society

45 Vikas Shivam, Shubhada Kar, Gaurav K. Bansal, Avanish K. Chandan, Biraj K. Sahoo, G.K. Mandal, N.K. Mukhopadhyay, V.C. Srivastava, "A novel Fe-rich non-equiatomic medium- entropy alloy with superior mechanical properties", Journal of Alloys and Compounds, 952 (2023) 170029

46 Harsh Jain, Y Shadangi, D Chakravarty, K. Chattopadhyay, A.K. Dubey, and N.K. Mukhopadhyay "Low-density Fe40Mn19Ni15Al15Si10C1 High Entropy Steel Processed by Mechanical Alloying and Spark Plasma Sintering: Phase Evolution, Microstructure, and Mechanical properties", Materials Science & Engineering A 868 (2023) 144776.

47 Rajat Gupta, Y Shadangi, K. Chattopadhyay, A.K. Chaubey and N.K. Mukhopadhyay, "CNT reinforced 6082 Al matrix nanocomposites: Influence of mechanical milling and cryomilling", Advances in Materials & Processing Technology (2024 January published on-line) https://doi.org/10.1080/2374068X.2024.2304411

48 R.R. Tripathy, Y. Shadangi, P. Pradhan, B. Mukherjee, V.S Raja, N. K. Mukhopadhyay, "Microstructural features and corrosion behaviour of AlSiCrFeMnNiCu high entropy intermetallics" Transaction of the Indian Institute of Metals (Online April 28, 2024); https://doi.org/10.1007/s12666-024-03325.

49 Yagnesh Shadangi, S Bhatt, P Pradhan, A Tiwari, A Tripathy, K Chattopadhyay, and Mukhopadhyay; Structure, electrical and thermal transport properties of Sn reinforced Al- Cu-Fe quasicrystalline matrix composite prepared by mechanical milling and subsequent annealing; Journal of Alloys and Compounds, 960 (2023) 170586.

50 Bibek Kumar Singh, Dipanjan Banerjee, A. Mangababu, Yagnesh Shadangi, N. K. Mukhopadhyay,Rajesh Rawat, A. P. Pathak,S. Venugopal Rao, Archana Tiwari, Ajay Tripathy, "Ultra-short Pulsed Laser Ablation of Decagonal AlCoNi and AlCoCuNi Quasicrystals", Journal of Alloys and Compounds, 968 (2023) 1722238.

51 Abhishek Kumar, Nilay Krishna Mukhopadhyay, and Thakur Prasad Yadav, "Hydrogen storage in high entropy alloys", in Book (chapter 3.2), Towards Hydrogen Infrastructure: Advances and Challenges in Preparing for the Hydrogen Economy, (2023) (pp.1-30) (Elsevier) DOI: https://doi.org/10.1016/B978-0-323-95553-9.00007-8.

52 Satish K. Verma, S. S. Mishra, N.K. Mukhopadhyay, T. P. Yadav, "Superior catalytic action of high-entropy alloy on hydrogen sorption properties of MgH2", International Journal of Hydrogen Energy, 50 (2024) 749-762.

53 Abhishek Kumar, Mohammad Abu Shaz, Nilay Krishna Mukhopadhyay, Thakur Prasad Yadav, Phase transformation of AB5 to AB2 type phase on substitution of Mn with Zr in TiVCoNi (ZrxMn2-x)(x= 0, 0.3, 0.6, 1.0) high entropy alloys, Materials Chemistry and Physics, 318 (2024) 12929.

54 SK Alla, CH.V.V. Ramana, RH Rao, RK Mandal, NK Mukhopadhyay, "Synthesis and characterization of FeAlZnCrCuMg alloy using high energy ball milling", Materials Today: Proceedings, (2024, published on-line) https://doi.org/10.1016/j.matpr.2024.02.017

55 Nabarun Mandal, Partha Kumbhakar, Arindam Dey, Pathik Kumbhakar, Udit Chatterjee, Christiano J. S. de Matos, Thakur Prasad Yadav, Nilay Krishna Mukhopadhyay, Krishanu Biswas, Vidya Kochat, Chandra Sekhar Tiwary, "Optical Resonator-Enhanced Random Lasing using Atomically Thin Aluminium-based Multicomponent Quasicrystals", Optics & Laser Technology, 175 (2024)110746; https://doi.org/10.1016/j.optlastec.2024.110746.

56 Vikas Shivam, Shubhada Kar, Gopi K Mandal, VC Srivastava, NK Mukhopadhyay," Microstructural Evolution and Mechanical Properties of Fe-Containing High and Medium Entropy Alloys: Recent Advances and Future Prospects", Transactions of the Indian Institute of Metals, (2023) 1-10; https://doi.org/10.1007/s12666-023-03194-8.

57 Abhisek Kumar, Thakur Prasad Yadav, Mohammad Abu Shaz, N.K. Mukhopadhyay, Hydrogen storage properties in rapidly solidified TiZrVCrNi high-entropy alloys, Energy Storage (2023) 1-9; https://doi.org/10.1002/est2.532.

58 Erosive Wear of Dual Phase Steels Containing Different Amount of Martensite, P Verma, R Tyagi, S Mohan, Journal of Materials Engineering and Performance 32 (1), 314-325

59 Synthesis and mechanical characterisation of self-lubricating Al7075/MoS2/ZrB2 hybrid composite M Dubey, N Kumar, S Mohan, International Journal of Materials and Product Technology 66 (1), 1-16

60 Effect of Insitu Formed TiB2 Particles on Tribological Behaviour of Al-Si/Mg2Si Hybrid Composites
AK Yadav, G Gautam, S Mohan, Silicon 15 (2), 1011-1025

61 Tribology of Insitu Zn-Al/ZrB2 Composites in Reciprocating Motion, V Kumar, G Gautam, A Mohan, S Mohan, International Journal of Metalcasting 17 (1), 182-194

62 Correlating topographical characteristics of relaxed layer to tribology in Cu-Gr-TiC composite system G Gautam, KK Singh, S Mohan, Surface Topography: Metrology and Properties 11 (1), 015015

63 Influence of InSitu Formed ZrB2 Particles on Dry Sliding Behavior of ZA Based Metal Matrix Composites, V Kumar, G Gautam, AK Yadav, A Mohan, S Mohan, International Journal of Metalcasting 17 (2), 786-800

64 Microstructure and Mechanical Properties of an In Situ Al 356-Mg2Si-TiB2 Hybrid Composite Prepared by Stir and Cooling Slope Casting, AK Yadav, V Kumar, Ankit, S Mohan, International Journal of Metalcasting 17 (2), 740-752

65 A comparative assessment on microstructure, mechanical and tribological behaviour of light aluminium–trialuminide composites, G Gautam, N Kumar, A Mohan, S Mohan, JP Davim International Journal of Metalcasting 17 (2), 813-828

66 Effect of microstructure, impact velocity and angle on erosive wear of medium carbon, dual phase and fully martensitic steels, P Verma, R Tyagi, S Mohan, Wear 518, 204645

67 Correlating surface topography of relaxed layer of ZA/ZrB2 in situ composites to wear and friction V Kumar, G Gautam, A Mohan, S Mohan, Surface Topography: Metrology and Properties 11 (2), 025006

68 Prediction of tribology in (Mg2Si+ TiB2)/A356 composites based on RSM method and correlative with topographical characteristics, AK Yadav, G Gautam, S Mohan, Physica Scripta 98 (11), 115918

69 Prediction of tribological performance of Cu-Gr-TiC composites based on response surface methodology and worn surface analysis, V Kumar, AK Yadav, G Gautam, KK Singh, S Mohan Physica Scripta 98 (11), 115971

70 Microstructure-Mechanical Property Correlation in Cooling Slope Cast Al-Si/Mg2Si-xwt.% TiB2 (x = 0, 1, 3 and 5) insitu Hybrid Composites, AK Yadav, G Gautam, S Mohan Silicon 15 (17), 7431-7440

71 Synthesis and wear characterization of Al7075/molybdenum disulfide/zirconium diboride hybrid composites, M Dubey, N Kumar, S Mohan, Materialwissenschaft und Werkstofftechnik 55 (4), 466-476

72 Nanoarchitectonics of self-assembled chessboard-like structures by recurrent phase separation and coalescence of nano domains in CoFeMn oxide, AS Pal, AKL Das, K Gururaj, M Sadhasivam, KM Knowles, MI Ahmad, J. Basu, et. al., Acta Materialia 242, 118423

73 Crystal structure determination of a new monoclinic phase in NiMn system in a self-assembled chessboard-like microstructure, AK Lal Das, GD Rout, AS Pal, J Basu, Journal of Applied Physics 133 (16)

74 Microstructural evolution and phase stability in semi-Heusler NiMnSb and vanadium added equi-atomic NiMnSbV alloys, AKL Das, AS Pal, GD Rout, J Basu, Journal of Alloys and Compounds 942, 169009

75 Structural Analysis Enabled by the Invizo 6000® Large Field-of-View Atom Probe Yimeng Chen, Isabelle Martin, Ty Prosa, Robert Ulfig, Katherine P Rice, David J Larson, David A Reinhard, Dan Lenz, Nicholas R Brewer, Michael Holman, Jacob Hanna, Gard Groth, Avnish Singh Pal, Joysurya Basu, Microscopy and Microanalysis 29 (Supplement_1), 813-814

76 Micro-mechanisms of deformation and strengthening during high pressure torsion of CoCuFeMnNi high entropy alloy, R Sonkusare, NP Gurao, K Biswas, J Basu, S Sen, KG Pradeep et.al., Materialia 32, 101916

77 Wurtzite nanoparticle ink spray processing for chalcopyrite CuIn (S, Se) 2 photovoltaic absorber layer
MS Pradeepkumar, A Kumar, S Das, J Basu, MI Ahmad, Materials Science in Semiconductor Processing 169, 107940

78 Structural transformations and characterisation in nano-engineered alloys, S Mukherjee, J Basu, RK Mandal, Progress in Crystal Growth and Characterization of Materials 70 (1), 100606

79 Effect of Aging on the Ballistic Performance of AA-7017 Alloy, PK Jena, K Suresh, K Sivakumar, RK Manda, AK Singh, Defence Science Journal 73 (2)

80 Effect of Modes of Deformation by Cold Rolling on Microstructure, Texture and Mechanical Properties of Ni-16Cr and Ni-16Mo Alloys, KK Mehta, RK Mandal, AK Singh, Journal of Materials Engineering and Performance, 1-16

Proceedings of International Conferences

1. Sudipta Patra, Subhasis Sinha, GS Mahobia, Deepak Kamble, Proceedings of the International Conference on Metallurgical Engineering and Centenary Celebration: METCENT-2023, 26-28 October, Varanasi, India, 2023, Springer Nature

2. FM Ayub Khan, V Narsimha Rao, Abhijit Ghosh, Anish Karmakar, Sudipta Patra Prediction of Mechanical Properties of Cr-Mn-N Austenitic Stainless Steel Using Machine Learning Approach,The International Conference on Metallurgical Engineering and Centenary Celebration, 2023Springer Nature Singapore

3. C Kadgaye, R Trivedi, S Patra, A Karmakar, Role of Cerium on High-Temperature Oxidation Behaviour of Low-Carbon Steel, The International Conference on Metallurgical Engineering and centenary celebration, 2023

4. Kapil Dev Sharma, Arnab Sarkar, Sudipta Patra, Anish Karmakar,Effect of Cu on the Microstructure and Properties of Hot Rolled Low Carbon Steels, The International Conference on Metallurgical Engineering and centenary celebration, 2023

Distinguished Visitor

S. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	Prof. K. S. Ravi Chandran, Department of Materials Science and Engineering, The University of Utah, Salt Lake City, USA	January 12th, 2024	Collaborative research and to deliver a lecture on "New Net-section Mechanics approach to fatigue and fracture characterization"
2	Professor Indradev Samajdar, Department of Metallurgical Engineering and Materials Science, IIT Bombay	October 17th, 2023	To deliver lecture on "Residual Stress-A Microstructural Perspective"
3	Dr. Fernando Warchomicka, Institute of Materials Science, Joining and Forming, Graz University of Technology, Austria	September 28th, 2023	Collaborative research and to deliver a lecture on "Functionalization of the surface in biocompatible alloys by electron beam technique"
4	Mr. Esmaeil Shahryari, Institute of Materials Science, Joining and Forming, Graz University of Technology, Austria	September 28th, 2023	Collaborative research and to deliver a lecture on "A framework to optimize present and future models developed at IMAT"
5	Dr. Vikash Kumar, Distinguished Scientist & Former Director, DMRL / DRDO, Hyderabad	2nd January 2024	To deliver lecture on "Structure Integrity, Sustainability and NextGen Life Cycle Management of Aerospace & Defence Platforms - An Integrated Perspective and Research Opportunities for Academia under AR&DB / DRDO
6	Ms. Friederike Voigt, National Museums, Scotland, Edinburgh, United Kingdom	February 11-12, 2024	Collaborative research and MetWaste-2024

6. Other activities

Indian Faculty visits in the Department

S. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1.	Dr. Vikash Kumar, Distinguished Scientist & Former Director, DMRL / DRDO, Hyderabad	To deliver lecture on "Structure Integrity, Sustainability and NextGen Life Cycle Management of Aerospace & Defence Platforms - An Integrated Perspective and Research Opportunities for Academia under AR&DB / DRDO"	January 2nd, 2024
2.	Dr. Prabeer Barpanda, Associate Professor, Materials Research Center, Indian Institute of Science (IISc), Bangalore	To deliver lecture on "A Brief Overview of Secondary Alkali-ion Batteries"	December 1st, 2023
3.	Professor Indradev Samajdar, Department of Metallurgical Engineering and Materials Science, IIT Bombay	To deliver lecture on "Residual Stress-A Microstructural Perspective"	October 17th, 2023

Foreign Faculty Visits in the Department

S. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1.	Prof. K. S. Ravi Chandran, Department of Materials Science and Engineering, The University of Utah, Salt Lake City, USA	Collaborative research and to deliver a lecture on "New Net-section Mechanics approach to fatigue and fracture characterization"	January 12th, 2024
2.	Dr. Fernando Warchomicka, Institute of Materials Science, Joining and Forming, Graz University of Technology, Austria	Collaborative research and to deliver a lecture on "Functionalization of the surface in biocompatible alloys by electron beam technique"	September 28th, 2023
3.	Mr. Esmaeil Shahryari, Institute of Materials Science, Joining and Forming, Graz University of Technology, Austria	Collaborative research and to deliver a lecture on "A framework to optimize present and future models developed at IMAT"	September 28th, 2023
4.	Prof. Roger Jeffery, The University of Edinburgh, Scotland, United Kingdom	Collaborative research and MetWaste-2024	February 11-12, 2024

15. Department of Mining Engineering

Complete Name of Department: Mining Engineering

Year of Establishment: 1923

Head of the Department: Prof. S. Gupta (w.e.f. 01.07.2022)

Brief Introduction of the Department:

The Department of Mining Engineering a well-conceived dream of the founder of this university Pandit Madan Mohan Malviyaji and the oldest Mining Engineering Department in the country, came into existence as early as 1923, as a section of the Department of Geology, Mining and Metallurgy. Later, in the year 1944, separate departments of Mining and Metallurgy were constituted under the College of Mining and Metallurgy.

The first Ph.D. degree in Mining Engineering in the country was awarded from this department in the year 1964. This lead was further strengthened by introducing the First Post- Graduate course in 1966 leading to M.Sc. degree in Mining Engineering n Metal Mining and Coal Mining, respectively and later the M.Sc. degree in Mine Planning was introduced in 1972. Since 1995-96 the department offers M.Tech. degree in Mine Environment, Mine Planning and Rock Mechanics.

The Department of Mining Engineering, BHU was one of the first in the country to receive UGC Assistance under COSIST and SAP Programme in 1984. Subsequently, the Department was upgraded as a Centre of Advanced Study in the area of Rock Mechanics and Ground Control in 1984.

The Department of Mining Engineering, IIT (BHU) occupies a pioneering position in the field of mining education and research. It has many firsts to its credit. The first Bachelor, Postgraduate and Doctoral degrees in mining engineering in India have been awarded by this department. Today's Mineral Industry is being run by many of its illustrious alumni who are holding key positions within the country and abroad. Senior faculty members have been recognized by the mining and allied industries as experts in the respective fields and are members of the important decision making bodies associated with CIMFR, NIRM, UGC, ISMU, NCL, CCL, SCCL, CIL, HZL, UCIL etc. The Department received generous grants to accelerate its research and developmental activities.

The Department is divided into six divisions with laboratories that are well equipped with the conventional and modern facilities. Facilities have also been developed for research in collaboration with the mining industry to deal with their practical problems, these laboratories are also equipped to undertake fundamental research in the field of mining.

The above divisions consist of 19 laboratories. The Department is also provided with an Underground Experimental Model Mine well equipped for demonstration, experimental and research purposes particularly in the field of underground mechanised transport systems, mine ventilation and mine surveying experiments.

Major areas of Research

- Rock Mechanics & Ground Control and numerical modelling
- Mine Environment, Mine Ventilation, Mine Safety, Water Soluble Polymer
- Mining Geology, Mine Water Management & Environmental Pollution
- Mining Methods, Production and Productivity analysis of Mining Machines
- Design of Structure in Rock, Mine Planning, Mine Environment
- Reliability Analysis and and Slope stability
- Environmental Economic, GIS and Remote Sensing, Operations Research
- Mine Surveying, Mine economics, Mine legislation and Computer Applications in Mining
- Mine Safety, Risk Analysis, Reliability and Rock Cutting Technology
- Rock Fragmentation Engineering, Rock Mechanics, Surveying
- Coal Analysis, Mineral Beneficiation

Area of the Department (in square meters):

- Ground floor (including Model Experimental of Underground Mine) = 5815.0826 m^2
- Ground Floor Open Space & Workshop & Laboratories = 1829.179 m^2
- First Floor = 3219.4264 m^2
- Second Floor = 505.3867 m^2

Infrastructure

S. No.	Particulars	Number
1	No. of Classrooms	03
2	No. of Lecture Halls	01
3	No. of Laboratory	07
4	No. of Computers available for students	32

Unique Achievement / Preposition of the Department

- Special Assistance Programme
- COSIST
- FIST Assistance
- MODROB
- Centre of Advanced Study in the area of Rock Mechanics & Ground Control and Geo-Environment

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	B. Tech/IDD	151	127	116	95	23
2	M. Tech	35	01			
3	Ph. D (Under Institute Fellowship)	04	01	01		03
4	Ph. D (Under Project Fellowship)			01	02	
5	Ph. D (Under Sponsored Category)				02	

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Mr. Asarapalli Sandeep Kumar	21151503	High End Microscopy under CSIR	11 Aug-23 Lucknow	PMRF
			Environmental pollution prediction and apportionment of sources using computational modeling technique under CSIR	16-18 Aug 2023 Lucknow	PMRF
			Application oriented school on Modeling system	21-25 Aug 2023 PUNE	PMRF
2	Mr. Abhimanyu Kumar Gond	21151501	National Environment Conference	15- 17 Feb 20024 IIT(Bombay)	RSGF
			High-end workshop on " Training on advance surveying instrument and its application" under SERB	29 May – 04 June 2024 NIT (Warangal)	RSGF
			National Air quality conference (NAQC)	18-21 March 2024 EPA USA	Online

Names of students/scholars who got prizes and awards outsidethe Institute

Sl. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Dr. Ashwani Kumar Sonkar	14151003	Smt. Saroma Sanyal Memorial Prize	27-29 Dec 2023 Jabalpur	Indian Institute of Engineering (India)

Names of scholars/students who won Convocation/Institute Day prizes

Sl. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1	Mr. Mehul Sharma	21152019	Gold Medal for first rank in IIT (BHU) in M.Tech	IIT (BHU) Varanasi
			D.N. Bhargava Gold Medal for first rank in Mining Engineering (M.Tech)	
			D.N. Bhargava Awad for best project award in M.Tech	

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
PROFESSORS			
1	Dr. Piyush Rai, Ph.D, Employee ID 13868	2002	Mining methods; Rock fragmentation by blasting; Performance assessment and planning for enhanced production & productivity aspects of equipment
2	Dr. N C Karmakar, Ph.D, Employee ID 17282	2000	Mine Environment, Mine Ventilation, Mine Safety, Water Soluble Polymer
3	Dr. A Jamal, Ph.D, Employee ID 13869	1989	Mining Geology, Mine Water Management & Environmental Pollution
4	Dr. S K Sharma, Ph.D, Employee ID 13871	2009	Design of Structure in Rock, Mine Planning, Mine Environment
5	Dr. S Gupta, Ph.D, Employee ID 13872	2004	Reliability Analysis, Mine Ventilation
ASSOCIATE PROFESSORS			
1	Shri R P Singh, M.Tech, Employee ID 13867	----	Mine fire, Mine mechanization & Planning
2	Dr. Ashok Jaiswal, Ph.D, Employee ID 18149	2007	Strata Control, Stability analysis, Numerical Simulation
3	Dr. Rajesh Rai, Ph.D, Employee ID 18150	2009	Slope Stability, Vegetation and Mining, Mineral Economics
4	Dr. A Kumar, Ph.D, Employee ID 18148	2014	Environmental Economics, Operations Research
5	Dr. G.S.P. Singh, Ph.D, Employee ID 18197	2008	Rock Mechanics and Ground Control
6	Dr. S. K. Palei, Ph.D, Employee ID 18237	2007	Mine Safety Engineering, Reliability Analysis of HEMM, Occupational Health & Safety
7	Dr. Amit Kumar Verma, Ph.D, Employee ID 50210	2012	Slope stability, Landslide, Rock Mechanics, Numerical Modelling, AI
ASSISTANT PROFESSORS			
1	Dr. Tarun Verma, PhD Employee ID 18147	2016	Mine Environment, Mine Ventilation, Mine Surveying, Mine Economics
2	Dr. Suresh Sharma, PhD Employee ID 18230	2015	Rock Fragmentation Engineering, Rock Mechanics, Surveying
3	Dr. Nawal Kishore, PhD Employee ID 50041	2004	Mine Planning, Surface Mining Operations
4	Dr. Satyabrata Behera, PhD Employee ID 50336	2021	Drilling & Blasting Technology, Mine Environment, Surface Mining Technology.
5	Dr. Bhardwaj Pandit, PhD Employee ID 50321	2021	Probabilistic analysis in Rock Mechanics, Numerical modelling of geotechnical structures, Tunnelling in rock mass
6	Dr. BNV Shiva Prasad, PhD	2024	Design of Underground Space, Metal Mining, Hydroelectric Projects, Caverns, Numerical Modelling & Applied Rock Mechanics, Rock Excavation, Instrumentation

Senior Scientific Officers

S. No.	Name & Qualification	Designation, Employee No.	Date of Appointment in the department	Major Areas of Specialization
1.	Dr. A.K. Singh, PhD	Senior Scientific Officer, 18987	26.06.2010	Mine Environment
2.	Dr. C.S. Singh, PhD	Senior Scientific Officer, 17034	21.05.2004	Rock Mechanics

Research Staff: Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
Technical Staff			
1	Shri Mithilesh Kumar Gupta, B.A. & Polytechnic in Mechanical Automobile Engineering	Senior Technical Superintendent Gr.-II, 18023	29.01.2007
2	Shri Lalmani, Intermediate and Diploma in Mechanical Engineering	Senior Technical Superintendent, 18650	12.08.2008
3	Shri Anupam Kumar Dubey, M.Sc. (Biochemistry), PG (Envi. Science.) & M.A. (Social Science)	Senior Technical Superintendent, 18751	16.12.2008
4	Shri Rajendra Prasad, B.A.	Senior Technical Superintendent, 14086	20.04.1989
5	Shri Bindresh Yadav, High School	Senior Technical Superintendent, 14088	22.12.1990
6	Shri Indu Bhusan Pal, Intermediate (Science)	Technical Superintendent, 14089	01.02.1991
7	Shri Ramdhani Prasad, Intermediate (Science)	Technical Superintendent, 14090	01.06.1994
8	Shri Ram Sewak Singh, Intermediate (Science)	Technical Superintendent, 14091	07.01.1997
9	Shri Mahendra Yadav, Intermediate (Science)	Junior Technical Superintendent, 18644	05.08.2008
10	Shri Vijay Prakash Shrivastava, Intermediate (Science)	Junior Technical Superintendent, 18642	05.08.2008
11	Shri Ajay Kumar Patel, M.Sc. (Geology)	Junior Technical Superintendent, 18641	06.08.2008
12	Shri Sunil Kumar Mishra, B.A. & ITI Degree	Junior Technical Superintendent, 18643	05.08.2008
13	Shri Rajkumar Singh, Intermediate (Science)	Junior Technical Superintendent, 16963	23.04.2004
14	Shri Amit Kumar Rawat, Intermediate (Science)	Junior Technical Superintendent, 14218	20.12.2021
15	Shri Pyarelal, Intermediate & ITI Degree	Senior Technician, 19601	11.07.2012
16	Shri Rahul Yadav, B.E. Civil Engineering	Junior Technician, 50349	11.10.2023
17	Shri Manish Kumar, B. Tech- Civil Engineering, M. Tech- Soil and Water Conservation Engineering (Agriculture Engineering)	Junior Technician, 50352	14.11.2023
Non-Teaching Staff			
1	Shri Ashish Shankar Gupta, M.A. in Sociology (IGNOU)	Senior Assistant, 50082	08.05.2017
2	Shri Jasvindar Singh, B. Tech (CSE), MBA (IT & MKT) & M. Tech. (Decision Sci. & Engg.)	Senior Assistant, 50106	15.09.2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Dr. R Rai	Stability analysis of high dump slope by Numerical Modelling	11-12 May 2023, Bhubaneswar
2	Dr. R Rai	Stability analysis of mine embankment against river at opencast coal mine	18-20 January, IIT Patna
3	Dr. Satyabrata Behera	Finite Element Modelling for Predicting Backbreak in Rock Blasting Operations	24th – 27th January, 2024 Venue: Savannah, Georgia, USA
4	Dr. G S P Singh	Design of Protective Water Barrier Pillars for Enhanced Safety and Productivity in Underground Coal Mines	23-24 December 2024, Kolkata

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	Prof. Sanjay K Sharma	Challenges in delivery of pedagogical innovations for science learning in higher education	IUCTE, Varanasi	05 March 2024
2	Prof. Sanjay K Sharma	National Education Policy - 2020	Rajkiya Engineering College, Sonbhadra	11 January 2024
3	Prof. Sanjay K Sharma	Upscaling faculty performance in technological universities	GITAM University, Vishakhapatnam	28 April 2024

Honours and awards *(From 1st April 2022 to 31st March 2023)*

Sl. No.	Name of Faculty Member	Details of Award
1	Dr. Bhardwaj Pandit	Young Geotechnical Engineer best paper award
2	Dr. Tarun Verma	Best Researcher Award by INSO
3	Dr. G S P Singh	D N Bhargava Best Teacher Award
4	Dr. G S P Singh	Award of Excellence in Coal Mining
5	Dr. Satyabrata Behera	Hackathon organized by the Ministry of Coal

Fellowships of academic and professional societies

Sl. No.	Name of Faculty Member	Details of Fellowship
1	Prof. Sanjay K Sharma	Fellow, The Institution of Engineers (India)
2	Dr. GSP Singh	Fellow, The Institution of Engineers (India)

Books, monographs authored/co-authored

Sl. No.	Name of Author/Co- Author	Title	Publisher
1	Debasis Jana, Suprakash Gupta & Deepak Kumar	Book Chapter: 'Bayesian Approach for Reliability Evaluation and Remaining Useful Life Prediction' In Edited book: Reliability Analysis of Modern Power Systems	IEEE Press Wiley, 445 Hoes Lane, Piscataway, NJ 08854, pp 17-27

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1	Dr. GSP Singh and Dr. Sanjay K Sharma	A System to Detect and Classify Severity of Face Damage in Longwall Mining
2	Dr. GSP Singh and Dr. Sanjay K Sharma	A System and Method for Assessing Hydro-mechanical Performance of Water Barrier Pillars for Coal Mines
3	Dr. Sanjay K Sharma, and Dr. GSP Singh	A Stability Analysis and Hazard Rating System for Mine Overburden Dump Slope Structure

Sponsored R&D Projects

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	Whole Body Vibration Exposure on HEMM Operators in Surface Coal Mines – An Assessment of Various Contributing Factors	2019-23	SERB, DST, New Delhi	40.03	Dr. S K Palei, Dr. S Gupta, Prof. N C Karmakar, Dr. A. Kumar
2	Design and Development of Micro Seismic based technique for monitoring and prediction of slope failure in Pandoh, Himachal Pradesh	2019-22	SERB, DST, New Delhi	45.26	Dr. A. K. Verma
3	Slope Stability monitoring and analysis using hyperspectral imaging	2019-23	SERB, DST, New Delhi	47.105	Dr. T Verma
4	Contribution of Neighboring Industries over the Air Quality of the Mining Area	2020-23	NCL, Coal India	134	Dr. A Jamal, Dr. A Kumar
5	Developing Slope Stability Models for Design of Long Term Stable Dump Slopes through proper benching and vegetation- Part A	2020-23	NCL, Coal India	68.8	Dr. Rajesh Rai, Dr. A Jaiswal, Prof. B K Srivastava, Dr. S Kumar

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
6	Evaluation of ground behaviour in open-cast and underground excavations using TDR and Machine Learning Techniques	2020-22	NCL, Coal India	36	Dr Sanjay K Sharma
7	Stability Evaluation of Dump Slopes and developing Slope Stability Models for Design of long term Stable Dump Slopes through proper Benching and Vegetation -Part-B	2020-23	NCL, Coal India	141	Dr. GSP Singh, Dr. Sanjay K Sharma, Dr. N. Kishore and Dr. P Bala Ramudu
8	Study of Impact Assessment of Back filling of Fly Ash in Abandoned Gorbi Mine and Treatment to Avoid Contamination of Ground water and soil	2020-23	NCL, Coal India	124	Dr. A Jamal, Dr. A Kumar
9	Optimization of capacity Utilization of Draglines deployed in NCL through Big data Analytics	2020-23	NCL, Coal India	83.97	Dr. S Gupta, Dr. A. Kumar, Dr. S. Pal
10	Design of Protective Barrier Pillar against Large water Head in Underground Mines	2021-23	Coal India	104	Dr. GSP Singh, Dr. Sanjay K Sharma, Dr. T Verma and Dr. N. Kishore
11	Development of prototype of early warning systems on impending goaf for underground coal mining.	2022-25	SERB, New Delhi	38	Dr. Ashok Jaiswal
12	Assessment of safe parting thickness and optimal goaf edge support requirement for extraction of pillars under soft cover	2023-25	Coal India	182.29	Dr. Sanjay K Sharma, Dr. GSP Singh,
13	Assessment of Work Posture of Mine Equipment Operators in Relation to Whole-Body Vibration Exposure – Using RULA, REBA and Human Modelling Approach	2023-26	SERB, New Delhi	38.29	Dr. S. K. Palei
14	Inverse estimation of uncertainty at meso-scale using full-field strain measurements	2023-25	SRG, SERB	33	Dr. Bhardwaj Pandit
15	Technology to Detect the Effect of Blasting on Propagation of Cracks in Structures.	2024-26	Ministry of Coal	116.7	Dr. S Behera, Prof. P Rai

Industrial consultancy projects *(Ongoing only)*

Sl. No.	Coordinator	Title	Funding Agency	Amount (in lakhs of Rs.)
1	Dr. A.K. Verma (PI) Dr. C.S. Singh	Scientific Studies for the period 2023-24 at JMS HO Project	JMS Mining Pvt. Ltd.	6.49
2	Dr. Suresh Kr. Sharma (PI) Dr. Rajesh Rai	Scientific study to assess the stability of the old and unapproachable water dam belowground to hold back the water on the rise side and effect of deep hole blasting on the dam to ensure safe parting to be left against the water dam at C.L. Jambad OC (H)	ECL, West Bengal	11.8
3	Dr. Rajesh Rai (PI) Dr. Ashok Jaiswal	Scientific study as per regulations 106 of CMR 2017 for Pit slope stability, Vetting for methodology, and slope monitoring of BGR- kerandari mines NTPC	BGR Mining & Infra Limited	5.9
4	Dr. A.K. Singh	Proximate and G.C.V. of coal	Mahadev Coal Traders	0.1
5	Dr. C.S.Singh(P.I.), Prof. S.K.Sharma Dr. G.S.P.Singh, Dr. N.Kishore	Appointment of safety consultant for mining project of HSIIDC over an area 258.3 hectare at village Khanak, Teshsil Tosham, Dist. Bhiwani, Haryana	Haryana State Industrial and Indrastructurer Development Cop. Ltd., Khanak Mine	13.1098
6	Dr. Ashok Jaiswal (PI), Dr. Rajesh Rai	Shoring works	Indigo Infra Project Pvt. Ltd, New Delhi	7.08
7	Dr. Ashok Jaiswal (PI), Dr. Rajesh Rai	Scientific study for Geo-technique study for optimization on bench height and width in Mines	Dalmia Cement (Bharat) Ltd., Kalyanpur (Murali Mines) Rohtas, Bihar	3.54
8	Dr. Suresh Kumar Sharma (PI), Dr. Rajesh Rai, Dr. Ashok Jaiswal	Work order for Scientific study under regulation 106(2) and 121(a) of CMR-2017 (Penganga Opencast Mine) as per the scope of work, Wani Area, WCL	WCL, Nagpur	11.8

Sl. No.	Coordinator	Title	Funding Agency	Amount (in lakhs of Rs.)
9	Dr. Amrendra Kumar	Study of the environmental impact assessment of abondoned samll quarry area when filled fly ash, Mirzapur Dist.	Pratap Dwelings Pvt. Ltd., Lucknow	2.9618
10	Dr. Rajesh Rai (PI) Dr. Ashok Jaiswal	Scientific study for support design for drivage of tunnel from surface to no. 1 seam of annexed property at KTK-1 Incline, Bhupalapally Area of SCCL	The Singareni Collieries Company Ltd., Kothagudem Colloeries, Bhadradri, Telangana	11.21
11	Dr. C.S.Singh	Determination of RMR at Vindhya of Jhanjra project	JMS Mining Pvt. Ltd., Kolkata, W.B.	3.54
12	Dr. A.K.Singh	Proximate analysis and GCV on equilibrated basis	Coal Controller (Ranchi), NCL, CCL and other mines	6.2953
13	Dr. Rajesh Rai (PI), Dr. Ashok Jaiswal	Vetting for the design of slope stability of two projects	Rajmery, Mine Core Consultants, Jodhpur	2
14	Dr. Ashok Jaiswal (PI), Dr. Rajesh Rai	Scientific study for the proposed man winding intake air shaft (620m depth with 7.5m dia) at Adriyala longwall project, APL Area of SCCL	The Singareni Collieries Company Ltd., Kothagudem Colloeries, Bhadradri, Telangana	11.8
15	Dr. Ashok Jaiswal (PI), Dr. Rajesh Rai	Slope stability study for OB dump	Sasan Power Ltd, Moher & Moher Amlohri Ext OCP, Waidhan, Singruli, MP	4.24
16	Dr. Suresh Kumar Sharma (PI), Dr. Rajesh Rai, Dr. Ashok Jaiswal	Scientific study for under regulation 106(2) and 121(1) of CMR-2017 (Penganga Opencast Mine) as per the scope of work Wani Area, WCL	Majri Area, At Kuchana PO Kuchana, Western Coalfields Ltd, Chandrapur, Maharashtra	18.88
17	Dr. Nawal Kishore (PI), Dr. C.S.Singh	Scientific study to find out the reasons of bricks developed in the benches and area near access trench and to suggest the measures to be taken to avert the apprehended bench slope failure on the OB and Coal benches on Rise side at Singhori OCM	Singhori OCM, Nagpur Area, Maharashtra	4.9796
18	Dr. A.K. Singh(PI) Shri R P Singh	Study of verify mine wise availability and potential of mine water for community use	NCL, Singrauli	3.068
19	Dr. C.S.Singh (PI), Dr. Nawal Kishore	Determination of Physico-Mechanical Properties of rock/coal core samples	Sasan Power Ltd., M.P.	5.49408
20	Dr. C.S.Singh	Scientific study for determination of RMR at Jhanjra 3 and 4 and Dhankasa at JMS HO Project	JMS Mining Pvt. Ltd., Kolkata, W.B.	3.54
21	Dr. Rajesh Rai (PI), Dr. Ashok Jaiswal, Dr. B.Pandit	Geotechnical study with fly ash dumping	Sasan Power Ltd., M.P.	5.31
22	Dr. Suresh Kumar Sharma	Scientific study for controlled blasting at Siduli OC (H) Patch in Iambad (R-VIII) seam under Reg. 196(3) of CMR 2017, Kenda Area, ECL	ECL, Bardhaman, WB	4.956
23	Dr. B.Pandit (PI), Dr. Ashok Jaiswal, Dr. Rajesh Rai	Subsidence study to be conducted for Gare Palma IV/7 Coal mine at Tamnar, Raigarh, Chhattisgarh	Sarda Energy & Minerals ltd, Raipur, Chhattisgarh	7.08
24	Dr. C.S.Singh (PI)	Scientific study for determination of RMR at Jhanjra and Tilaboni at JMS HO Project	JMS Mining Pvt. Ltd., Kolkata, W.B.	3.54
25	Dr. C.S.Singh (PI), Dr. Nawal Kishore	Analysis of Physico-Mechanical Properties in borehole number CMMIC-37 and CMMIC-38 in Makri-Barka East & Inguri-A Combined Block (Adl. CIL)	CMPDIL, Singrauli, MP	30
26	Dr. Bhardwaj Pandit	Conducting Scientific Study for method of working, bench design, dump design including dump slope, ultimate pit slope and monitoring of slope stability as per Reg.no. 106(2) under CMR 2017 and DGMS (Tech) Circular No.03 of 2020 dtd. 16/01/2020. of Kolarpimpri OC Mine, Wani North Area,WCL	Western Coal Fields Limited	5.2
27	Dr. Bhardwaj Pandit	Subsidence Study to be conducted for Gare Palma IV Coal Mine at Tamnar, Raigarh, Chhattisgarh	SEML	6

Sl. No.	Coordinator	Title	Funding Agency	Amount (in lakhs of Rs.)
28	Dr. Tarun Verma	Scientific study of the Air Pollution Impacts associated with operationalization of Wharfwall and Pollution Control/Mitigational Measures to Minimise the Pollution Load	Khadia Project,Northern Coal Field Limited, Singrauli	5.31
29	Dr. Tarun Verma	Assessment study of Impact of Alternative Usage of Overburden on Environment	Coal India Limited	9.44
30	Prof Arif Jamal and Dr B N V Siva Prasad	Determination of Bulk Density of Coal Seam / ROM / Crushed Coal of BGR -Kerandari mines NTPC, Jharkhand.	BGR Mining and Infra Limited,	4.13
31	Dr. GSP Singh Prof. Sanjay K Sharma, Dr. C S Singh, Dr. N Kishore	Scientific Study at New Umrangshu Limestone at New Umrangshu Limestone Mines, Umrangso, AssamDalmia Bharat Cement	Dalmia Cement Bharat Ltd,	32
32	Prof. Sanjay K Sharma, Dr. GSP Singh, Dr. N Kishore	Scientific study of the use of steel plant rejected dust for stowing purpose in underground depillaring districts at Satgram Area, Eastern Coalfields Limited	Eastern Coalfields Limited	3.894
33	Dr. Satyabrata Behera, Prof. Piyush Rai and Dr. B N V Siva Prasad	Scientific Study of Deep Hole Drilling and Controlled Blasting for M/s BGR Mining and Infra Ltd, Badam Coal Block of NTPC, Hazaribagh, Jharkhand	BGR Mining and Infra Limited,	5.9
34	Dr. Satyabrata Behera, Prof. Piyush Rai	Scientific study for conducting blast vibration, controlled blasting, normal blast design study in Bhanegaon OCM of Nagpur Area as per regulation 196(3) of CMR:2017	Western Coalfields Limited	4.5
35	Prof. Sanjay K Sharma	An independent technical assessment of the equipment and the project facilties required for the operation of the Mines as per the IMSA, Mining Plan of 2010 and revised Mining Plan of 2021.	M/s Singh & Singh Associates for AEL	35.4
36	Prof. Sanjay K Sharma, Dr. GSP Singh	Determination/Formulation of SOR (schedules of Rates) for Outsourcing Work of Removal of Overburden, loading of coal into Tippers/trucks, transportation of coal, wagon loading, drilling in coal strata, crushing of coal by mobile crusher and extraction of coal by surface miner etc. in SECL 2024.	SECL	27.5

Research Publications

Sl. No.		No.
1	Total Number of Papers Published in Refereed International Journals	28
2	Total Number of Papers Presented in International Conferences	01

Refereed International Journals

1. Rudra ESCK, Gadepaka PR, Rai R, Jaiswal A. (2024) Numerical analysis of dump slope stability using material properties obtained by parallel gradation method. *Mining Technology*; 133(1):31-41. doi:10.1177/25726668231222996
2. Gupta G, Sharma S K and Singh, GSP (2024) "Numerical modelling based sensitivity analysis of stability of an overburden dump slope" Jour. Geol. Soc. India (2024) 100 (3) : 346-354 https://doi.org/10.17491/jgsi/2024/17384
3. Sonu, Chawla, S. & Jaiswal, A. An Experimental Study on Effect of Limited Boundness (*LB*) on Peak and Residual Strength of Intact Rock. *Mining, Metallurgy & Exploration* 41, 985–995 (2024). https://doi.org/10.1007/s42461-024-00963-x
4. Gadepaka, P.R., Sonu & Jaiswal, A. Assessment of the strength deterioration of a coal pillar using a strain-softening time-dependent constitutive model. *Mech Time-Depend Mater* (2024). https://doi.org/10.1007/s11043-024-09692-6
5. Kumar V, Palei SK, Karmakar NC. Discomfort survey of dumper operators exposed to whole-body vibration in opencast coal mines. *Journal of Vibration and Control*. 2024;0(0). doi:10.1177/10775463241230141
6. Gond, A K Gond, Jamal, A and Verma T (2024), "Spatio-temporal trend analysis of air pollutants during COVID-19 over Korba district, Chhattisgarh (India) using Google Earth Engine", Remote Sensing Applications: Society and Environment, 33, 101143,https://doi.org/10.1016/j.rsase.2024.101143.

7. Yadav A, Behera B, Singh, GSP and Sharma SK (2024), "Numerical modelling of post-failure behaviors of coal specimens", Journal of Rock Mechanics and Geotechnical Engineering, 16 (2), 514-531, https://doi.org/10.1016/j.jrmge.2023.06.011.
8. Sonu, Jaiswal, A. Time-Dependent Stability Assessment of Coal Mine's Gallery Using New Geotechnical Classification. *J. Inst. Eng. India Ser. D* (2024). https://doi.org/10.1007/s40033-024-00665-0
9. Masood M M, Verma, T & Seervi V (2023), "Development of an Algorithm for the Prediction of Slope Failure in Surface Mines", *J. Inst. Eng. India Ser. D* (2023). https://doi.org/10.1007/s40033-023-00513-7
10. Raju G Y, Gupta G, and Singh Lalit K (2023), "Prediction of human performance using EEG data to improve safety and productivity in mines", International Journal of Relieability and Safety, 40-54, https://doi.org/10.1504/IJRS.2023.132946
11. Jana D, Kumar D, Gupta S, Pal S and Ghosh S (2023), "Bayesian network approach for studying the operational reliability and remaining useful life", Journal of Reliability and Statistical Studies, Vol. 16, Issue 2 (2023), 373–392. doi: 10.13052/jrss0974-8024.16210
12. Galav, A., Singh, G.S.P. & Sharma, S.K. Hydro-Mechanically Coupled Numerical Modelling of Protective Water Barrier Pillars in Underground Coal Mines in India. *Mine Water Environ* 42, 418–440 (2023). https://doi.org/10.1007/s10230-023-00946-2
13. Arra, K., Gunda, Y.R. & Gupta, S. Development of a predictive model for workers' involvement in workplace accidents in an underground coal mine. *Sādhanā* 48, 63 (2023). https://doi.org/10.1007/s12046-023-02121-3
14. Sahu, A R, Palei S K and Mishra A (2023), "Data driven fault diagnosis for industrial equipment : a review", Expert System, https://doi.org/10.1111/exsy.13360
15. Yadav, A., Singh, G.S.P. & Behera, B. A Machine Learning Model for Evaluation of Chain Pillar Stability in Deep Longwall Workings in India. *Mining, Metallurgy & Exploration* 40, 2119–2137 (2023). https://doi.org/10.1007/s42461-023-00859-2
16. Singh, N.P., Seervi, V., Kishore, N. *et al.* An Investigation into Statistical Correlations Between Coal Production and Key Productivity Indicators of Surface Miners in Indian Opencast Mines. *Mining, Metallurgy & Exploration* 40, 389–402 (2023). https://doi.org/10.1007/s42461-023-00734-0
17. Kumar, D., Jana, D., Gupta, S. *et al.* Bayesian Network Approach for Dragline Reliability Analysis: a Case Study. *Mining, Metallurgy & Exploration* 40, 347–365 (2023). https://doi.org/10.1007/s42461-023-00729-x
18. Gunda, Y., Gupta, S. & Singh, L.K. Assessing human performance and human reliability: a review. *Int J Syst Assur Eng Manag* 14, 817–828 (2023). https://doi.org/10.1007/s13198-023-01893-5
19. Singh K J, Palei SK, Karmakar NC. Role of contributing factors on health risks of whole-body vibration exposure of heavy equipment and vehicle operators: A critical review. *Journal of Vibration and Control*. 2024;30(11-12):2338-2355. doi:10.1177/10775463231185627
20. Behera S, Dey K (2023), "A 3D nearfield vibration model for simultaneous blasting of multiple holes in the sedimentary rock formation", Materials Today Communications, 35,106229, https://doi.org/10.1016/j.mtcomm.2023.106229.
21. Gadepaka, R R, Jaiswal A (2023), "A novel approach for the assessment of caving behaviour in a bord and pillar depillaring panel by using continuum modelling", International Journal of Rock Mechanics and Mining Sciences, 170, 1365-1609, https://doi.org/10.1016/j.ijrmms.2023.105476.
22. Modi, P., Hower, J. C., Giri, R. K., Rahi, I. C., Siddiqui, Mohd. A., Rajak, P. K., & Jamal, A. (2023). Recovery of rare earth elements from coal samples from the Sohagpur coalfield, Madhya Pradesh, India. International Journal of Coal Preparation and Utilization, 44(2), 219–239. https://doi.org/10.1080/19392699.2023.2179998
23. Chaturvedi, A., Singh, G.S.P. & Sharma, S.K. Stabilization of Mine Waste Dumps Through Bio-Engineering. *J. Inst. Eng. India Ser. D* (2023). https://doi.org/10.1007/s40033-023-00524-4
24. Ansari, A.A.M.A., Seervi, V., Kishore, N. *et al.* An Investigation into the Effect of Rain on Fragmented Coal: A Case Study. *J. Inst. Eng. India Ser. D* 105, 581–594 (2024). https://doi.org/10.1007/s40033-023-00454-1
25. Singh, N.P., Seervi, V., Kishore, N. *et al.* Impact of Surface Miner Utilisation on Production Efficiency in Opencast Coal Mines Using Least Squares Method: A Case Study. *J. Inst. Eng. India Ser. D* 105, 567–580 (2024). https://doi.org/10.1007/s40033-023-00451-4

26. Singh, N.P., Seervi, V., Meena, S.K. et al. Development of Multiple Regression Model for Assessment of Coal Calorific Value in Indian Opencast Mines. J. Inst. Eng. India Ser. D 104, 503–514 (2023). https://doi.org/10.1007/s40033-022-00444-9

27. Sonkar A K, Varshney R, Ahmed S I, Viskwakarma A K and Jamal A (2023), "Impact of mining industries on the ground water fluctuation in Singrauli coalfield area using remote sensing and GIS", Environmental Quality Management, https://doi.org/10.1002/tqem.22054

28. Ganesh, K.M., Ray, A., Dagdi, D. et al. Sensitivity Analysis of Excavation Support Systems Using Numerical Modelling. J. Inst. Eng. India Ser. D (2023). https://doi.org/10.1007/s40033-023-00589-1

Proceedings of International Conferences

Galav A, Singh GSP and Sharma SK (2023), "Design of Protective Water Barrier Pillars for Enhanced Safety and Productivity in Underground Coal Mines", International Seminar on Underground Mining: Augmentation, New-Initiatives & Ground Breakings (UMANG- 2023), Jointly organized by CIL and IMMA, Coal Bhawan, Kolkata

Key Instruments

Closed loop stiff loading system

Large size direct shear automatic testing system for dump material

16. Department of Pharmaceutical Engineering and Technology

Complete Name of Department: Department of Pharmaceutical Engineering &Technology

Year of Establishment: 1932

Head of the Department: Prof. Siva (Mrs.) Hemalatha w.e.f. 27-02-2022

Brief Introduction of the Department:

Department of Pharmaceutical Engineering & Technology is a pioneer in Pharmaceutical education in India at University level and established in July 1932 by Prof. Mahadev Lal Schroff under the auspicious guidance of Mahamana Madan Mohan Malaviya Ji. Initially, a two-year programme was introduced in 1934 for the degree of B.Sc. (Pharmaceutical Chemistry). Later, the department has expanded academically by the inception of B.Pharm. (1937), M.Pharm. (1941), Ph.D. (1945) and integrated dual degree (2006) as its regular programmes. In the year 2014, the UG and IDD programmes were restructured and renamed as 4-year B Tech Programme in Pharmaceutical Engineering & Technology and 5-year IDD (B Tech & M Tech) programme in Pharmaceutical Engineering & Technology, respectively.

The Department has produced over 2150 B.Pharm., 1240 M.Pharm., 65 M.Pharm.(Integrated Dual Degree) and 142 Ph.D. students who enjoy leading positions in industry, academia, drug administration, research institutes and contemporary pharmacy practice worldwide. The Department has hosted many national and international events and to name a few are the 17th, 34th & 59th editions of Indian Pharmaceutical Congress in the year 1965, 1982 & 2007 in conjunction with Silver Jubilee, Golden Jubilee and Platinum Jubilee of the Department, respectively.

Major Areas of Research

Drug discovery – Identification and optimization of new chemical agents from natural and synthetic origin for the treatment of Neurological, Metabolic & Hepatic disorders, Cancer, and Pain.

Drug formulation design and development – Design and development of new drug delivery systems with improved pharmacokinetic and pharmacodynamics profiles.

Phytopharmaceuticals &nutraceuticals – Quality control, standardization, therapeutic validation and formulation development

Area of the Department (in square meters):

The department is spread over an area of 5823 m^2. The department has 26 laboratories, 2 lecture halls and 6 classrooms.

Infrastructure

S. No.	Particulars	Number
1	No. of classrooms	06
2	No. of lecture halls	02
3	No. of laboratory	26
4	No. of computers available for students in the Department	40

Unique Achievement / Preposition of the Department

The Department of Pharmaceutical Engineering & Technology is the pioneer department to start the degree level pharmacy education in the Country and in South-east Asia. This department is known for its enormous contribution to the growth and expansion of pharmaceutical education and research across the country. In pursuit of achieving its goal, the department has been continuously imparting quality education to produce pharmacists befitting to the requirements of industry and society. Recently the department introduced a research based undergraduate and integrated dual degree curriculum to impart innovative research skills and expertise among the students. Recent the department has proposed to start a new M. Pharm. programme; Quality Control in Pharmaceuticals and Medical Devices and is currently under review at the Institute level. The new M Pharm programme is aimed to provide the students in-depth knowledge of the quality methods for pharmaceutical substances and drug products prescribed in Indian Pharmacopoeia (IP) and enable them to gain extensive practical training on such products (including medical devices) in collaboration with Indian Pharmacopoeia Commission (IPC).

The department as National Resource Centre in Pharmacy discipline has been hosting *Advances in Drug Discovery and formulation development* course under the Annual Refresher Programme in Teaching (ARPIT 2019) programme of AICTE, New Delhi for the last two years. Over four thousand teachers of Pharmacy and Allied disciplines has been trained through this online outreach teaching programme

On the research front, the department has been actively engaged in the cutting-edge research areas of drug discovery and development. The R & D expertise available in the department includes; (a) New drug target identification and validation; (b) Discovery of natural and synthetic lead compounds and their optimization; (c) Development of novel drug delivery systems including nano-formulations for synthetic and herbal drugs; (d) Authentication and standardization of herbal products; (e) Preclinical evaluation of drug candidates; (f) Analytical method development for drugs and drug formulations.

Apart from institute funded research projects, extramural research funding to the tune of about two crores has been generated during the last two years. Recently the department has been recognized as a **DST FIST Sponsored Department** to establish state of the art research facilities and has been granted an amount of Rs. 58.00 lakh. To date, nearly 1700 peer-reviewed research papers have been documented by the department. Approximately ~700 research communications have been registered with Scopus alone. During the last five years, the department has published over 350 peer-reviewed research papers. Besides this, a dozens of patents have been filed by the faculty members during the last five years. The high order research credits of faculty members viz., total citations ~26000, further corroborates the research strength of the department of Pharmaceutical Engineering & Technology.

Some of the key research accomplishments of the department in the area of drug discovery and development include; (a) discovered of some potential multifunctional anti-Alzheimer's and anticancer lead compounds, active at nanomolar to micromolar concentration, (b) enhancement of bioavailability and efficacy of drugs through nano-formulations and target-directed carrier systems, (c) identified newer cellular and molecular mechanisms involved in neuropathic pain,(d) developed a bioactive glass based formulation for the treatment of cerebral ischemia, and(e) created a well characterized natural product library of over hundred compounds from plants and microbial origin.

On an average the faculty members of the department publish around 60-70 peer-reviewed research papers annually. Over 25 patent applications have been filed by the faculty members so far.

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	B. Tech	74	75	40	33	--
2	Dual Degree	18	19	11	18	18
3	M. Pharm	40	41	--	--	--
4	Ph. D (Under Institute Fellowship)	03	03	06	03	13
5	Ph. D (Under Project Fellowship)	04	01	08	04	03
6	Ph. D (Under Sponsored Category)	--	--	01	--	--
7	Ph. D (Under Foreign Category)	01	--	--	--	--

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Debadatta Mohapatra	19161016	Innovations in Chemical, Biological and Pharmaceutical Sciences (ICBPS-2023)	23-25th November, 2023, GLA University, Mathura, Uttar Pradesh, India	IIT (BHU), Varanasi
2	Debadatta Mohapatra	19161016	International Conference on "Drug Development and Dug Delivery (CD4)	21-22nd November, 2023, University of Lucknow, Lucknow, Uttar Pradesh, India	IIT (BHU), Varanasi
3	Debadatta Mohapatra	19161016	Mass Spectrometry Based Metabolomics Study: Method Development and Data Analysis	15th-17th January 2024, DBT-RRSFP-SAHAJ Drug Metabolomics Laboratory, Tripura University, Agartala, Tripura, India	NA
4	Debadatta Mohapatra	19161016	Advancement in Tissue Fabrication Technology	18th-19th December, 2023, School of Biomedical Engineering, IIT (BHU), Varanasi, Uttar Pradesh, India	NA

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
5	Debadatta Mohapatra	19161016	Particle Size, Shape Analysis assisted by AI/ML in Pharmaceutical Formulation and Development	29th September 2023, Department of Pharmaceutical Engineering and Technology, IIT (BHU), Varanasi, Uttar Pradesh, India	NA
6	Sourabh Chakrabarti	22162018	International Conference cum Workshop on Artificial Intelligence Solutions for Pharmaceutical Research and Knowledge	9-11th October, 2023, Department of Pharmacoinformatics, National Institute of Pharmaceutical Education and Research, Sector 67, S.A.S. Nagar - 160062, Punjab, India	Dean (Research and Development) and Department of Pharmaceutical Engineering &Technology
7	Anuj Mehta	22162035	Neuroscience and Neurological Disorders	14th -16th September 2023	IIT (BHU) and Dept. Of Pharmaceutical Engineering & Technology,
8	Km Nivedita Verma	22162037	Indian Academy of Neurosciences	3rd-5th October 2023 in Jiwaji University Gwalior	Department of Pharmaceutical Engineering & Technology
9	Anmol	22162039	SNCI conference	16th-18th September 2023	IIT (BHU)
10	Sourabh Chakrabarti	22162018	International Conference cum Workshop on ARTIFICIAL INTELLIGENCE SOLUTIONS FOR PHARMACEUTICAL RESEARCH AND KNOWLEDGE	9-11th October, 2023, Department of Pharmacoinformatics, National Institute of Pharmaceutical Education and Research, Sector 67, S.A.S. Nagar - 160062, Punjab (INDIA)	Dean (Research and Development), IIT(BHU), and Department of Pharmaceutical Engineering & Technology,IIT(BHU)
11	Hitesh Harsukhbhai Chandpa	22161502	Advances in Drug Delivery Technology (ADDT) - 2024	16-17th February 2024, BITS-PILANI, Pilani, Rajasthan	Department of Pharmaceutical Engineering &Technology, IIT (BHU)
12	Hitesh Harsukhbhai Chandpa	22161502	High End Microscopy	11th September 2023, CSIR-Indian Institute of Toxicology Research, Lucknow	NA
13	Hitesh Harsukhbhai Chandpa	22161502	Advanced Functional Materials and Informatics (AFMI) - 2023	29th November to 3rd December 2023, IIT, BHU, Varanasi	NA
14	Shovan Naskar	22162038	IIT-B Biopharma Summit 2023	23rd -24th November, 2023, IIT (Bombay)	IIT (BHU)
15	Hansal P Kumar	21161004	RICT 2023 International Conference on Medicinal Chemistry	5-7th July, 2023	PMRF, CSIR, IIT (BHU)
16	Shalini Agarwal	22162030	Biopharma summit IIT BOMBAY	22-24th November 2023	NA
17	Sagar Singh Shyamal	22162025	Pharmacon 2023 niper Hyderabad	14-16th September, Hyderabad	IIT (BHU)
18	Anagha Gadepalli	19161014	37th Annual Meeting of the SNCI- International Conference on “Neuroscience and Neurological Disorders”	8-16th September, 2023 at North-Eastern Hill University, Shillong, Meghalaya	STGS
19	Madhu Kiran D R	22161001	International Conference on Separation and Purification Technologies (ICSPT)	7-8th December 2023, Hyderabad	PMRF
20	Madhu Kiran D R	22161001	Nanomechanics for Pharmaceutical Applications (NPA) 2023	16-17th December 2023, Hyderabad	PMRF
21	Obulapathi Ummadisetty	21161009	37th Annual Meeting of Society for Neurochemistry, India (SNCI)	08-16th September 2023, North Eastern Hill University, Shillong, Meghalaya	Students Travel Grant Support from IIT (BHU)
22	Nivedita Bhardwaj	19161008	International Conference Organic and Medicinal Chemistry	28-30th June, 2023, Participated in Poster Presentation organized by NIT Warangal	IIT (BHU)

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
23	Ankit Kumar Malik	21161012	1. 22nd International Symposium on Advances in Technology and Business Potential of New Drug Delivery Systems (Controlled Release Society)	1st March 2024 at Mumbai	PMRF
24	Jatin	22162023	International Conference on New Horizons in Drugs, Devices & Diagnostics	14-16th September 2023, NIPER Hyderabad & Kanha Shanti Vanam, Hyderabad	Institutional STGS (IIT BHU)
25	Nilesh Gajanan Bajad	21161501	AD/PD 2024: International Conference on Alzheimer's and Parkinson's Diseases and related neurological disorders	05-09th March 2024, Lisbon, Portugal.	SERB
26	Powsali Ghosh	21161503	3rd International Conference on Antimicrobial Resistance, Novel Drug Discovery and Vaccine Development: Challenges and Opportunities	18-20th March, 2024 at India Habitat Centre, New Delhi.	Student Travel Grant Support (STGS), IIT(BHU)

Names of students/scholars who got prizes and awards outsidethe Institute

Sl. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Debadatta Mohapatra	19161016	Best poster presentation award	25th November, 2023, GLA University, Mathura, Uttar Pradesh, India	Innovations in Chemical, Biological and Pharmaceutical Sciences (ICBPS-2023), GLA University, Mathura, India.
2	Devansh Jain	21164010	Visiting Scholar & Young Scientist Program '23	31st July 2023, Seattle, Washington, USA	Blue Marble Space Institute of Science
3	Sagorika Nag	19164012	DAAD-WISE 2023 Scholarship Award, Graduate Student Application Scholarship	9th August 2023	DAAD, IBGAA
4	Shovan Naskar	22162038	Best Poster Award at IIT Bombay Biopharma Summit 2023	24th November 2023, IIT (Bombay)	Wadhwani Research Centre for Bioengineering, IIT Bombay Biopharma Summit 2023

Names of scholars/students who won Convocation/Institute Day prizes

Sl. No.	Name of Student	Roll No.	Name of Prize	Prize awarded by
1.	Ritika Srivastava	21162001	Medal for standing First at the M.Pharm. in Pharmaceutical Engineering & Technology Examination, 2023	IIT (BHU)
			Shri J.N. Kapoor Gold Medal for securing First Position at the M.Pharm. Examination, 2023.	IIT (BHU)
2	Soumya Mehta	21162002	Medal for standing First at the M.Pharm. in Pharmaceutical Engineering & Technology Examination, 2023	IIT (BHU)
			Shri J.N. Kapoor Gold Medal for securing First Position at the M.Pharm. Examination, 2023.	IIT (BHU)
3	Himanshu Verma	18164004	Medal for standing First at the 5-Year I.D.D. (B.Tech.-M.Tech.) in Pharmaceutical Engineering and Technology Examination, 2023	IIT (BHU)
4	Pragya Agarwal	19165041	Medal for standing First at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023.	IIT (BHU)
			Aruna and Malviya Medal for standing First at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023.	IIT (BHU)
			Late Sundari Devi Gold Medal for securing highest CPI > 8.50 as a girl student in Pharmaceutical Engineering and Technology at the B.Tech. Examination, 2023	IIT (BHU)
			Shri J.N. Kapoor Gold Medal for securing First position at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023	IIT (BHU)
			Late Prof. G.P. Srivastava (Prize Rs. 200/= in the form of books) for standing First at the B.Tech. in Pharmaceutical Engineering & Technology Examination, 2023	IIT (BHU)

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
PROFESSORS			
1	Brahmeshwar Mishra (M.Pharm., Ph.D.)	1988	Pharmaceutics –Rate Controlled Novel Drug Delivery Systems, Nanotechnology based drug formulations Pharmacokinetics and Pharmacodynamics
2	Sushil Kumar Singh (M.Pharm., Ph.D.)	1989	Pharmaceutical Chemistry –Chemistry of Natural Drug Products, Synthetic Analogues and Evaluation of their Biological Activity
3	Sanjay Singh (M.Pharm., Ph.D.)- on deputation	1993	Pharmacology – Nanomedicine, PK/PD Modeling, Stress and Diabetic Pharmacology
4	Sushant Kumar Shrivastava (M.Pharm., Ph.D.)	2000	Pharmaceutical Chemistry – Rational Drug Design and Molecular Modeling
5	S. Hemalatha (M.Pharm., Ph.D.)	2005	Pharmacognosy – Pharmacognostical and Pharmacological Evaluation of Indian Medicinal Plants
6	Sairam K (M.Pharm., Ph.D.)	2003	Pharmacology – Neuropharmacology, Mitochondrial Medicine, New Drug Discovery, Organelle Targeted Drug Development
7	Senthil Raja A (M.Pharm., Ph.D.)	2009	Pharmaceutical Chemistry – Synthetic Medicinal Chemistry, Computational Chemistry, Lead identification and Optimization
8	M.S. Muthu (MS., Ph.D.)	2010	Pharmaceutics –Cancer Nanotechnology, Theranostics, Anti-psychotic nanomedicine
ASSOCIATE PROFESSORS			
1	Alakh Niranjan Sahu (M.Pharm., Ph.D.)	2014	Development and characterization of rational novel drug delivery systems and nanomaterials from natural products for therapeutic and environmental utilities
2	Ruchi Chawla (M.Pharm., Ph.D)	2016	Pharmaceutics – Nano-drug Delivery System and Pharmacokinetics
3	Gyan Prakash Modi (M.Pharm., Ph.D.)	2013	Pharmaceutical Chemistry – Design, Development of Novel Drugs to Treat Infections and CNS Disorders
4	Vinod Tiwari (M.Pharm., Ph.D.)	2012	Pharmacology: Cellular molecular mechanisms driving Neuropathic Pain, Role of reward circuitry in Chronic Pain, Targeting Kinesins for the treatment of neuropathic pain
5	Ashish Kumar Agrawal (M.Pharm, Ph.D.)	2015	Pharmaceutical Nanotechnology and drug delivery
6	Shreyans Kumar Jain (MS, Ph.D.)	2015	Medicinal Chemistry of Natural Products
ASSISTANT PROFESSORS			
1	Sunil Kumar Mishra (M.Pharm., Ph.D.)	2013	Pharmacognosy – Medicinal & Aromatic Plants (MAP) Research, MAP Tissue Culture, Natural Drugs
2	Prasanta Kumar Nayak (M.Pharm., Ph.D.)	2013	Pharmacology –Brain injury; Memory impairment; Breast cancer; Gallbladder cancer
3	Rajnish (MPharm, Ph.D)	2014	Pharmaceutical and Medicinal Chemistry
4	Deepak Kumar (M.Pharm., Ph.D.) Ramalinga Swami Fellow	2016	Medicinal Chemistry, natural product chemistry, bioluminescent chemistry
5	Dinesh Kumar (M.Pharm., Ph.D.)	2017	Crystal engineering of APIs, Solid state pharmaceutical research, Understanding of pharmaceutical APIs, formulations and their processing
6	Jairam Meena (M.Pharm., Ph.D.)	2016	Pharmacology-Vaccine Immunology, Immunotherapy, Drug Delivery
SENIOR RESEARCH OFFICER			
1.	Ashok Kumar (M.Sc., Ph.D.)	1993	Pharmaceutical Chemistry – Synthesis and Characterization of Novel Compounds
DST INSPIRE/Ramalingaswami Faculty			
1.	Arun Khattri, Ph.D.	2010	Cancer Biology, bioinformatics and human genetics

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation & Employee No.	Date of Appointment in the department
Office Staff			
1	Sh. Bipin Kumar Pandey, M.A.	Superintendent, 50158	11.09.2023
2	Sh. Siddhant Jha, B.Tech. (EC)	Junior Assistant, 50397	10.01.2024
3	Sh. Yashwant Singh, M.A.	Skilled Clerical Staff (Ex cadre)	27.04.2015
4	Sh. Anand Kumar, B.A.	Caretaker cum Clerk	06.12.2016
5	Sh. Anand Kumar Gond, Intermediate	Unskilled	26.04.2024
Library Staff			
1	Sh. Naveen Kumar,Diploma in Mechanical Engg	Technical Assistant (Skilled)	19.08.2021
Laboratory Staff			
1	Smt. Archana Singh, M.Sc	Senior Technical Superintendent,18747	15.12.2008
2	Sh. Virendra Kumar, I Sc.	Technical Superintendent, 14187	15.10.1998
3	Sh. Arun Kumar, Intermediate	Junior Technical Superintendent, 18624	02.07.1996
4	Sh. Akhila Nand Upadhyay, B. Sc., D. Pharm.	Junior Technical Superintendent, 18628	07.08.2008
5	Sh. Mohd. Jameel, Intermediate	Junior Technical Superintendent, 18633	02.07.1996
6	Sh. Amit Kumar, Intermediate	Junior Technical Superintendent, 17371	03.12.2015
7	Sh. Sunil Kumar Singh, Diploma in Electrical Engineering	Junior Technical Superintendent, 19269	20.12.2013
8	Sh. Lakshmi Narayan Dhara M. Tech (Mechanical Engineering)	Junior Technician, 50402	18.12.2023

Short-term courses/workshops/seminars/symposia/conferences organized by faculty members

Sl. No.	Coordinator	Title	Period
1.	Prof. S. K. Shrivastava	"औषधविज्ञानकीअद्यतनप्रौद्योविकी: तितमानऔरभविष्य",	SERB Sponsored Hindi Sangoshti (National Symposium) – 27th May, 2023
2.	Dr. Vinod Tiwari	Exploring New Avenues and Innovations in Drug Discovery	27-28 October, 2023
3.	Dr. Rajnish Kumar	SERB sponsored one-day workshop on Modern Medicinal Chemistry Advancements in Drug Discovery	15 December 2023
4.	Dr. Rajnish Kumar	I-DAPT Hub Foundation IIT (BHU) sponsored Short-Term-Course (STC) on Transforming Healthcare with AI-Driven Drug Discovery	18-22 December 2023
5.	Dinesh Kumar	Hands on training on "Particle Size, Shape Analysis assisted by AI/ML in Pharmaceutical Formulation and Development	29 Sep 2023
6.	Dinesh Kumar	International Conference on Pharmaceutical Innovations and Spirit: The Annual Techno Pharma Conclave	06-07th April 2024
7.	Dr. Jairam Meena (Co-coordinator)	International conference on pharmaceutical innovations & sprit: The annual techno-pharma conclave	06-07th April 24

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Prof. M.S. Muthu	Cancer theranostics: Nanomedicine, Targeting, Imaging and Therapy	23 April 2024 at IIT Roorkee
2	Dr. Alakh Niranjan Sahu	2-Weeks Patent course (equivalent to 30 hours workload) - Online	09.10.2023 to 22.10.2023, organised by Turnip Innovations, Kolkata, India.
3	Dr. Vinod Tiwari	Alternatives to animal experiments: Exploring imminent possibilities in preclinical drug discovery using computational tools	01-03 November, 2023
4	Dr. Prasanta Kumar Nayak	Depression and psychosomatic disorders- Alternative Treatments and Lifestyle	21.10.2023 to 30.10.2023 Global Institute for Human Cognizance Advancement, Manav Chetna Vikash Kendra, Indore, Madhya Pradesh
5	Dr. Deepak Kumar	CD4-2023 Conferences on drug development and drug delivery.	21- 22 November 2023 University of Lucknow, Lucknow, INDIA
6	Dr. Deepak Kumar	Ramalingaswami Re-entry Fellowship (RRF) Expert Committee meeting (virtually)	29th & 30th January 2024
7	Dr. Rajnish Kumar	Young India Investigator's Meeting 2024	11-15 March, 2024 IISER Bhopal
8	Dr. Dinesh Kumar	Impact of Crystal Disorders on pharmaceutical solid dosage forms	International Conference of "Nanomechanics for Pharmaceutical Applications-2023", 17-18 Dec 2023, in Hyderabad, India

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	Prof. Brahmeshwar Mishra	Risk management for Effective Medication	HRDC, BHU	28-08-2023
2	Prof. Brahmeshwar Mishra	Risk management for Effective Medication	HRDC, BHU	25-09-23
3	Prof. Brahmeshwar Mishra	Risk management for Effective Medication	HRDC BHU	01-12-2023
4	Prof. S.K. Shrivastava	"Exploring New Avenues and Innovations in Drug Discovery"	IIT-BHU	27-10-202 3-28.10.2023
5	Prof. Senthil Raja A	Overview of emerging computational methods in modern drug discovery	IIT BHU Varanasi	19-12-2023
6	Prof. Senthil Raja A	In Silico Drug Discovery Tools – An overview	Vivekanandha Pharmacy College for Women, Sankagiri, Salem (TN)	23-06-2023
7	Prof. M.S. Muthu	Cancer theranostics: Nanomedicine, Targeting, Imaging and Therapy	IIT Roorkee	23-04-2024
8	Dr. Alakh Niranjan Sahu	Hydrothermal-engineered biomass-derived carbon nanodots for antioxidant and metal-sensing activity	NIT Srinagar (8th edition of International conference on Nanotechnology for Better Living NBL-2023)	25-05-2023-29.05-2023
9	Dr. Ruchi Chawla	Conventional and Novel drug delivery systems	Department of Prasuti Tantra, Faculty of Ayurveda I.M.S., B.H.U. VARANASI	11-08-2023 & 16-12-2023
10	Dr. Gyan Prakash Modi	Development of naturally inspired novel therapeutic and diagnostic agents for Alzheimer's disease.	Jiwaji University, Gwalior, Indian academy of Neuroscience meeting	04-10-2023 to 06-10-2023
11	Dr. Gyan Prakash Modi	Discovery of novel smart NIRF fluorescent materials as diagnosis and theranostic agents for Alzheimers disease.	NIPER-RBL (online)	29-11-2023

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
12	Dr. Gyan Prakash Modi	Discovery of Natural Product-Based Therapeutic and Theranostics Agents for Alzheimer's Disease	AIIMS, Patna	25-02-2024
13	Dr. Vinod Tiwari	Peripheral G Protein-Coupled Receptors (GPCRs): A potential Target for the treatment of neuropathic pain	Manipal College of Pharmaceutical Sciences, Manipal, Karnataka, India.	13-03-2024
14	Dr. Vinod Tiwari	Writing to Win: Strategies for Effective Publication in Academic and Scientific	Sandip University, School of Pharmaceutical Sciences, Nashik Maharashtra.	12-03-2024
15	Dr. Vinod Tiwari	Essential Techniques for Characterization and Evaluation of Materials	National Institute of Ayurveda, Jaipur	02-03-2024
16	Dr. Vinod Tiwari	Stereotaxic & Optogenetics: Applications in Neuroscience Research	National Institute of Medical Sciences (NIMS), Jaipur	01-03-2024
17	Dr. Vinod Tiwari	Development of a Clinically Mimicable Model for Studying Chemotherapy Induced Neuropathic Pain	SNCI (Society for Neurochemistry, India) Symposium in Hyderabad India	03-02-2024
18	Dr. Vinod Tiwari	Role of Animal Models in Neurodegenerative Disorders	Department of Pharmacy, BITS Pilani – Pilani Campus from	28-10-2023 to 02-11-2023
19	Dr. Vinod Tiwari	Why Your PAIN Matters? Unlocking Chronic Pain's Secrets: A Path to Drug Development	Department of Chemical and Biochemical Engineering, Indian Institute of Technology Patna, Bihar	19-10-2023
20	Dr. Vinod Tiwari	Emerging trends in Pharmacovigilance: Challenges and Opportunities	Narayan Institute of Pharmacy, Gopal Narayan Singh University, Jamuhar, Rohtas, Bihar	23-09-2023
21	Dr. Vinod Tiwari	Cellular and Molecular Mechanism of Chronic Pain and Screening of Novel Analgesics	Department of Pharmaceutical Engineering & Technology Meerut Institute of Engineering & Technology (MIET), Meerut.	23-06-2023
22	Dr. Shreyans Kumar Jain	Unnat Bharat Abhiyan and Woman Empowerment	Maharana Pratap College Gorakhpur	10-01-2024
23	Dr. Shreyans Kumar Jain	Impact on natural products on drug discovery	Jai Narain Vyas University Jodhpur	09-12-2023
24	Dr. Shreyans Kumar Jain	Plant Secondary metabolites	Lachoo memorial College of Science &Technology Jodhpur	08-12-2023
25	Dr. Shreyans Kumar Jain	Cow Urine Metbolomics	Gauvigyan Anushandhan Kendra Devlapara at Gayatrdham Sendhwa, Indore	02-11-2023
26	Dr. Shreyans Kumar Jain	Computational Resources and Databases for Natural Product	Invertis University Bareilly	17-07-2023 to 22-07-2023
27	Dr. Deepak Kumar	Exploiting the potential of antibacterial metabolites of marine origin for type II NADH dehydrogenases inhibitors against Mycobacterium tuberculosis	NIOT-Chennai/Online Mode	28-03-2023
28	Dr. Rajnish Kumar	Structure-based discovery and development of novel lead candidates against tauopathy in neurodegenerative diseases	Institute of Protein Research, Osaka University, Osaka, Japan	15-06-2023
29	Dr. Dinesh Kumar	Crystallization as Unit process	Trinity College Dublin, Ireland (Online)	11-10-2023

Honours and awards

Sl. No.	Name of Faculty Member	Details of Award
1	Prof. Brahmeshwar Mishra	Awarded with Professor M L Schroff Memorial Pharma Ratan Award during National Pharma Summit 2023 Pharma Lok on November 26 at Lemon Tree Hotel East Delhi.
2	Dr. Alakh N Sahu	Dr. P.D. Sethi Memorial Annual National Awards 2022 Issued by Anchhrom Enterprises Pvt. Ltd. Mumbai, India for "Best Research Paper on the Application of TLC/HPTLC in Pharmaceutical, Herbal, and other Chemical Analysis"
3	Dr. Gyan Prakash Modi	Young scientist award by Indian academy of biomedical science (IABS)
4	Dr. Vinod Tiwari	Appointed as Editor in BMC Neuroscience
5	Dr. Vinod Tiwari	Appointed as Associate Editor in The Regional Anesthesia & Pain Medicine (RAPM) is the official publication of the American Society of Regional Anesthesia and Pain Medicine (ASRA)
6	Dr. Vinod Tiwari	Invitation by Korean Pain Society to deliver Special Lecture during 77th Scientific Meeting of the Korean Pain Society, held at Gwangju, South Korea
7	Dr. Vinod Tiwari	Appointment as link Nominee for Baba Raghav Das (B.R.D) Medical College, Gorakhpur, Uttar Pradesh by Committee for Control and Supervision of Experiments on Animals (CCSEA)
8	Dr. Vinod Tiwari	CCSEA member of the Animal Ethical Committee of the R.K. Pharmacy College Sathiaon Azamgarh, January 2024.
9	Dr. Vinod Tiwari	Appointed as Society for Neurochemistry, India (SNCI) Coordinator for Varanasi Chapter, January 2024.
10	Dr. Vinod Tiwari	Awarded with Prestigious IBRO Neuroscience School Funding for organizing the upcoming IBRO-APRC School in October 2024 at the Indian Institute of Technology (B.H.U), Varanasi, India
11	Dr. Vinod Tiwari	Travel Award by the Indian Academy of Neuroscience for Attending and delivering talk at NEURO2024, The 47th Annual Meeting of the Japan Neuroscience Society in Fukuoka, Japan
12	Dr. Vinod Tiwari	Invited Talk at IBRO-APRC Neuroscience School in Hyderabad, India (December 2023)
13	Dr. Deepak Kumar	Our work published in *ChemistrySelect* on behalf of Chemistry Europe, has received enough downloads to rank within the top 10% of papers published (Small Molecule Fluorescent Probes for Sensing and Bioimaging of Nitroreductase, ChemistrySelect 2022, 7, e202102895)
14	Dr. Deepak Kumar	Our article received most featured article of RSC Medicinal Chemistry issue 3 recognition. (Cytochrome bd oxidase: an emerging anti-tubercular drug target, RSC Med. Chem., 769-787,15, 2024)

Fellowships of academic and professional societies

Sl. No.	Name of Faculty Member	Details of Fellowship
1	Prof. Sushil Kumar Singh	Fellow of Royal Society of Chemistry, United Kingdom.
2	Dr. Gyan Prakash Modi	Fellowship Indian Chemical Society

Books, monographs authored/co-authored

Sl. No.	Name of Author/Co- Author	Title	Publisher
1	Chaurasia S, Mishra B.	Synthetic polymers as biomaterials for the treatment of colon diseases	Academic Press
2	Manjit M, Mishra B.	Synthetic Polymer-Based Hydrogels for Tissue Engineering.	Springer Nature
3	Mishra B., and Jha A.	Gastroretentive drug delivery.	N K Jain
4	Mishra B., and Bharti K.	Biopharmaceutical and pharmacokinetic considerations	N K Jain
5	Kumar M., Jha A., Bharti K., and Mishra B.	Polysaccharide-based antimicrobial hydrogels as wound dressing materials.	Elsevier
6	Mittal, P., Chopra, H., Kapoor R., and Mishra B.	Polysaccharide-based responsive hydrogels for nerve regeneration.	Elsevier
7	Mittal, P., Chopra, H., Kapoor R., and Mishra, B.	Polysaccharide-based hydrogel scaffolds for the regeneration of pancreatic beta cells to treat diabetes.	Elsevier

Sl. No.	Name of Author/Co- Author	Title	Publisher
8	Mishra B., and Singh J.	Chemical Stimuli Responsive Nanotherapeutics for Cancer Management: Current Status and Future Perspectives	Cambridge Scholars
9	Yenisetti, S. C., Koza, Z., Kumar, D., Singh, S. K., & Ganeshpurkar, A.	Parkinson's Disease: Animal Models, Current Therapies and Clinical Trials	Intechopen.
10	Mehata AK, Dehari D, Priya V,Vikas, Muthu MS	Drug-releasing textile materials: current developments and future perspectives	Elsevier
11	Setia A, Mehata AK, Priya V, Malik AK, Muthu MS	Synthesis and processing methods of magnetic nanosystems for diagnostic tools and devices: Design strategies and physicochemical aspects. In Functionalized Magnetic Nanosystems for Diagnostic Tools and Devices	Elsevier
12	Mehata AK, Viswanadh MK, Prasanna P, Kumar M, Muthu MS.	Theranostic Applications of Upconversion Nanoparticle-Based Drug-Delivery Systems. InNanomaterial-Based Drug Delivery Systems: Therapeutic and Theranostic Applications	Springer Nature
13	Vikas, Mehata AK, Singh C, Malik AK, Setia A, Muthu MS	Alginate-Based Hydrogels as Drug Carriers. InBiomaterial-based Hydrogels: Therapeutics Carrier and Tissue Regeneration	Springer Nature
14	Mehata AK, Muthu MS	Development of supramolecules in nanomedicine	Springer Nature
15	Gaurav Gopal Naik, Alakh N. Sahu, Vichitra Kaushik, Atul Kaushikand Biresh Kumar Sarkar (2023)	Phytopharmaceuticals and Herbal Drugs - Prospects and Safety Issues in the Delivery of Natural Products	Elsevier
16	Ruchi Chawla, Krishan Kumar, Mohini Mishra, Varsha Rani	Chapter: COVID-19 Therapy: Molecular Mechanisms, Pharmacological Interventions and Therapeutic Targets Interaction of Coronavirus Disease 2019 with other Infectious and Systemic Diseases	CRC Press
17	Abha Sharma and Gyan Prakash Modi	Natural Product-based Synthetic Drug Molecules in Alzheimer's Disease: Therapeutic & Theranostic Agents	Springer Nature
18	Gourav Singh, Nishant Kumar Rana, Indubhusan Mishra, Gyan Prakash Modi, Springer Nature	Ferroptosis modulators: A potential therapeutic target in Alzheimer's disease	Springer Nature
19	Vinod Tiwari	Delineating the neuroinflammatory crosstalk in neurodegeneration and probing the near future therapeutics	Traditional Medicine for Nutritional Health Bentham Science. pp.24-46.
20	Samarpita Das, Pulkit Asati, Harish K. Indurthi, Ashutosh Kumar Dash and Deepak K. Sharma	Recent Trends in synthesis of chromene Syntheses	Benthem Science
21	Bharti Devi, Anurag TK Baidya, Rajnish Kumar	Community Benchmarking Exercises for Docking and Scoring	Wiley-VCH GmbH
22	Bhanuranjan Das, Anurag TK Baidya, Rajnish Kumar	Polyphenol: Development of Polyphenol-Inspired Derivatives Targeting Pathological Factors of AD	Springer Nature

Editorial boards of journals

Sl. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Prof. S.K. Shrivastava	Editorial Board Member	Bioorganic Chemistry (BOC) – Elsevier Publisher
2	Dr. Ruchi Chawla	Guest Editor	JoVE (Journal of Visualized experiments)
3	Dr. Ruchi Chawla	Member	British Society of Nanomedicine
4	Dr. Vinod Tiwari	Associate Editor	Frontiers in Endocrinology
5	Dr. Vinod Tiwari	Associate Editor	Frontiers in Behavioral Neuroscience
6	Dr. Vinod Tiwari	Associate Editor	Regional Anaesthesia & Pain Medicine
7	Dr. Vinod Tiwari	Editor	BMC Neuroscience

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1	Sushil Kumar Singh	Novel sulfonamide derivatives of para-amino benzoic acid as selective Butyrylcholinesterase (BuChE) inhibitors for the treatment of Alzheimer's disease, Patent Number :533010, Date of grant: 15/04/2024.
2	Sushil Kumar Singh	Novel Quinolinyl piperazine derivatives as dual inhibitors of **β** secretase (BACE1) and acetylcholine esterase (AChE) for the management of Alzheimer's disease, Patent Number: 535704, Date of grant: 29/04/2024.
3	Sushil Kumar Singh	Multitarget-directed triazole bridged cycloaryl analogues for the treatment of Alzheimer's disease, Patent Number: 527730, Date of grant: 15/03/2024.
4	Sushil Kumar Singh	Novel Adamantyl analogues as Multitargeting agent for the treatment of Alzheimer's Disease, Patent Number: 445788, Date of grant: 18/08/2023.
5	Sushil Kumar Singh	Novel Triazole Adamantyl analogues as Multitargeting agent for the treatment of Alzheimer's Disease, Patent Number: 446612, Date of grant: 23/08/2023.
6	S.K. Shrivastava	Carbonyldiimidazole as a "CO" surrogate for the synthesis of symmetrical ureas and its use as anti-Alzheimer's agent
7	Ruchi Chawla and Mohini Mishra	Solid lipid nanoparticles of Epigallocathechin-3-gallate and Gemcitabine as the effective treatment against cancer.
8	Ruchi Chawla and Krishan Kumar	Dual targeting pH responsive chitosan nanoparticles for targeted delivery of gemcitabine in NSCLC.
9	Ashish Kumar Agrawal	Pharmaceutical Composition of folic Acid conjugated Docetaxel/Erlotinib loaded solid lipid Nanoparticles
10	Rajnish Kumar	A Heterocyclic Substituted Dicarbonyl Compound and a Method of Synthesis Thereof
11	Rajnish Kumar	An Amide Linkage-Based Heterocyclic Derivative and a Method of Preparation Thereof
12	S. K. Singh, A. Kumar, A. Ganeshpurkar, D. Kumar, R. Singh, P. Gore, G. Gutti	Novel sulfonamide derivatives of para-amino benzoic acid as selective Butyrylcholinesterase (BuChE) inhibitors for the treatment of Alzheimer's disease. Patent Number :533010, Date of grant: 15/04/2024
13	S. K. Singh, A. Kumar, D. Kumar, D. Kumar, G. Gutti, A. Ganeshpurkar	Novel Quinolinylpiperazine derivatives as dual inhibitors of **β** secretase (BACE1) and acetylcholine esterase (AChE) for the management of Alzheimer's disease. Patent Number: 535704, Date of grant: 29/04/2024
14	S. K. Singh, A. Kumar, G. Gutti, A. Ganeshpurkar, D. Kumar, R. Singh	Multitarget-directed triazole bridged cycloaryl analogues for the treatment of Alzheimer's disease. Patent Number: 527730, Date of grant: 15/03/2024
15	S. K. Singh, A. Kumar, D. Kumar, D. Kumar, R. Singh, A. Ganeshpurkar, A. Tripathi	Novel Adamantyl analogues as Multitargeting agent for the treatment of Alzheimer's Disease. Patent Number: 445788, Date of grant: 18/08/2023
16	S. K. Singh, A. Kumar, D. Kumar, D. Kumar, R. Singh, A. Ganeshpurkar, A. Tripathi	Novel TriazoleAdamantyl analogues as Multitargeting agent for the treatment of Alzheimer's Disease. Patent Number: 446612, Date of grant: 23/08/2023

Research and Consultancy

Sponsored research projects *(Ongoing only)*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	Design and Development of potential multifunctional molecular hybrids for the treatment of 1. Alzheimer's disease	2022-2025	SERB CRG	28,28,600.00	Prof. S.K. Shrivastava
2	Design and Development of Molecular Hybrids in a multifunctional framework for regulating 2. cholinesterases, β-secratase 1, Amyloid β and oxidative stress against Alzheimer's disease	2021-2024	ICMR	61,31,395.00	Prof. S.K. Shrivastava
3	3. Development of enzyme enhancement treatment for neuronopathic Gaucher disease.,	2023-2026	ICMR	70,62,250.00	Prof. Sairam Krishnamurthy
4	Development of regenerative nanofibrous bioactive conduit for treatment of spinal cord injury.Cost	2023-2026	ICMR	98,41,584.00	Prof. Sairam Krishnamurthy

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
5	Evaluation of Coded drug Ayush Rasayana B for treatment of high-altitude sickness using multi-dimensional drug discovery approach.	2024-2025	CCRAS	61,73,440	Prof. Sairam Krishnamurthy
6	Synthesis and evaluation of diverse n-functionalized hybrids as muti-target directed ligands for neuroprotective and neurorestorative therapies	2019-2024	MoE, STARS	75,30,000	Prof. Senthil Raja A
7	Defining the AMR burden of antimicrobial manufacturing waste in Puducherry and Chennai	4 years	DBT	106,50,000	Prof. M.S. Muthu
8	Self-assembled smart nanomedicine for targeted therapy of advanced non-small cell lung cancer	3 years	ICMR	21,27,000.00	Prof. M.S. Muthu
9	Preparation & characterization of natural products derived self-surface functionalized carbon dots for oral cancer theranostics	2022-2025	CST, UP	11,94,000.00	Dr. Alakh N Sahu
10	Development and evaluation of Intra-nasal nanocarriers for the treatment of Alzheimer's disease	2024-2027	ICMR	60,96,000.00	Dr. Ruchi Chawla
11	Design, synthesis, and biological evaluation of mechanism-based novel theranostic agents for Alzheimer's disease	2023-2026	SERB-CRG	44,24,400.00	Dr. Gyan Prakash Modi
12	Design, synthesis, and biological evaluation of novel photo-switchable ligands to probe role of cholinesterases in Alzheimer's disease	2024-2027	SERB-TARE	Fund release awaited	Dr. Gyan Prakash Modi
13	Development of exosome-based drug delivery system for naturally inspired novel multifunctional neuroprotective molecules and their biological evaluation in Alzheimer's disease models	2023-2026	ICMR	55,59,246.00	Dr. Gyan Prakash Modi
14	Development of Biopolymer based Peptide and Flavonoid Co-Loaded Chitosan Oral Nanosuspension: A novel dual drug therapy approach to manage Type 2 Diabetes	2024-2026	DBT	56,00,000.00	Dr. Vinod Tiwari
15	Study on therapeutic and preventive efficacy of linoleic acid in hamster model of visceral leishmaniasis	2022-2024	ICMR	18,00,000.00	Dr. Vinod Tiwari
16	Development of Peripherally Acting Nanoformulation of Opioids for the Treatment of Neuropathic Pain	2023-2024	CST-UP	7,080,00.00	Dr. Vinod Tiwari
17	Pharmacological exploration and repurposing of an anti-malarial drug for the treatment of triple-negative breast cancer using bovine milk exosomes as a delivery vehicle	2023-2026	ICMR	50,63,000.00	Dr. Ashish Kumar Agrawal
18	Folic acid-functionalized drug cocktail loaded lipid Nano-constructs for ameliorating the triple-negative breast cancer therapy	2023-2026	ICMR	32,63,000.00	Dr. Ashish Kumar Agrawal
19	Milk-Derived Exosomes as Drug Delivery Vehicles for Cancer Therapies	2023-2024	SERB	24,20,000.00	Dr. Ashish Kumar Agrawal
20	Microbial diversity and biotechnological potentials of antarctic deep biosphere	2022-2025	DST	31,66,000.00	Dr. Ashish Kumar Agrawal
21	Exploring Anti-infective Potential of Panchagavya: Metabolomics and Proteomics Approaches	2022-2025	DST	65,43,378.00	Dr. Shreyans Kumar Jain
22	Targeting CDK9 by coumarin based inhibitors: Design, Preparation and Biological Evaluation	2023-2026	SERB (CRG)	30,46,740.00	Dr. Shreyans Kumar Jain
23	Bioluminescence based monitoring of tumor progression and treatment by apoptotic pathway	2019-2025	DBT	42,50,000.00	Dr. Deepak Kumar
24	Targeting cytochrome bd oxidase (cyt-bd) inhibitor for the development of rational drug combination for complete sterilization of Mycobacterium tuberculosis	2024-27	ICMR	71,03,000.00	Dr. Deepak Kumar
25	Exploiting synthetic lethality of type II NADH dehydrogenases for complete sterilization of Mycobacterium tuberculosis.	2024-27	ICMR	79,40, 000.00	Dr. Deepak Kumar
26	Development of a toolkit for prediction of blood-brain-barrier permeability using deep learning to expedite CNS drug discovery	2022-2024	SERB-MATRICS	6,60,000.00	Dr. Rajnish Kumar
27	Exploring the utility of co-processing techniques to produce DPI formulations	2023-2024	DDL, Austria	4,93,000.00	Dr. Dinesh Kumar
28	Multiepitope nanoglycoconjugate vaccine development against Mycobacterium tuberculosis	2024-2027	SERB	35,00,000.00	Dr. Jairam Meena

Industrial consultancy projects *(Ongoing only)*

Sl. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
1	Dr. Vinod Tiwari	Development of Novel Therapeutics for the treatment of chronic pain	Shivanka Research LLC 20236	14.89 Lacs

Faculty members' participation with other universities under MoUs *(Ongoing only)*

Research Publications

Sl. No.		No.
1	Total Number of Papers Published in Refereed National Journals	2
2	Total Number of Papers Published in Refereed International Journals	229
3	Total Number of Papers Presented in National Conferences	7
4	Total Number of Papers Presented in International Conferences	11

Refereed International Journals

1. Jha, A., Kumar, M., Bharti, K., Manjit, M., & Mishra, B. (2024). Biopolymer-based tumor microenvironment-responsive nanomedicine for targeted cancer therapy. Nanomedicine, 19(7), 633-651.
2. Kumar, M., Jha, A., & Mishra, B. (2024). DNA-Based Nanostructured Platforms as Drug Delivery Systems. Chem & Bio Engineering.
3. Biswas, A. A., Dhondale, M. R., Agrawal, A. K., Serrano, D. R., Mishra, B., & Kumar, D. (2024). Advancements in microneedle fabrication techniques: artificial intelligence assisted 3D-printing technology. Drug Delivery and Translational Research, 1-22.
4. Gupta, A., Shetty, S., Mutalik, S., Nandakumar, K., Mathew, E. M., Jha, A., ... & Moorkoth, S. (2023). Treatment of H. pylori infection and gastric ulcer: Need for novel Pharmaceutical formulation. Heliyon, 9(10).
5. Manjit, M., Kumar, K., Kumar, M., Jha, A., Bharti, K., Tiwari, P., ... & Mishra, B. (2024). Fabrication of gelatin coated polycaprolactone nanofiber scaffolds co-loaded with luliconazole and naringenin for treatment of Candida infected diabetic wounds. International Journal of Biological Macromolecules, 261, 129621.
6. Manjit, M., Kumar, M., Kumar, K., Dhondale, M. R., Jha, A., Bharti, K., ... & Mishra, B. (2024). Fabrication of dual drug-loaded polycaprolactone–gelatin composite nanofibers for full thickness diabetic wound healing. Therapeutic Delivery, 15(1), 5-21.
7. Manjit, M., Kumar, M., Jha, A., Bharti, K., Kumar, K., Tiwari, P., ... & Mishra, B. (2024). Formulation and characterization of polyvinyl alcohol/chitosan composite nanofiber co-loaded with silver nanoparticle & luliconazole encapsulated poly lactic-co-glycolic acid nanoparticle for treatment of diabetic foot ulcer. International Journal of Biological Macromolecules, 258, 128978.
8. Bharti, K., Deepika, D., Kumar, M., Jha, A., Manjit, Akhilesh, ... & Mishra, B. (2023). Development and Evaluation of Amorphous Solid Dispersion of Riluzole with PBPK Model to Simulate the Pharmacokinetic Profile. AAPS PharmSciTech, 24(8), 219.
9. Bharti, K., Dubey, G., Kumar, M., Jha, A., Upadhyay, M., Mali, P. S., ... & Mishra, B. (2023). A multifaceted approach for grading of polymers for the development of stable amorphous solid dispersion of Riluzole. Journal of Drug Delivery Science and Technology, 90, 105158.
10. Upadhyay, M., Hosur, R. V., Jha, A., Bharti, K., Mali, P. S., Jha, A. K., ... & Kumar, A. (2023). Myricetin encapsulated chitosan nanoformulation for management of type 2 diabetes: Preparation, optimization, characterization and in vivo activity. Biomaterials Advances, 153, 213542.
11. Alam, Q., Ganeshpurkar, A., Singh, S. K., & Krishnamurthy, S. (2023). Novel Gastroprotective and Thermostable Cocrystal of Dimethyl Fumarate: Its Preparation, Characterization, and In Vitro and In Vivo Evaluation. ACS omega, 8(29), 26218-26230.
12. Alam, Q., Ganeshpurkar, A., Singh, S. K., & Krishnamurthy, S. (2024). Preparation, Characterization, in-vitro and in-vivo Pharmacokinetic Evaluation of Thermostable Dimethyl Fumarate Cocrystals. Journal of Pharmaceutical Sciences, 113(3), 647-658.
13. Anand, A., Ghosh, P., Singh, R., Gajanan Bajad, N., Kumar, A., & Singh, S. K. (2023). Identification of potent histone deacetylase 2 (HDAC2) inhibitors through combined structure and ligand-based designs and molecular modelling approach. Journal of Biomolecular Structure and Dynamics, 1-20.

14. Bajad, N. G., Kumar, A., & Singh, S. K. (2023). Recent Advances in the Development of Near-Infrared Fluorescent Probes for the in Vivo Brain Imaging of Amyloid-κ Species in Alzheimer's Disease. ACS Chemical Neuroscience, 14(17), 2955-2967.

15. Bajad, N. G., Singh, R. B., Gajendra, T. A., Gutti, G., Kumar, A., Krishnamurthy, S., & Singh, S. K. (2024). Development of multi-targetable chalcone derivatives bearing N-aryl piperazine moiety for the treatment of Alzheimer's disease. Bioorganic Chemistry, 143, 107082.

16. Ganeshpurkar, A., Singh, R., Singh, M., Kumar, A., & Singh, S. K. (2023). Energy Pathways in Mycobacterium Tuberculosis. In Tuberculosis: Integrated Studies for a Complex Disease (pp. 541-569). Cham: Springer International Publishing.

17. Ghosh, P., Singh, R., Chatterjee, C., Kumar, A., & Singh, S. K. (2023). Computational screening of coumarin derivatives as inhibitors of the NACHT domain of NLRP3 inflammasome for the treatment of Alzheimer's disease. Journal of Biomolecular Structure and Dynamics, 1-17.

18. Ghosh, P., Singh, R., Ganeshpurkar, A., Swetha, R., Kumar, D., Singh, S. K., & Kumar, A. (2023). Identification of potential death-associated protein kinase-1 (DAPK1) inhibitors by an integrated ligand-based and structure-based computational drug design approach. Journal of Biomolecular Structure and Dynamics, 41(20), 10785-10797.

19. Gutti, G., Leifeld, J., Kakarla, R., Bajad, N. G., Ganeshpurkar, A., Kumar, A., ... & Singh, S. K. (2023). Discovery of triazole-bridged aryl adamantane analogs as an intriguing class of multifunctional agents for treatment of Alzheimer's disease. European Journal of Medicinal Chemistry, 259, 115670.

20. Singh, R., Anand, A., Ganeshpurkar, A., Ghosh, P., Chaurasia, T., Singh, R. B., ... & Kumar, A. (2023). Machine learning-based screening of in-house database to identify BACE-1 inhibitors. Chemical Papers, 77(11), 6849-6858.

21. Singh, R., Ghosh, P., Ganeshpurkar, A., Anand, A., Swetha, R., Singh, R. B., ... & Kumar, A. (2023). Natural-Language Processing (NLP) based feature extraction technique in Deep-Learning model to predict the Blood-Brain-Barrier permeability of molecules. Molecular Informatics, 42(10), 2200271.

22. Singh, R., Pokle, A. V., Ghosh, P., Ganeshpurkar, A., Swetha, R., Singh, S. K., & Kumar, A. (2023). Pharmacophore-based virtual screening, molecular docking and molecular dynamics simulations study for the identification of LIM kinase-1 inhibitors. Journal of Biomolecular Structure and Dynamics, 41(13), 6089-6103.

23. Jangra, J., Bajad, N. G., Singh, R., Kumar, A., & Singh, S. K. (2024). Identification of novel potential cathepsin-B inhibitors through pharmacophore-based virtual screening, molecular docking, and dynamics simulation studies for the treatment of Alzheimer's disease. Molecular Diversity, 1-21.

24. Verma, A., Waiker, D. K., Singh, N., Singh, A., Saraf, P., Bhardwaj, B., ... & Shrivastava, S. K. (2024). Lead optimization-based design, synthesis, and pharmacological evaluation of quinazoline derivatives as multi-targeting agents for Alzheimer's disease treatment. European Journal of Medicinal Chemistry, 271, 116450.

25. Tripathi, N., Saraf, P., Bhardwaj, N., Shrivastava, S. K., & Jain, S. K. (2024). Identifying inflammation-related targets of natural lactones using network pharmacology, molecular modeling and in vitro approaches. Journal of Biomolecular Structure and Dynamics, 1-16.

26. Patel, P., Shrivastava, S. K., Sharma, P., Kurmi, B. D., Shirbhate, E., & Rajak, H. (2024). Hydroxamic acid derivatives as selective HDAC3 inhibitors: computer-aided drug design strategies. Journal of Biomolecular Structure and Dynamics, 42(1), 362-383.

27. Singh, U., Laxmi, Singh, P., Singh, A. K., Singh, S., Kumar, D., ... & Asthana, R. K. (2023). In silico and in vitro evaluation of extract derived from Dunaliella salina, a halotolerant microalga for its antifungal and antibacterial activity. Journal of Biomolecular Structure and Dynamics, 41(15), 7069-7083.

28. Kiran, P. V. R., Waiker, D. K., Verma, A., Saraf, P., Bhardwaj, B., Kumar, H., ... & Shrivastava, S. K. (2023). Design and development of benzyl piperazine linked 5-phenyl-1, 2, 4-triazole-3-thione conjugates as potential agents to combat Alzheimer's disease. Bioorganic Chemistry, 139, 106749.

29. Tripathi, M. K., Bhardwaj, B., Waiker, D. K., Tripathi, A., & Shrivastava, S. K. (2023). Discovery of novel dual acetylcholinesterase and butyrylcholinesterase inhibitors using machine learning and structure-based drug design. Journal of Molecular Structure, 1286, 135517.

30. Waiker, D. K., Verma, A., Akhilesh, Singh, N., Roy, A., Dilnashin, H., ... & Shrivastava, S. K. (2023). Design, Synthesis, and Biological Evaluation of Piperazine and N-Benzylpiperidine Hybrids of 5-Phenyl-1, 3, 4-oxadiazol-2-thiol as Potential Multitargeted Ligands for Alzheimer's Disease Therapy. ACS Chemical Neuroscience, 14(11), 2217-2242.

31. Dubey, T., Bhanukiran, K., & Hemalatha, S. (2024). Development of phytosterol-loaded silver nanoparticles for ameliorating haemorrhoidal complications via the AMPK pathway—a mechanistic approach. Biomedical Materials, 19(3), 035030.
32. Ksirri, R., Khazem, M., Bhanukiran, K., & Hemalatha, S. (2024). G melina asiatica: exploring traditional uses, pharmacological insights, and phytoconstituents—a comprehensive review (1961–2023). Phytochemistry Reviews, 1-24.
33. Bhanukiran, K., & Hemalatha, S. (2024). Single crystal X-ray, DFT, molecular dynamic simulations, and biological evaluation of 3-OH pyrrolidine derivative VA10 from alkaloid vasicine for BACE1 inhibition. Journal of Molecular Structure, 1300, 137196.
34. Tiwari, V., & Hemalatha, S. (2024). Sida cordifolia L. attenuates behavioral hypersensitivity by interfering with KIF17-NR2B signaling in rat model of neuropathic pain. Journal of Ethnopharmacology, 319, 117085.
35. Hazarika, S., & Hemalatha, S. (2024). Quality control assessment, toxicity profiling, and experimental validation of network pharmacology-predicted anti-inflammatory potential of Natsiatum herpeticum Buch.-Ham. Ex Arn. Journal of Ethnopharmacology, 318, 116902.
36. Hazarika, S., Thakur, S., Jadhav, H. R., Chetia, P., Laloo, D., & Hemalatha, S. (2024). Investigation of antibacterial potential of Natsiatum herpeticum Buch.-Ham. ex Arn. using in silico-in vitro approach. South African Journal of Botany, 164, 167-179.
37. Sharma, P., Kumari, A., Singh, P., Srivas, S., Thakur, M. K., & Hemalatha, S. (2023). Pyrus pashia fruit extract and its major phytometabolite chrysin prevent hippocampal apoptosis and memory impairment in PTZ-kindled mice. Nutritional Neuroscience, 1-13.
38. Ksirri, R., Bhanukiran, K., Maity, S., Maiti, P., & Hemalatha, S. (2023). Evaluation of anticancer activity of Gmelina asiatica leaves, in-vitro and in-silico studies. Journal of Biomolecular Structure and Dynamics, 1-16.
39. Bhanukiran, K., Singh, S. K., Singh, R., Kumar, A., & Hemalatha, S. (2023). Discovery of Multitarget-Directed Ligands from Piperidine Alkaloid Piperine as a Cap Group for the Management of Alzheimer's Disease. ACS Chemical Neuroscience, 14(15), 2743-2760.
40. Chethan, H., Mohapatra, D., Sahu, A., & Hemalatha, S. (2023). Formulation Development and Evaluation of Hydrogel Containing Silver Nanoparticles with Withania coagulans Aqueous Extract. Indian Journal of Pharmaceutical Sciences, 85(4).
41. Bhanukiran, K., Singh, R., Gajendra, T. A., Ramakrishna, K., Singh, S. K., Krishnamurthy, S., ... & Hemalatha, S. (2023). Vasicinone, a pyrroloquinazoline alkaloid from Adhatoda vasica Nees enhances memory and cognition by inhibiting cholinesterases in Alzheimer's disease. Phytomedicine plus, 3(2), 100439.
42. Hazarika, S., Borah, P., Deb, P. K., Venugopala, K. N., & Hemalatha, S. (2023). Icacinaceae Plant Family: A Recapitulation of the Ethnobotanical, Phytochemical, Pharmacological, and Biotechnological Aspects. Current Pharmaceutical Design, 29(15), 1193-1217.
43. Bhanukiran, K., Gajendra, T. A., Krishnamurthy, S., Singh, S. K., & Hemalatha, S. (2023). Discovery of multi-target directed 3-OH pyrrolidine derivatives through a semisynthetic approach from alkaloid vasicine for the treatment of Alzheimer's disease. European Journal of Medicinal Chemistry, 249, 115145.
44. Hazarika, S., Hemalatha, S., & Venugopala, K. N. (2023). Phytochemical Screening, Acute Toxicity Study, and Pharmacological Evaluation of Natsiatum herpeticum Buch. Ham. ex Arn. Ind. J. Pharm. Edu. Res, 57(4), 1098-1103.
45. Majumdar, S., Tiwari, A., Mallick, D., Patel, D. K., Trigun, S. K., & Krishnamurthy, S. (2024). Oral Release Kinetics, Biodistribution, and Excretion of Dopants from Barium-Containing Bioactive Glass in Rats. ACS omega.
46. Verma, A., Waiker, D. K., Singh, N., Singh, A., Saraf, P., Bhardwaj, B., ... & Shrivastava, S. K. (2024). Lead optimization based design, synthesis, and pharmacological evaluation of quinazoline derivatives as multi-targeting agents for Alzheimer's disease treatment. European Journal of Medicinal Chemistry, 271, 116450.
47. Waiker, D. K., Verma, A., Gajendra, T. A., Roy, A., Kumar, P., Trigun, S. K., ... & Shrivastava, S. K. (2024). Design, synthesis, and biological evaluation of some 2-(3-oxo-5, 6-diphenyl-1, 2, 4-triazin-2 (3H)-yl)-N-phenylacetamide hybrids as MTDLs for Alzheimer's disease therapy. European Journal of Medicinal Chemistry, 271, 116409.
48. Singh, A., Verma, A., Bhardwaj, B., Saraf, P., Kumar, H., Jain, N., ... & Shrivastava, S. K. (2024). Structure-Guided Design, Synthesis, and Biological Evaluation of Peripheral Anionic Site Selective and Brain Permeable Novel Oxadiazole-Piperazine Conjugates against Alzheimer's Disease with Antioxidant Potential. ACS omega, 9(16), 18169-18182.

49. Prajapati, S. K., Ahmed, S., Rai, V., Gupta, S. C., & Krishnamurthy, S. (2024). Suvorexant improves mitochondrial dynamics with the regulation of orexinergic and mTOR activation in rats exhibiting PTSD-like symptoms. Journal of Affective Disorders, 350, 24-38.

50. Rai, H., Singh, R., Bharti, P. S., Kumar, P., Rai, S., Varma, T., ... & Modi, G. (2024). Rhodanine composite fluorescence probes to detect pathological hallmarks in Alzheimer's disease models. Sensors and Actuators B: Chemical, 407, 135364.

51. Bajad, N. G., Singh, R. B., Gajendra, T. A., Gutti, G., Kumar, A., Krishnamurthy, S., & Singh, S. K. (2024). Development of multi-targetable chalcone derivatives bearing N-aryl piperazine moiety for the treatment of Alzheimer's disease. Bioorganic Chemistry, 143, 107082.

52. Verma, A., Waiker, D. K., Singh, N., Roy, A., Singh, N., Saraf, P., ... & Shrivastava, S. K. (2024). Design, Synthesis, and Biological Investigation of Quinazoline Derivatives as Multitargeting Therapeutics in Alzheimer's Disease Therapy. ACS Chemical Neuroscience.

53. Firdaus, Z., Gutti, G., Ganeshpurkar, A., Kumar, A., Krishnamurthy, S., Singh, S. K., & Singh, T. D. (2024). Centella asiatica improves memory and executive function in middle aged rats by controlling oxidative stress and cholinergic transmission. Journal of Ethnopharmacology, 117888.

54. Rajput, P., Kumar, D., & Krishnamurthy, S. (2023). Chronic exposure to dim artificial light disrupts the daily rhythm in mitochondrial respiration in mouse suprachiasmatic nucleus. Chronobiology International, 40(7), 938-951.

55. Prajapati, S. K., Chippala, R., & Krishnamurthy, S. (2023). Inhibition of phosphodiesterase-4 mitigates stress-re-stress-paradigm induced mitochondrial perturbations in rats exhibiting PTSD-like symptoms. Neuroscience and Behavioral Physiology, 53(8), 1330-1346.

56. Teeple, K., Rajput, P., Scinto, S., Schoonmaker, J., Davis, C., Dinn, M., ... & Casey, T. (2023). Impact of high-fat diet and exposure to constant light on reproductive competence of female ICR mice. Biology Open, 12(10).

57. Gutti, G., Leifeld, J., Kakarla, R., Bajad, N. G., Ganeshpurkar, A., Kumar, A., ... & Singh, S. K. (2023). Discovery of triazole-bridged aryl adamantane analogs as an intriguing class of multifunctional agents for treatment of Alzheimer's disease. European Journal of Medicinal Chemistry, 259, 115670.

58. Alam, Q., Ganeshpurkar, A., Singh, S. K., & Krishnamurthy, S. (2024). Preparation, Characterization, in-vitro and in-vivo Pharmacokinetic Evaluation of Thermostable Dimethyl Fumarate Cocrystals. Journal of Pharmaceutical Sciences, 113(3), 647-658.

59. Alam, Q., Ganeshpurkar, A., Singh, S. K., & Krishnamurthy, S. (2023). Novel Gastroprotective and Thermostable Cocrystal of Dimethyl Fumarate: Its Preparation, Characterization, and In Vitro and In Vivo Evaluation. ACS omega, 8(29), 26218-26230.

60. Ramakrishna, K., Sinku, S., Majumdar, S., Singh, N., Gajendra, T. A., Rani, A., & Krishnamurthy, S. (2023). Indole-3-carbinol ameliorated the thioacetamide-induced hepatic encephalopathy in rats. Toxicology, 492, 153542.

61. Kumar, J., Shankar, G., Kumar, S., Thomas, J., Singh, N., Srikrishna, S., ... & Mishra, S. K. (2023). Extraction, isolation, synthesis, and biological evaluation of novel piperic acid derivatives for the treatment of Alzheimer's disease. Molecular Diversity, 1-20.

62. Waiker, D. K., Verma, A., Akhilesh, Singh, N., Roy, A., Dilnashin, H., ... & Shrivastava, S. K. (2023). Design, Synthesis, and Biological Evaluation of Piperazine and N-Benzylpiperidine Hybrids of 5-Phenyl-1, 3, 4-oxadiazol-2-thiol as Potential Multitargeted Ligands for Alzheimer's Disease Therapy. ACS Chemical Neuroscience, 14(11), 2217-2242.

63. Tripathi, P., Ganeshpurkar, A., Singh, S. K., & Krishnamurthy, S. (2023). Identification of novel glucocerebrosidase chaperone for potential treatment of Parkinson's disease: An approach using in silico virtual screening, molecular docking and molecular dynamics, and in vitro studies. International Journal of Biological Macromolecules, 228, 453-466.

64. Rajput, P., & Krishnamurthy, S. (2023). Standardization and validation of novel ex-vivo method for mitochondrial bioenergetics using mitochondrial modulators. Journal of Pharmacological and Toxicological Methods, 119, 107209.

65. Waiker, D. K., Verma, A., Saraf, P., TA, G., Krishnamurthy, S., Chaurasia, R. N., & Shrivastava, S. K. (2023). Development and Evaluation of Some Molecular Hybrids of N-(1-Benzylpiperidin-4-yl)-2-((5-phenyl-1, 3, 4-oxadiazol-2-yl) thio) as Multifunctional Agents to Combat Alzheimer's Disease. ACS omega, 8(10), 9394-9414.

66. Rajput, P., Aryal, U. K., Bhide, K., Minor, R. C., Krishnamurthy, S., & Casey, T. M. (2023). Characterization of sow milk N-linked glycoproteome over the course of lactation. Journal of Animal Science, 101, skac426.

67. Ganeshpurkar, A., Singh, R., Tripathi, P., Alam, Q., Krishnamurthy, S., Kumar, A., & Singh, S. K. (2023). Effect of sulfonamide derivatives of phenylglycine on scopolamine-induced amnesia in rats. Ibrain, 9(1), 13-31.

68. Tekam, C. K. S., Majumdar, S., Kumari, P., Prajapati, S. K., Sahi, A. K., Shinde, S., ... & Mahto, S. K. (2023). Effects of ELF-PEMF exposure on spontaneous alternation, anxiety, motor co-ordination and locomotor activity of adult wistar rats and viability of C6 (Glial) cells in culture. Toxicology, 485, 153409.

69. Ramakrishna, K., & Krishnamurthy, S. (2023). Indole-3-carbinol ameliorated the neurodevelopmental deficits in neonatal anoxic injury in rats. International Journal of Developmental Neuroscience, 83(1), 31-43.

70. Mitra, R., Kumar, S., & Ayyannan, S. R. (2023). Identification of new small molecule allosteric SHP2 inhibitor through pharmacophore-based virtual screening, molecular docking, molecular dynamics simulation studies, synthesis and in vitro evaluation. Journal of Biomolecular Structure and Dynamics, 1-20.

71. Adhikari, N., & Ayyannan, S. R. (2023). Development and validation of machine learning models for the prediction of SH-2 containing protein tyrosine phosphatase 2 inhibitors. Molecular Diversity, 1-17.

72. Kumar, S., Jaiswal, S., Gupta, S. K., & Ayyannan, S. R. (2023). Benzimidazole-derived carbohydrazones as dual monoamine oxidases and acetylcholinesterase inhibitors: design, synthesis, and evaluation. Journal of Biomolecular Structure and Dynamics, 1-20.

73. Mehata, A. K., Singh, V., Vikas, Singh, N., Mandal, A., Dash, D., ... & Muthu, M. S. (2023). Chitosan-g-estrone nanoparticles of palbociclib vanished hypoxic breast tumor after targeted delivery: development and ultrasound/photoacoustic imaging. ACS Applied Materials & Interfaces, 15(29), 34343-34359.

74. Shukla, V. N., Mehata, A. K., Setia, A., Kumari, P., Mahto, S. K., Muthu, M. S., & Mishra, S. K. (2023). EGFR targeted albumin nanoparticles of oleanolic acid: In silico screening of nanocarrier, cytotoxicity and pharmacokinetics for lung cancer therapy. International Journal of Biological Macromolecules, 246, 125719.

75. Chauhan, M., Singh, R. P., Yadav, B., Shekhar, S., Kumar, A., Mehata, A. K., ... & Pandey, D. K. (2023). Development and characterization of micelles for nucleolin-targeted co-delivery of docetaxel and upconversion nanoparticles for theranostic applications in brain cancer therapy. Journal of Drug Delivery Science and Technology, 87, 104808.

76. Setia, A., Mehata, A. K., Priya, V., Pawde, D. M., Jain, D., Mahto, S. K., & Muthu, M. S. (2023). Current advances in nanotheranostics for molecular imaging and therapy of cardiovascular disorders. Molecular Pharmaceutics, 20(10), 4922-4941.

77. Vikas, Mehata, A. K., Viswanadh, M. K., Malik, A. K., Setia, A., Kumari, P., ... & Muthu, M. S. (2023). EGFR targeted redox sensitive chitosan nanoparticles of cabazitaxel: dual-targeted cancer therapy, lung distribution, and targeting studies by photoacoustic and optical imaging. Biomacromolecules, 24(11), 4989-5003.

78. Chauhan, M., Singh, R. P., Yadav, B., Shekhar, S., Kumar, L., Mehata, A. K., ... & Muthu, M. S. (2023). Dual-targeted transferrin and AS1411 aptamer conjugated micelles for improved therapeutic efficacy and imaging of brain cancer. Colloids and Surfaces B: Biointerfaces, 231, 113544.

79. Shukla, V. N., Mehata, A. K., Setia, A., Kumari, P., Mahto, S. K., Muthu, M. S., & Mishra, S. K. (2023). Rational design of surface engineered albumin nanoparticles of asiatic acid for EGFR targeted delivery to lung cancer: Formulation development and pharmacokinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 676, 132188.

80. Dhamija, P., Mehata, A. K., Setia, A., Priya, V., Malik, A. K., Bonlawar, J., ... & Muthu, M. S. (2023). Nanotheranostics: molecular diagnostics and nanotherapeutic evaluation by photoacoustic/ultrasound imaging in small animals. Molecular Pharmaceutics, 20(12), 6010-6034.

81. Singh, C., Mehata, A. K., Muthu, M. S., & Tiwari, K. N. (2024). Premna integrifolia: A Review on the Exploration of its Potential Pharmacological and Therapeutic Properties. Current Traditional Medicine, 10(2), 37-50.

82. Malik, A. K., Singh, C., Tiwari, P., Verma, D., Mehata, A. K., Setia, A., ... & Muthu, M. S. (2024). Nanofibers of N, N, N-trimethyl chitosan capped bimetallic nanoparticles: Preparation, characterization, wound dressing and in-vivo treatment of MDR microbial infection and tracking by optical and photoacoustic imaging. International Journal of Biological Macromolecules, 130154.

83. Setia, A., Kumari, P., Mehata, A. K., Malik, A. K., Mahto, S. K., & Muthu, M. S. (2024). Cetuximab decorated redox sensitive D-alpha-tocopheryl-polyethyleneglycol-1000-succinate based nanoparticles for cabazitaxel delivery: Formulation, lung targeting and enhanced anti-cancer effects. International Journal of Pharmaceutics, 123881.

84. Singh, C., Mehata, A. K., Viswanadh, M. K., Tiwari, P., Saini, R., Singh, S. K., ... & Muthu, M. S. (2024). Chitosan film of thiolated TPGS-modified Au-Ag nanoparticles for combating multidrug-resistant bacteria. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 686, 133287.

85. Setia, A., Mehata, A. K., Priya, V., Pradhan, A., Prasanna, P., Mohan, S., & Muthu, M. S. (2024). Nanoparticles for Thrombus Diagnosis and Therapy: Emerging Trends in Thrombus-theranostics. Nanotheranostics, 8(2), 127.

86. Priya, V., Samridhi, Singh, N., Dash, D., & Muthu, M. S. (2023). Nattokinase Encapsulated Nanomedicine for Targeted Thrombolysis: Development, Improved in Vivo Thrombolytic Effects, and Ultrasound/Photoacoustic Imaging. Molecular Pharmaceutics, 21(1), 283-302.

87. Mehata, A. K., Singh, V., Srivastava, P., Koch, B., Kumar, M., & Muthu, M. S. (2024). Chitosan nanoplatform for the co-delivery of palbociclib and ultra-small magnesium nanoclusters: dual receptor targeting, therapy and imaging. Nanotheranostics, 8(2), 179-201.

88. Malik, A. K., Setia, A., Mehata, A. K., Priya, V., Nikitha Lakshmi Suseela, M., Gokul, P., ... & Muthu, M. S. (2024). Green analytical chemistry: Experimental and chemometric methods for the detection of therapeutics using liquid chromatography in wastewater samples. Analytical Chemistry Letters, 1-28.

89. Dhamija, P., Mehata, A. K., Tamang, R., Bonlawar, J., Vaishali, Malik, A. K., ... & Muthu, M. S. (2024). Redox-Sensitive Poly (lactic-co-glycolic acid) Nanoparticles of Palbociclib: Development, Ultrasound/Photoacoustic Imaging, and Smart Breast Cancer Therapy. Molecular Pharmaceutics.

90. Chauhan, M., Shekhar, S., Yadav, B., Garg, V., Dutt, R., Mehata, A. K., ... & Singh, R. P. (2024). AS1411 aptamer/RGD dual functionalized theranostic chitosan-PLGA nanoparticles for brain cancer treatment and imaging. Biomaterials Advances, 160, 213833.

91. Suseela, M. N. L., Mehata, A. K., Vallamkonda, B., Gokul, P., Pradhan, A., Pandey, J., ... & Muthu, M. S. (2024). Comparative evaluation of liquid-liquid extraction and nanosorbent extraction for HPLC-PDA analysis of cabazitaxel from rat plasma. Journal of Pharmaceutical and Biomedical Analysis, 245, 116149.

92. Bonlawar, J., Setia, A., Challa, R. R., Vallamkonda, B., Mehata, A. K., Viswanadh, M. K., & Muthu, M. S. (2024). Targeted Nanotheransotics: Integration of Preclinical MRI and CT in the Molecular Imaging and Therapy of Advanced Diseases. Nanotheranostics, 8(3), 401.

93. Sonker, P., Tamang, R., Mehata, A. K., Nidhar, M., Sharma, V. P., Kumar, V., ... & Tewari, A. K. (2024). PTSA-induced synthesis, in silico and nano study of novel ethylquinolin–thiazolo–triazole in cervical cancer. Future Medicinal Chemistry, (0).

94. Setia, A., Vallamkonda, B., Challa, R. R., Mehata, A. K., Badgujar, P., & Muthu, M. S. (2024). Herbal Theranostics: Controlled, Targeted Delivery and Imaging of Herbal Molecules. Nanotheranostics, 8(3), 344.

95. Mohapatra, D., Pratap, R., Pandey, V., Shreya, S., Naik, G. G., Mandal, S. C., ... & Sahu, A. N. (2023). Bioengineered dual fluorescent carbon nano dots from Indian long pepper leaves for multifaceted environmental and health utilities. Environmental Science and Pollution Research, 30(18), 52182-52208.

96. Sahu, A. N., Mohapatra, D., & Acharya, P. C. (2024). Nanovesicular ultraflexible invasomes and invasomal gel for transdermal delivery of phytopharmaceuticals. Nanomedicine, (0).

97. Shreya, S., Mohapatra, D., Naik, G. G., Bobde, Y., Ghosh, B., & Sahu, A. N. (2023). In vitro Antioxidant and Cytotoxic Potential of Pleurotus Mushroom and Activity-Based Correlation: a Comparative Study. Journal of Analytical Chemistry, 78(4), 456-463.

98. Mishra, K. N., Mohapatra, D., Chaubey, P., Sahu, A. N., Kumar, S., & Upadhyay, H. C. (2023). Bio-fabrication of Silver Nanoparticles Using Alysicarpus vaginalis Extract: Preparation, Characterization and Comparative in vitro Antibacterial Evaluations. ChemistrySelect, 8(24), e202301113.

99. Mohapatra, D., Kumar, D. N., Shreya, S., Panigrahi, D., Agrawal, A. K., & Sahu, A. N. (2023). Quality-by-design-based development of ultradeformable nanovesicular transgelosome of standardized Piper longum extract for melanoma. Nanomedicine, 18(14), 963-985.

100. Naik, G. G., Pratap, R., Mohapatra, D., Shreya, S., Sharma, D. K., Parmar, A. S., ... & Sahu, A. N. (2023). From phytomedicine to photomedicine: quercetin-derived carbon nanodots—synthesis, characterization and healthcare applications. Journal of Materials Science, 58(34), 13744-13761.

101. Mohapatra, D., Kumar, D. N., Shreya, S., Pandey, V., Dubey, P. K., Agrawal, A. K., & Sahu, A. N. (2023). Quality by design–based development and optimization of fourth-generation ternary solid dispersion of standardized Piper longum extract for melanoma therapy. Drug Delivery and Translational Research, 13(12), 3094-3131.

102. Upadhyay, S., Pandey, V., Tripathi, A., Sahu, A. N., Rani, A., Diwakar, A., ... & Dubey, P. K. (2024). A comparative analysis of phytochemicals versus synthetic drugs/nanomedicines in the treatment of uterine fibroid: a systematic review. Toxicology and Environmental Health Sciences, 16(1), 21-36.

103. Naik, G. G., Mohapatra, D., Shreya, S., Madavi, R., Shambhavi, Patel, P. K., & Sahu, A. N. (2023). Nip in the bud: can carbon/quantum dots be a prospective nano-theranostics against COVID-19?. Bulletin of Materials Science, 47(1), 6.

104. Shreya, S., Kumar, D. N., Mohapatra, D., Jaiswal, S., Naik, G. G., Guru, S. K., ... & Sahu, A. N. (2023). Tracing the anti-cancer mechanism of Pleurotus osteratus by the integrative approach of network pharmacology and experimental studies. Applied Biochemistry and Biotechnology, 195(1), 152-171.

105. Naik, G. G., Madavi, R., Minocha, T., Mohapatra, D., Pratap, R., Shreya, S., ... & Sahu, A. N. (2024). In vitro cytotoxic potential of cow dung and expired tomato sauces-derived carbon nanodots against A-375 human melanoma cell line. Arabian Journal of Chemistry, 17(2), 105576.

106. Yadav, A. K., Tripathi, H., Rajput, S., Singh, P., Dubey, A. K., Kumar, K., ... & Rath, C. (2024). Drug kinetics and antimicrobial properties of quaternary bioactive glasses 81S (81SiO2-(16-x) CaO-2P2O5-1Na2O-xMgO); an in-vitro study. Biomaterials Advances, 157, 213729.

107. Kumar, K., Verma, R., Manjit, Priya, Mishra, M., Rani, V., & Chawla, R. (2023). In Vivo Cancer Microenvironment Responsive Glycan Receptor-Targeted Nanoparticles for Gemcitabine Delivery to Benzo [a] pyrene-Induced Lung Cancer Model. AAPS PharmSciTech, 25(1), 2.

108. Kumar, K., Rawat, S. G., Mishra, M., Kumar, A., & Chawla, R. (2023). Dual targeting pH responsive chitosan nanoparticles for enhanced active cellular internalization of gemcitabine in non-small cell lung cancer. International Journal of Biological Macromolecules, 249, 126057.

109. Rani, V., Verma, R., Kumar, K., & Chawla, R. (2023). pH-influenced self-assembled stealth nanoscaffolds encapsulating memantine for treatment of Alzheimer's disease. Journal of Biosciences, 48(3), 31.

110. Singh, P., Chawla, R., Pandey, A. K., Mishra, J. K., & Singh, R. (2023). Comparative evaluation of two intranasal forms of Curcumin: Quantitation and impact on mouse model of asthma. Phytomedicine Plus, 3(1), 100413.

111. Rani, V., Verma, R., Kumar, K., & Chawla, R. (2023). Role of pro-inflammatory cytokines in Alzheimer's disease and neuroprotective effects of pegylated self-assembled nanoscaffolds. Current Research in Pharmacology and Drug Discovery, 4, 100149.

112. Rai, H., Singh, R., Bharti, P. S., Kumar, P., Rai, S., Varma, T., ... & Modi, G. (2024). Rhodanine composite fluorescence probes to detect pathological hallmarks in Alzheimer's disease models. Sensors and Actuators B: Chemical, 407, 135364.

113. Singh, G., Shankar, G., Panda, S. R., Kumar, S., Rai, S., Verma, H., ... & Modi, G. (2024). Design, Synthesis, and Biological Evaluation of Ferulic Acid Template-Based Novel Multifunctional Ligands Targeting NLRP3 Inflammasome for the Management of Alzheimer's Disease. ACS Chemical Neuroscience, 15(7), 1388-1414.

114. Singh, G., Kesharwani, P., Singh, G. K., Kumar, S., Putta, A., & Modi, G. (2023). Ferroptosis and its Modulators: A Raising Target for Cancer and Alzheimer's Disease. Bioorganic & Medicinal Chemistry, 117564.

115. Rai, S., Bharti, P. S., Singh, R., Rastogi, S., Rani, K., Sharma, V., ... & Kumar, S. (2023). Circulating plasma miR-23b-3p as a biomarker target for idiopathic Parkinson's disease: comparison with small extracellular vesicle miRNA. Frontiers in Neuroscience, 17, 1174951.

116. Rastogi, S., Rani, K., Rai, S., Singh, R., Bharti, P. S., Sharma, V., ... & Kumar, S. (2023). Fluorescence-tagged salivary small extracellular vesicles as a nanotool in early diagnosis of Parkinson's disease. BMC medicine, 21(1), 335.

117. Kumar, J., Shankar, G., Kumar, S., Thomas, J., Singh, N., Srikrishna, S., ... & Mishra, S. K. (2023). Extraction, isolation, synthesis, and biological evaluation of novel piperic acid derivatives for the treatment of Alzheimer's disease. Molecular Diversity, 1-20.

118. Narayanan, A. C., Venkatesh, R., Singh, S., Singh, G., Modi, G., Singh, S., & Kandasamy, J. (2023). Synthesis of phenylethanoid glycosides from acrylic esters of glucose and aryldiazonium salts via palladium-catalyzed cross-coupling reactions and evaluation of their anti-Alzheimer activity. Carbohydrate Research, 532, 108920.

119. Borkotoky, S., Prakash, A., Modi, G. P., & Dubey, V. K. (2024). Computational Repurposing of Potential Dimerization Inhibitors against SARS-CoV-2 Main Protease. Letters in Drug Design & Discovery, 21(4), 799-808.

120. Kumari, B., Kumari, U., Singh, D. K., Husain, G. M., Patel, D. K., Shakya, A., ... & Singh, G. K. (2024). Molecular Targets of Valeric Acid: A Bioactive Natural Product for Endocrine, Metabolic, and Immunological Disorders. Endocrine, Metabolic & Immune Disorders Drug Targets.

121. Das, B., Baidya, A. T., Chakrabarti, S., Chouhan, D., Thakur, B., Darreh-Shori, T., ... & Kumar, R. (2024). Synthesis and biological evaluation of Halogen-Substituted novel **α**-Ketoamides as potential protein aggregation modulators in Alzheimer's disease. Bioorganic Chemistry, 147, 107373.

122. Akhilesh, Menon, A., Agrawal, S., Chouhan, D., Gadepalli, A., Das, B., ... & Tiwari, V. (2024). Virtual screening and molecular dynamics investigations using natural compounds against autotaxin for the treatment of chronic pain. Journal of Biomolecular Structure and Dynamics, 1-21.

123. Ummadisetty, O., Gadepalli, A., Chouhan, D., Patil, U., Singh, S. P., Singh, S., & Tiwari, V. (2024). Dermorphin [D-Arg2, Lys4](1-4) Amide Alleviates Frostbite-Induced Pain by Regulating TRP Channel-Mediated Microglial Activation and Neuroinflammation. Molecular Neurobiology, 1-12.

124. Ummadisetty, O., Gadepalli, A., Chouhan, D., & Tiwari, V. (2024). Development and validation of clinically Mimicable model of frostbite injury-induced chronic pain. Cellular Signalling, 115, 111028.

125. Gadepalli, A., Ummadisetty, O., Chouhan, D., Yadav, K. E., & Tiwari, V. (2024). Peripheral mu-opioid receptor activation by dermorphin [D-Arg2, Lys4](1–4) amide alleviates behavioral and neurobiological aberrations in rat model of chemotherapy-induced neuropathic pain. Neurotherapeutics, 21(1), e00302.

126. Bharti, K., Deepika, D., Kumar, M., Jha, A., Manjit, Akhilesh, ... & Mishra, B. (2023). Development and Evaluation of Amorphous Solid Dispersion of Riluzole with PBPK Model to Simulate the Pharmacokinetic Profile. AAPS PharmSciTech, 24(8), 219.

127. Chouhan, D., Ummadisetty, O., Verma, N., & Tiwari, V. (2023). Bergenin ameliorates chemotherapy-induced neuropathic pain in rats by modulating TRPA1/TRPV1/NR2B signalling. International Immunopharmacology, 125, 111100.

128. Akhilesh, Uniyal, A., Mehta, A., & Tiwari, V. (2024). Combination chemotherapy in rodents: a model for chemotherapy-induced neuropathic pain and pharmacological screening. Metabolic Brain Disease, 39(1), 43-65.

129. Gadepalli, A., Ummadisetty, O., Chouhan, D., & Tiwari, V. (2023). Loperamide, a peripheral Mu-Opioid receptor agonist, attenuates chemotherapy-induced neuropathic pain in rats. International Immunopharmacology, 124, 110944.

130. Waiker, D. K., Verma, A., Akhilesh, Singh, N., Roy, A., Dilnashin, H., ... & Shrivastava, S. K. (2023). Design, Synthesis, and Biological Evaluation of Piperazine and N-Benzylpiperidine Hybrids of 5-Phenyl-1, 3, 4-oxadiazol-2-thiol as Potential Multitargeted Ligands for Alzheimer's Disease Therapy. ACS Chemical Neuroscience, 14(11), 2217-2242.

131. Prajapati, N., Sharma, D., Ashok Bidve, P., Akhilesh, Chouhan, D., Allani, M., ... & Tiwari, V. (2024). Glucose regulation by newly synthesized boronic acid functionalized molecules as dipeptidyl peptidase IV inhibitor: a potential compound for therapeutic intervention in hyperglycaemia. Journal of Biomolecular Structure and Dynamics, 42(6), 2859-2871.

132. Jaiswal, S., Akhilesh, Tiwari, V., & Ayyannan, S. R. (2023). Anti-nociceptive potential of an isatin-derived dual fatty acid amide hydrolase-monoacylglycerol lipase inhibitor. Pharmacological Reports, 75(3), 737-745.

133. Kumar, D. N., Chaudhuri, A., Dehari, D., Gamper, A. M., Kumar, D., & Agrawal, A. K. (2024). Enhanced Therapeutic Efficacy Against Melanoma through Exosomal Delivery of Hesperidin. Molecular Pharmaceutics.

134. Biswas, A. A., Dhondale, M. R., Singh, M., Agrawal, A. K., Muthudoss, P., Mishra, B., & Kumar, D. (2024). Development and comparison of machine learning models for in-vitro drug permeation prediction from microneedle patch. European Journal of Pharmaceutics and Biopharmaceutics, 114311.

135. Tripathi, N., Naik, A., Kumar, D. N., Bhardwaj, N., Goel, B., Kumar, S., ... & Jain, S. K. (2024). Unveiling the healing properties of 2, 3-dehydrosilychristin: a potential silymarin-derived flavonolignan from Vitex negundo. Natural Product Research, 1-9.

136. Biswas, A. A., Dhondale, M. R., Agrawal, A. K., Serrano, D. R., Mishra, B., & Kumar, D. (2024). Advancements in microneedle fabrication techniques: artificial intelligence assisted 3D-printing technology. Drug Delivery and Translational Research, 1-22.

137. Dehari, D., Kumar, D. N., Chaudhuri, A., Kumar, A., Kumar, R., Kumar, D., ... & Agrawal, A. K. (2023). Bacteriophage entrapped chitosan microgel for the treatment of biofilm-mediated polybacterial infection in burn wounds. International Journal of Biological Macromolecules, 253, 127247.

138. Anjum, M. M., Kumar, D. N., Bhattacharya, S., Patel, K. K., Vijayakumar, M. R., Agrawal, A. K., & Singh, S. (2023). Topical delivery of cyclodextrin crosslinked nanosponge of anacardic acid for treatment of UV-B induced skin photoaging: Formulation, characterization and biochemical estimation. Journal of Drug Delivery Science and Technology, 87, 104840.

139. Kumar, D. N., Chaudhuri, A., Kumar, D., Singh, S., & Agrawal, A. K. (2023). Impact of the drug loading method on the drug distribution and biological efficacy of exosomes. AAPS PharmSciTech, 24(6), 166.

140. Dehari, D., Chaudhuri, A., Kumar, D. N., Anjum, M., Kumar, R., Kumar, A., ... & Agrawal, A. K. (2023). A bacteriophage-loaded microparticle laden topical gel for the treatment of multidrug-resistant biofilm-mediated burn wound infection. AAPS PharmSciTech, 24(6), 165.

141. Dehari, D., Chaudhuri, A., Kumar, D. N., Patil, R., Gangwar, M., Rastogi, S., ... & Agrawal, A. K. (2023). A Bacteriophage Microgel Effectively Treats the Multidrug-Resistant Acinetobacter baumannii Bacterial Infections in Burn Wounds. Pharmaceuticals, 16(7), 942.

142. Singh, M., Barua, H., Jyothi, V. G. S., Dhondale, M. R., Nambiar, A. G., Agrawal, A. K., ... & Kumar, D. (2023). Cocrystals by design: a rational coformer selection approach for tackling the API problems. Pharmaceutics, 15(4), 1161.

143. Chaudhuri, A., Kumar, D. N., Dehari, D., Patil, R., Singh, S., Kumar, D., & Agrawal, A. K. (2023). Endorsement of TNBC biomarkers in precision therapy by nanotechnology. Cancers, 15(9), 2661.

144. Patil, R., Dehari, D., Chaudhuri, A., Kumar, D. N., Kumar, D., Singh, S., ... & Agrawal, A. K. (2023). Recent advancements in nanotechnology-based bacteriophage delivery strategies against bacterial ocular infections. Microbiological Research, 127413.

145. Arora, S., Kumar, V., Kapil, L., Agrawal, A. K., Singh, A., & Singh, C. (2023). Piperine loaded metal organic frameworks reverse doxorubicin induced chemobrain in adult zebrafish. Journal of Controlled Release, 355, 259-272.

146. Dhondale, M. R., Nambiar, A. G., Singh, M., Mali, A. R., Agrawal, A. K., Shastri, N. R., ... & Kumar, D. (2023). Current trends in API co-processing: spherical crystallization and co-precipitation techniques. Journal of Pharmaceutical Sciences.

147. Dhondale, M. R., Thakor, P., Nambiar, A. G., Singh, M., Agrawal, A. K., Shastri, N. R., & Kumar, D. (2023). Co-crystallization approach to enhance the stability of moisture-sensitive drugs. Pharmaceutics, 15(1), 189.

148. Bhardwaj, N., A. Sharma, N. Tripathi, B. Goel, G. Ravikanth, S. K. Guru and S. K. Jain (2023). "New cycloartane triterpenoids from Dysoxylum malabaricum and their cytotoxic evaluation." Steroids 200: 109315.

149. Bhardwaj, N., V. K. Sharma, N. Tripathi, K. Pimpre, R. Sonti, G. Ravikanth, B. Koch and S. K. Jain (2024). "Isolation of cytotoxic cycloartane triterpenoids from Dysoxylum malabaricum." New Journal of Chemistry 48(9): 3933-3941.

150. Bhardwaj, N., N. Tripathi, S. Kumar, U. R. Lal, S. K. Guru and S. K. Jain (2023). "Mahamanalactone A, a new triterpenoid from Dysoxylum malabaricum bark: a case study for rapid identification of new metabolites via LC-HRMS profiling and database mining strategy." Natural Product Research: 1-6.

151. Bhardwaj, N., P. Gupta, N. Tripathi, S. Chakrabarty, A. Verma, S. Kumari, V. Gautam, G. Ravikanth and S. K. Jain (2024). "New ring-A modified cycloartane triterpenoids from Dysoxylum malabaricum bark: Isolation, structure elucidation and their cytotoxicity." Steroids 205: 109390.

152. Goel, B. and S. K. Jain (2023). "Natural products as a source of cytotoxic warheads in antibody-drug conjugates." Natural Product Research 37(17): 2973-2985.

153. Goel, B., S. Jaiswal and S. K. Jain (2023). "Indole derivatives targeting colchicine binding site as potential anticancer agents." Archiv der Pharmazie 356(10): 2300210.

154. Goel, B., A. Naik, N. Tripathi, A. Khan, S. Bansal, S. Bansal, S. Kumar Guru and S. K. Jain (2023). "Synthesis, in vitro Cytotoxicity Evaluation, and Docking Studies of Gloriosine Derivatives as Potential Anticancer Agents." ChemistrySelect 8(32): e202301063.

155. Goel, B., H. Reddy, A. Cholkar, S. Kumar, S. K. Guru and S. K. Jain (2023). "Isolation of a new cytotoxic colchinoid from Gloriosa superba roots." Natural Product Research 37(23): 3909-3914.

156. Goel, B., N. Tripathi, N. Bhardwaj, A. Kumar and S. K. Jain (2023). "Iodine-mediated one-step synthesis of ipomone from gibberellic acid." Natural Product Research 37(19): 3237-3244.

157. Jain, S. K., S. Bansal, S. Bansal, B. Singh, W. Klotzbier, K. Y. Mehta and A. K. Cheema (2024). "An Optimized Method for LC–MS-Based Quantification of Endogenous Organic Acids: Metabolic Perturbations in Pancreatic Cancer." International Journal of Molecular Sciences 25(11): 5901.

158. Kumar, S., M. K. Das, N. Singh, P. Pal, N. Tripathi, R. Sharma, S. K. Jain, A. Ranjan, R. K. Singh and A. Mishra (2024). "Antioxident and Anticancer Potency of Hydro-Alcoholic Ingudi (Balanites aegyptiaca Linn. Delile) Seed Extract."

159. Tripathi, N., N. Bhardwaj, S. Kumar and S. K. Jain (2023). "Phytochemical and Pharmacological Aspects of Psoralen–A Bioactive Furanocoumarin from Psoralea corylifolia Linn." Chemistry & Biodiversity 20(11): e202300867.

160. Tripathi, N., N. Bhardwaj, B. Singh and S. K. Jain (2024). "In-silico identification of Coumarin-based natural compounds as potential VEGFR-2 inhibitors." Chemical Papers: 1-14.

161. Tripathi, N., A. Naik, D. N. Kumar, N. Bhardwaj, B. Goel, S. Kumar, S. Chakrabarty, A. Ranjan, S. K. Guru and S. Kumar (2024). "Unveiling the healing properties of 2, 3-dehydrosilychristin: a potential silymarin-derived flavonolignan from Vitex negundo." Natural Product Research: 1-9.

162. Tripathi, N., A. Parmar, N. Pandey, N. Bhardwaj, S. Chakrabarty, R. Sarkar, H. Kumar and S. K. Jain (2024). "Isolation, Cytotoxicity, and In-silico Screening of Coumarins from Psoralea corylifolia Linn." Chemistry & Biodiversity 21(2): e202301841.

163. Tripathi, N., P. Saraf, N. Bhardwaj, S. K. Shrivastava and S. K. Jain (2024). "Identifying inflammation-related targets of natural lactones using network pharmacology, molecular modeling and in vitro approaches." Journal of Biomolecular Structure and Dynamics: 1-16.

164. Tripathi, N., H. Shah, N. Bhardwaj, R. Sarkar and S. K. Jain (2023). "In silico analysis, isolation, and cytotoxicity evaluation of the coumestans from Cullen corylifolium (L.) Medik." Natural Product Research: 1-8.

165. Singh, C., Anand, S. K., Upadhyay, R., Pandey, N., Kumar, P., Singh, D., ... & Tilak, R. (2023). Green synthesis of silver nanoparticles by root extract of Premna integrifolia L. and evaluation of its cytotoxic and antibacterial activity. Materials Chemistry and Physics, 297, 127413.

166. Mishra, S. K., Sinha, S., Singh, A. K., Upadhyay, P., Kalra, D., Kumar, P., ... & Srikrishna, S. (2023). Green synthesis, characterization, and application of Ascophyllum nodosum silver nanoparticles. Regenerative Engineering and Translational Medicine, 9(4), 518-532.

167. Singh, A. K., Kumar, P., Rajput, V. D., Mishra, S. K., Tiwari, K. N., Singh, A. K., ... & Pandey, A. K. (2023). Phytochemicals, Antioxidant, Anti-inflammatory Studies, and Identification of Bioactive Compounds Using GC–MS of Ethanolic Novel Polyherbal Extract. Applied Biochemistry and Biotechnology, 195(7), 4447-4468.

168. Singh, A. K., Kumar, P., Mishra, S. K., Tiwari, K., Singh, A. K., Pandey, A. K., ... & Sayyed, R. Z. (2024). A network pharmacology approach with experimental validation to discover protective mechanism of poly herbal extract on diabetes mellitus. Journal of King Saud University-Science, 103138.

169. Kumar, J., Shankar, G., Kumar, S., Thomas, J., Singh, N., Srikrishna, S., ... & Mishra, S. K. (2023). Extraction, isolation, synthesis, and biological evaluation of novel piperic acid derivatives for the treatment of Alzheimer's disease. Molecular Diversity, 1-20.

170. Dixit, J., Kumar, P., Singh, R., Verma, P., Tiwari, K. N., Singh, R. K., ... & Singh, J. (2024). Bio-based synthesis of silver nanoparticles using leaf extract of Uraria picta (Jacq.) Desv. ex DC.: Characterization and evaluation of its activity against Leishmania donovani. Biomass Conversion and Biorefinery, 1-22.

171. Singh, K., Kumar, P., Singh, A. K., Singh, N., Singh, S., Tiwari, K. N., ... & Mishra, S. K. (2024). In silico and network pharmacology analysis of fucosterol: a potent anticancer bioactive compound against HCC. Medical Oncology, 41(6), 1-14.

172. Singh, A. K., Kumar, P., Mishra, S. K., Rajput, V. D., Tiwari, K. N., Singh, A. K., ... & Upadhyay, P. (2024). A Dual Therapeutic Approach to Diabetes Mellitus via Bioactive Phytochemicals Found in a Poly Herbal Extract by Restoration of Favorable Gut Flora and Related Short-Chain Fatty Acids. Applied Biochemistry and Biotechnology, 1-26.

173. Tripathi, A. K., Das, R., Ray, A. K., Mishra, S. K., & Anand, S. (2024). Recent insights on pharmacological potential of lycopene and its nanoformulations: an emerging paradigm towards improvement of human health. Phytochemistry Reviews, 1-28.

174. Shukla, V. N., Mehata, A. K., Setia, A., Kumari, P., Mahto, S. K., Muthu, M. S., & Mishra, S. K. (2023). Rational design of surface engineered albumin nanoparticles of asiatic acid for EGFR targeted delivery to lung cancer: Formulation development and pharmacokinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 676, 132188.

175. Dubey, S. K., Mishra, S. K., Singh, V., Tripathi, Y. B., Chaurasia, R. N., Byadgi, P. S., ... & Jaiswal, A. (2023). Sunthi (Dry Zingiber Officinale) as a Prophylactic Agent Against SARS-CoV-2 Transmission and COVID-19 Symptomatology: Evidence From a Non-randomised Single-Arm Study. Journal of Herbal Medicine, 41, 100712.

176. Shukla, V. N., Mehata, A. K., Setia, A., Kumari, P., Mahto, S. K., Muthu, M. S., & Mishra, S. K. (2023). EGFR targeted albumin nanoparticles of oleanolic acid: In silico screening of nanocarrier, cytotoxicity and pharmacokinetics for lung cancer therapy. International Journal of Biological Macromolecules, 246, 125719.

177. Tripathi, A. K., & Mishra, S. K. (2023). A review article on neuroprotective, immunomodulatory, and anti-inflammatory role of vitamin-D3 in elderly COVID-19 patients. The Egyptian Journal of Neurology, Psychiatry and Neurosurgery, 59(1), 18.

178. Tripathi, A. K., Ray, A. K., Mishra, S. K., Bishen, S. M., Mishra, H., & Khurana, A. (2023). Molecular and therapeutic insights of alpha-lipoic acid as a potential molecule for disease prevention. Revista Brasileira de Farmacognosia, 33(2), 272-287.

179. Das, S., Verma, K. K., Indurthi, H. K., Saha, P., & Sharma, D. K. (2024). Efficient Pd-catalysed Synthesis of 3-Amino-4-indolylmaleimides and 3-Amido-4-indolylmaleimides. ChemistrySelect, 9(1), e202304745.

180. Kour, P., Saha, P., Sharma, D. K., & Singh, K. (2023). DNA topoisomerases as a drug target in Leishmaniasis: Structural and mechanistic insights. International Journal of Biological Macromolecules, 128401.

181. Saha, P., Das, S., Indurthi, H. K., Kumar, R., Roy, A., Kalia, N. P., & Sharma, D. K. (2024). Cytochrome bd oxidase: an emerging anti-tubercular drug target. RSC Medicinal Chemistry.

182. Indurthi, H. K., Das, S., Saha, P., & Sharma, D. K. (2024). A Metal-Free System for Conversion of Alcohols to Amides Using tert-Butyl Nitrite. Asian Journal of Organic Chemistry, e202300576.

183. KáSharma, D. (2024). Persulfate promoted regioselective C-1 thiocyanation of imidazo [1, 5-a] pyridines under visible light irradiation in water. New Journal of Chemistry, 48(16), 7041-7044.

184. Indurthi, H. K., Das, S., Saha, P., Koli, S. N., & Sharma, D. K. (2024). Potassium persulfate-glucose mediated synthesis of 3, 3′-Bis (indolyl) methanes from arylacetic acid and indoles in water. Journal of Molecular Structure, 1307, 137959.

185. Saha, P., Sau, S., Kalia, N. P., & Sharma, D. K. (2024). Antitubercular activity of 2-mercaptobenzothiazole derivatives targeting Mycobacterium tuberculosis type II NADH dehydrogenase. RSC Medicinal Chemistry, 15(5), 1664-1674.

186. Manhas, D., Bhatt, S., Rai, G., Kumar, V., Bharti, S., Dhiman, S., ... & Nandi, U. (2023). Rottlerin renders a selective and highly potent CYP2C8 inhibition to impede EET formation for implication in cancer therapy. Chemico-Biological Interactions, 380, 110524.

187. Das, S., Goswami, P., Verma, V. K., Indurthi, H. K., Kumar, M., Koch, B., & Sharma, D. K. (2023). Rapid access to 7-substituted cycloalkylamino and alkylamino analogues of 4-methylcoumarin reveals surprising emitters. Dyes and Pigments, 217, 111407.

188. Saha, P., Indurthi, H. K., Das, S., Diwan, H., & Sharma, D. K. (2023). Copper iodide mediated telescoped synthesis of 3-cyanoimidazo [1, 2-a] pyridines, photophysical and DFT studies. Journal of Molecular Structure, 1286, 135612.

189. Saha, P., Kour, P., Kumar, R., & Sharma, D. K. (2023). K2S2O8 mediated metal free oxidative coupling of alcohols with 1, 2-diaminobenzenes for synthesis of benzimidazoles, photophysical and DFT studies. Journal of Molecular Structure, 1294, 136431.

190. Kour, P., Saha, P., Bhattacharya, S., Kumari, D., Debnath, A., Roy, A., ... & Singh, K. (2023). Design, synthesis, and biological evaluation of 3, 3′-diindolylmethane N-linked glycoconjugate as a leishmanial topoisomerase IB inhibitor with reduced cytotoxicity. RSC Medicinal Chemistry, 14(10), 2100-2114.

191. Indurthi, H. K., Das, S., Saha, P., & Sharma, D. K. (2023). K2S2O8-Mediated C-3 Formylation of Imidazopyridines Using Glyoxylic Acid. European Journal of Organic Chemistry, 26(45), e202300829.

192. Indurthi, H. K., Goswami, P., Das, S., Saha, P., Koch, B., & Sharma, D. K. (2023). 7-Azaspiroketal as a unique and effective auxochrome moiety: demonstration in a fluorescent coumarin dye and application in cell imaging. New Journal of Chemistry, 47(47), 21608-21611.

193. Saha, P., Kumar, R., Das, S., Ansari, T., Indra, A., & Sharma, D. K. (2023). Visible light induced regioselective C-3 thiocyanation of imidazoheterocycles through naphthalimide dye based photoredox catalysis. Organic & Biomolecular Chemistry, 21(42), 8471-8476.

194. Kushwaha, P., Das, B., & Kumar, R. (2024). Unveiling of Indanone-Benzimidazole Hybrids as Anti-Alzheimer's Agents: Computational and Experimental Studies. ChemistrySelect, 9(15), e202400275.

195. Das, B., Baidya, A. T., Chakrabarti, S., Chouhan, D., Thakur, B., Darreh-Shori, T., Chen, G., Tiwari, V., and Kumar, R. (2024). Synthesis and biological evaluation of Halogen-Substituted novel α-Ketoamides as potential protein aggregation modulators in Alzheimer's disease. Bioorganic Chemistry, 147, 107373.

196. Wang, L., Kumar, R., Winblad, B., and Pavlov, P. F. (2024). Structure-based discovery of small molecule inhibitors of FKBP51-Hsp90 protein-protein interaction. European Journal of Medicinal Chemistry, 270, 116356.

197. Saklani, M., Jha, C. B., Baidya, A. T., Singh, S., Kumar, R., Mathur, R., Tiwari, A.K., and Varshney, R. (2024). Laminin mimetic angiogenic and collagen peptide hydrogel for enhance dermal wound healing. Biomaterials Advances, 158, 213761.

198. Akhilesh, Menon, A., Agrawal, S., Chouhan, D., Gadepalli, A., Das, B., Kumar, R., Singh, N., and Tiwari, V. (2024). Virtual screening and molecular dynamics investigations using natural compounds against autotaxin for the treatment of chronic pain. Journal of Biomolecular Structure and Dynamics, 1-21.

199. Jangid, K., Devi, B., Sahoo, A., Kumar, V., Dwivedi, A. R., Thareja, S., Kumar, R., and Kumar, V. (2024). Virtual screening and molecular dynamics simulation approach for the identification of potential multi-target directed ligands for the treatment of Alzheimer's disease. Journal of Biomolecular Structure and Dynamics, 42(1): 509-527.

200. Temre, M. K., Devi, B., Singh, V. K., Goel, Y., Yadav, S., Pandey, S. K., Kumar, R., Kumar, A., and Singh, S. M. (2023). Molecular characterization of glutor-GLUT interaction and prediction of glutor's drug-likeness: Implications for its utility as an antineoplastic agent. Journal of Biomolecular Structure and Dynamics, 41(20): 11262-11273.

201. Dahiya, L., Kumar, R., Baidya, A. T., Kumar, S., Kumar, R., Pawar, S. V., and Yadav, A. K. (2023). Design, synthesis, biological evaluations and in silico studies of N-substituted 2, 4-thiazolidinedione derivatives as potential a-glucosidase inhibitors. Journal of Biomolecular Structure and Dynamics, 1-18.

202. Mishra, A., Sinha, V. R., Sharma, S., Mathew, A. T., Kumar, R., and Yadav, A. K. (2023). A comprehensive compatibility study of ganciclovir with some common excipients. American Journal of Biopharmacy and Pharmaceutical Sciences, 3.

203. Baidya, A. T., Deshwal, S., Das, B., Mathew, A. T., Devi, B., Sandhir, R., and Kumar, R. (2023). Catalyzing a Cure: Discovery and development of LRRK2 Inhibitors for the treatment of Parkinson's disease. Bioorganic Chemistry, 106972.

204. Wang, L., Wojcieszak, J., Kumar, R., Zhao, Z., Sun, X., Xie, S., Winblad, B., and Pavlov, P. F. (2024). FKBP51-Hsp90 Interaction-Deficient Mice Exhibit Altered Endocrine Stress Response and Sex Differences Under High-Fat Diet. Molecular Neurobiology, 61(3): 1479-1494.

205. Kaur, M., Sharma, A., Kaur, H., Singh, M., Devi, B., Naresh Raj, A. R., Sood, V., Pandey, A., Gartia, J., Kumar, R., and Barnwal, R. P. (2023). Screening of potential inhibitors against structural proteins from Monkeypox and related viruses of Poxviridae family via docking and molecular dynamics simulation. Journal of Biomolecular Structure and Dynamics, 1-16.

206. Sharma, N., Srivastava, N., Kaushal, A., Das, B., Vashistha, A., Kumar, L., Kumar, R., and Kumar Yadav, A. (2023). Synthesis, in Silico Study and Biological Evaluation of N-(Benzothiazol/Thiazol-2-yl) benzamide Derivatives as Quorum Sensing Inhibitors against Pseudomonas aeruginosa. Chemistry & Biodiversity, 20(9): e202300647.

207. Kaur, H., Devi, B., Alajangi, H. K., Kumar, R., Singh, G., Barnwal, R. P., and Yadav, A. K. (2023). Design, synthesis, biological evaluation and in silico studies of N-(pyridin-2-yl)-benzamides derivatives as quorum sensing inhibitors. Journal of the Indian Chemical Society, 100(9): 101082.

208. Loona, D. P., Das, B., Kaur, R., Kumar, R., and Yadav, A. K. (2023). Free fatty acid receptors (FFARs): emerging therapeutic targets for the management of diabetes mellitus. Current Medicinal Chemistry, 30(30): 3404-3440.

209. Chauhan, M., Prajapati, C., Mirza, S., Barot, R., Yadav, R., Barmade, M., Kakadiya, D., Vijayvargia, R., Haobam, B., Baidya, A.T., Kumar, R., and Murumkar, P. (2023). Design, synthesis, biological evaluation and molecular dynamics of some novel 3-phenylpyrazolo [1, 5-a] pyrimidine-2, 7 (1 H, 4 H)-dione based compounds as anti-tubercular agents. Journal of Biomolecular Structure and Dynamics, 1-19.

210. Das, B., Mathew, A. T., Baidya, A. T., Devi, B., Salmon, R. R., and Kumar, R. (2023). Artificial intelligence assisted identification of potential tau aggregation inhibitors: ligand-and structure-based virtual screening, in silico ADME, and molecular dynamics study. Molecular Diversity, 1-19.

211. Biswas, A. A., Dhondale, M. R., Agrawal, A. K., Serrano, D. R., Mishra, B., & Kumar, D. (2024). Advancements in microneedle fabrication techniques: artificial intelligence assisted 3D-printing technology. Drug Delivery and Translational Research, 1-22.

212. Kara, A., Kumar, D., Healy, A. M., Lalatsa, A., & Serrano, D. R. (2023). Continuous manufacturing of cocrystals using 3d-printed microfluidic chips coupled with spray coating. Pharmaceuticals, 16(8), 1064.

213. Singh, M., Barua, H., Jyothi, V. G. S., Dhondale, M. R., Nambiar, A. G., Agrawal, A. K., ... & Kumar, D. (2023). Cocrystals by design: a rational coformer selection approach for tackling the API problems. Pharmaceutics, 15(4), 1161.

214. D. R. Madhukiran., Nambiar A. G., Singh M., Mali. R. A., Agrawal A K., Shastri N. R., Kumar. P., Kumar D. (2023) Current Trends in API Co-Processing: Spherical Crystallization and Co-Precipitation Techniques. Journal of Pharmaceutical Sciences, 1, 19.

215. Pablo, E. D., O'Connell, P., Fernandez-García, R., Marchand, S., Chauzy, A., Tewes. F., Deayuela, M. A., Kumar, D., Bolas, F., Ballesteros, M. P., Torrado, J. J., A.M. Healy., D. R. Serrano. (2023) Targeting lung macrophages for fungal and parasitic pulmonary infections with innovative amphotericin B dry powder inhalers. International Journal of Pharmaceutics, 635, 122788.

216. Madhukiran, D. R., Thakor P., Nambiar A. G., Singh M., Agrawal A K., Shastri N. R., Kumar. D. (2023) Co-Crystallization Approach to Enhance the Stability of Moisture-Sensitive Drugs. Pharmaceutics, 15, 189.

217. Gupta, A., Niveria, K., Chandpa, H. H., Singh, M., Kumar, V., Panda, A. K., & Meena, J. (2024). Stimuli-responsive magnetic silica-poly-lactic-co-glycolic acid hybrid nanoparticles for targeted cancer chemo-immunotherapy. Drug Delivery and Translational Research, 1-15.

218. Chandpa, H. H., Panda, A. K., Meena, C. L., & Meena, J. (2023). Beyond the polysaccharide and glycoconjugate vaccines for Streptococcus pneumoniae: Does protein/peptide nanovaccines hold promises?. Vaccine.

219. Ahuja, R., Srichandan, S., Meena, J., Biswal, B. K., & Panda, A. K. (2023). Immunogenicity evaluation of thermostable microparticles entrapping receptor binding domain of SARS-CoV-2 by single point administration. Journal of pharmaceutical sciences, 112(6), 1664-1670.

220. Jangra, J., Bajad, N. G., Singh, R., Kumar, A., & Singh, S. K. (2024). Identification of novel potential cathepsin-B inhibitors through pharmacophore-based virtual screening, molecular docking, and dynamics simulation studies for the treatment of Alzheimer's disease. Molecular Diversity, 1-21.

221. Bajad, N. G., Singh, R. B., Gajendra, T. A., Gutti, G., Kumar, A., Krishnamurthy, S., & Singh, S. K. (2024). Development of multi-targetable chalcone derivatives bearing N-aryl piperazine moiety for the treatment of Alzheimer's disease. Bioorganic Chemistry, 143, 107082.

222. Firdaus, Z., Gutti, G., Ganeshpurkar, A., Kumar, A., Krishnamurthy, S., Singh, S. K., & Singh, T. D. (2024). Centella asiatica improves memory and executive function in middle aged rats by controlling oxidative stress and cholinergic transmission. Journal of Ethnopharmacology, 117888.

223. Bajad, N. G., Singh, R. B., Gajendra, T. A., Gutti, G., Kumar, A., Krishnamurthy, S., & Singh, S. K. (2024). Development of multi-targetable chalcone derivatives bearing N-aryl piperazine moiety for the treatment of Alzheimer's disease. Bioorganic Chemistry, 143, 107082.

224. Ghosh, P., Singh, R., Ganeshpurkar, A., Swetha, R., Kumar, D., Singh, S. K., & Kumar, A. (2023). Identification of potential death-associated protein kinase-1 (DAPK1) inhibitors by an integrated ligand-based and structure-based computational drug design approach. Journal of Biomolecular Structure and Dynamics, 41(20), 10785-10797.

225. Gutti, G., Leifeld, J., Kakarla, R., Bajad, N. G., Ganeshpurkar, A., Kumar, A., ... & Singh, S. K. (2023). Discovery of triazole-bridged aryl adamantane analogs as an intriguing class of multifunctional agents for treatment of Alzheimer's disease. European Journal of Medicinal Chemistry, 259, 115670.

226. Singh, R., Anand, A., Ganeshpurkar, A., Ghosh, P., Chaurasia, T., Singh, R. B., ... & Kumar, A. (2023). Machine learning-based screening of in-house database to identify BACE-1 inhibitors. Chemical Papers, 77(11), 6849-6858.

227. Singh, R., Ghosh, P., Ganeshpurkar, A., Anand, A., Swetha, R., Singh, R. B., ... & Kumar, A. (2023). Natural-Language Processing (NLP) based feature extraction technique in Deep-Learning model to predict the Blood-Brain-Barrier permeability of molecules. Molecular Informatics, 42(10), 2200271.

228. Bajad, N. G., Kumar, A., & Singh, S. K. (2023). Recent Advances in the Development of Near-Infrared Fluorescent Probes for the in Vivo Brain Imaging of Amyloid-β Species in Alzheimer's Disease. ACS Chemical Neuroscience, 14(17), 2955-2967.

229. Bhanukiran, K., Singh, S. K., Singh, R., Kumar, A., & Hemalatha, S. (2023). Discovery of Multitarget-Directed Ligands from Piperidine Alkaloid Piperine as a Cap Group for the Management of Alzheimer's Disease. ACS Chemical Neuroscience, 14(15), 2743-2760.

Refereed National Journal

1. Kumar, S., A. Mishra, K. N. Dwivedi, N. Singh, A. Kumar, S. K. Bhartiya, S. Krishnamoorthi, A. Kumar, B. Goel and S. K. Jain (2023). "Evidence-based therapeutic potential of natural seed oil of Desert Date/Ingudi (Balanites aegyptiaca Linn. Delile) in chronic diabetic wound." Proceedings of the National Academy of Sciences, India Section B: Biological Sciences 93(4): 837-842.

2. Tripathi, N., K. Mandrah, B. Goel, N. Bhardwaj, V. K. Paswan, G. Ravikanth, S. K. Roy and S. K. Jain (2024). "In-vitro Anti-inflammatory Potential of Standardized Rottlerin Enriched Fraction of Mallotus philippensis Muell. Arg Anti-inflammatory Potential of Rottlerin Enriched Fraction of Mallotus philippensis." Proceedings of the National Academy of Sciences, India Section B: Biological Sciences: 1-7.

Proceedings of International Conferences

1. Mansi Upadhyay, Krushna Eknath Yadav, Abhishek Jha, Kanchan Bharti, Ramakrishna V Hosur, Brahmeshwar Mishra, Vinod Tiwari, Ashutosh Kumar. Presenting a poster on Medicated chewing gum tablet of myricetin loaded chitosan nanoparticles for management of type 2 diabetes in the International Conference on Nanomedicine and Nanobiotechnology going to be held in Barcelona, Spain, United States of America. 15th to 17th January 2024.
2. Akhilesh and Vinod Tiwari*. Presented a poster on Berginin Ameliorates Chemotherapy induced Neuropathic pain by Regulating TRPA1/TRPV1 Mediated NR2B Activation and Neuroinflmmation. 26th Thai Neuroscience Society International Conference, Faculty of Medical Science, Naresuan University, Phitsanulok, Thailand. (9th June 2023)

Proceedings of National Conferences

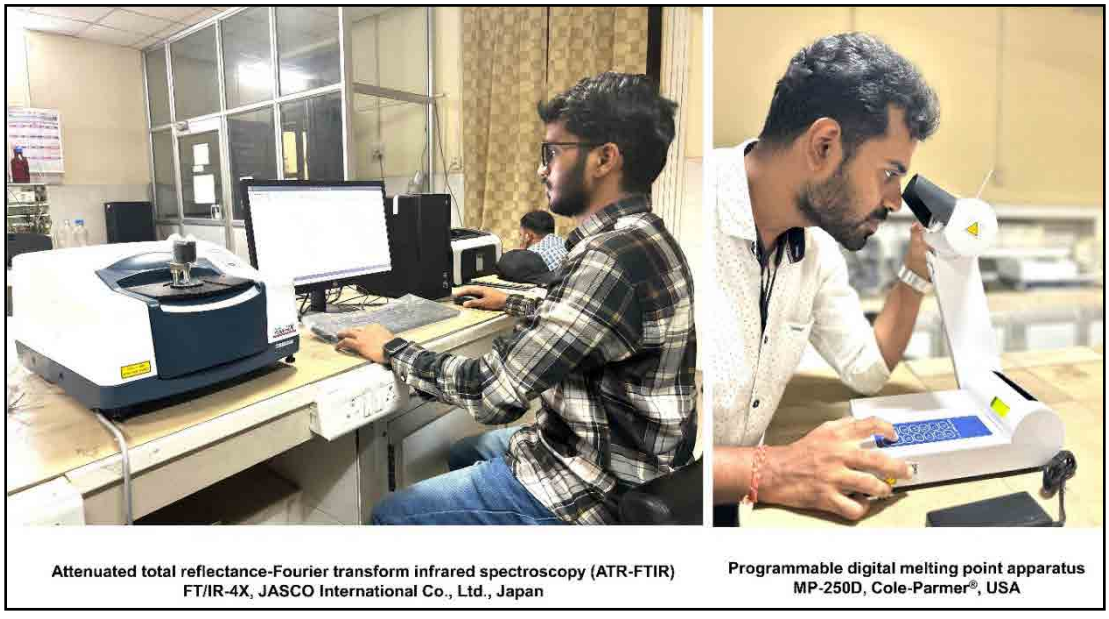
1. Hansal Kumar, S.K. Shrivastava, Carbonyldiimidazole-Mediated Synthesis of Symmetrical Ureas: Computational & Its Detailed Pharmacological Exploration as Anti-Alzheimer's Agent, RICT, France, 2023.
2. Kshirod K Das, S.K. Shrivastava, Design & Synthesis of Novel Oxadiazole Based Derivatives Bearing Indole Moiety as Potential Candidates for The Treatment of Alzheimer's Disease, ICFCS, Coimbatore, India, 2023.
3. Km Deeksha Nigam, S.K. Shrivastava, Design & Synthesis of Novel Quinazolinone Based Derivatives Bearing Indole Moiety as Potential Candidates for The Treatment Of AD, ICFCS, Coimbatore, India, 2023.
4. Abhinav Singh, S.K. Shrivastava, Design, Synthesis, and Biological Evaluation of PAS Selective and Brain Permeable Novel Oxadiazole-Piperazine Conjugates against Alzheimer's Disease, ICFCS, Coimbatore, India, 2023.
5. Nivedita Verma, Abhipshit Kalita and Vinod Tiwari* Presented a poster entitled Pharmacological Investigations on Therapeutic Potential of Gabaxate Mesilate in Animal Model of Rheumatoid Arthritis in the 41st Annual Meeting of the Indian Academy of Neuroscience & International Conference on Brain: Chemistry to Cognition held at Jiwaji Universtiy, Gwalior, India. October 4 to 6, 2023.
6. Krushna Yadav, Nipun Pundeer and Vinod Tiwari* Presented a poster entitled "Exploring the Therapeutic Possibilities of Atomoxetine through Pharmacological Studies in an Animal Model of Chronic Pain Induced by Burn Injury" in the 41st Annual Meeting of the Indian Academy of Neuroscience & International Conference on Brain: Chemistry to Cognition held at Jiwaji Universtiy, Gwalior, India. October 4 to 6, 2023.
7. Anagha Gadepalli and Vinod Tiwari*. Oral Presentation entitled "Activation of Peripheral μ-Opioid Receptors Alleviates Chemotherapy-induced Evoked and Ongoing Pain in Rats" in 37th Annual Meeting of the Society for Neurochemistry - International Conference on "Neuroscience and Neurological Disorders," at North Eastern Hill University in Shillong, Meghalaya. (September 8th to 16th, 2023).
8. Obulapathi and Vinod Tiwari*. Oral Presentation entitled "Development and Validation of Pre-Clinical Model for Frostbite-Induced Chronic Pain and its Therapeutic Management" in 37th Annual Meeting of the Society for Neurochemistry - International Conference on "Neuroscience and Neurological Disorders," at North Eastern Hill University in Shillong, Meghalaya. (September 8th to 16th, 2023).

9. Anmol, Nipun Pundeer and Vinod Tiwari*. Oral Presentation entitled "Pharmacological investigations on therapeutic potential of Atomoxetine in animal model of burn injury induced chronic pain" in 37th Annual Meeting of the Society for Neurochemistry - International Conference on "Neuroscience and Neurological Disorders," at North Eastern Hill University in Shillong, Meghalaya. (September 8th to 16th, 2023).
10. Anuj, Obulapathi and Vinod Tiwari*. Oral Presentation entitled " Dermorphin [D-Arg2, Lys4] (1-4) amide alleviates pain hypersensitivity in frostbite induced chronic pain in rats" in 37th Annual Meeting of the Society for Neurochemistry - International Conference on "Neuroscience and Neurological Disorders," at North Eastern Hill University in Shillong, Meghalaya. (September 8th to 16th, 2023).

Distinguished Visitors

Sl. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	Dr Kallol Chattopadhyay, Adjunct Professor, Chapman University, USA	02.04.2023	Visit
2	Dr. Pragallapati Nagamani, Associate Professor, Adarsa College of Pharmacy, AP	27.04.2023	Visit
3	Dr. Ashok Omray	29.05.2023	Visit
4	Prof. Ashutosh Kumar, Deptt of Bioscience & Bioengineering, IIT Bombay	13.06.2023	Visit
5	Dr. Gaurava Pradeep Srivastava, s/o Prof G.P. Srivastava	09.08.2023	Visit
6	Dr. Chandrashekhar Ranga, Deputy Drugs Controller India, CDSCO	16.08.2023	Visit
7	Dr. Shakti Sahi, School of Biotechnology, Gautam Buddha University, Gr. Noida	17.11.2023	Visit
8	Dr. Rashmi Srivastava, MET, Institute of Pharmacy, University of Mumbai	17.11.2023	Visit
9	Dr. Rakesh Kumar Sinha, Biological E Ltd., Hyderabad	18.11.2023	Visit
10	Dr. D. Boken	18.11.2023	Visit
11	Mr. Sejal Kumar	11.12.2023	Visit
12	Dr. Bhaskara Rao Rayini, Director, EME, Regulatory Axsome Therapeutics USA	19.12.2023	Visit
13	Mr. S.K. Banerjee	28.12.2023	Visit
14	Mr. Tushar Korday	28.12.2023	Visit
15	Dr. G.B. Jena, Professor, NIPER Mohali	28.12.2023	Visit
16	Prof. Armin Gamper, University of Alberta, Edmonton	16.11.2023 to 30.11.2023	SERB OVDF Visitor Programme
17	Dr. P.K. Nandi, Director – Centurion University, BBSR	09.02.2024	Visit
18	Dr. Nityananda Sahoo, Principal, School of Pharmacy, Centurion University	09.02.2024	Visit
19	Dr. Himanshu Bhusan Samal, Associate Dean, Centurion University	09.02.2024	Visit
20	Dr. Praful Kumari Sahi, Professor & Principal, Centurion University of Tech.	09.02.2024	Visit
21	Prof. V.K. Sharma, Ex-Director, BIT Meerut, UP	20.02.2024	Visit
22	Mr. Mohanji Saxena, Director, Qes Herbals Pvt. Ltd & MD, Ayurved Ltd.	20.02.2024	Visit
23	Mr. Praveen Tyle, Ph.D. Texas, USA	08.03.2024	Visit

Key Instruments (Photographs)



Attenuated total reflectance-Fourier transform infrared spectroscopy (ATR-FTIR) FT/IR-4X, JASCO International Co., Ltd., Japan

Programmable digital melting point apparatus MP-250D, Cole-Parmer®, USA

17. Department of Humanistic Studies

Complete Name of Department: Department of Humanistic Studies

Year of Establishment: 2015

Head of the Department: Dr. Ajit Kumar Mishra_w.e.f. 30.06.2021-29.06.2024

Brief Introduction of the Department:

The Department of Humanistic Studies was initiated in the year 2015. Prior to its inception, the Technical Writing Section was looking after the language and communication needs of the students of the institute for a little more than two decades. This Department as an academic entity envisages to enhance the power of science and technology with an inspiring touch of human sensibility that our world urgently needs in the present civilizational crisis pertaining to the mindless development in the form of three dimensional projections as the hallmarks of growth. It will be an interdisciplinary platform to develop finer sensibilities in the students of engineering and technology to creatively engage themselves in the development of a society which upholds values our heritage has provided us with its multifarious sources.

This Department comprises faculty in many disciplines such as History, Philosophy, Sociology, Psychology, Language, Linguistics, Literature and Culture, but not limited to these only. As and when a worthwhile academic proposition that evidently indicates a civilizational change, will be considered worthy to be included in its curriculum for teaching and research in this department.

Major areas of Research

1. **English** (Literature, Cultural Studies, Gender Studies, Film Studies and Visual Culture, Narrative Studies, Professional Communication, Creative writing, Literary Theory, Health Humanities)
2. **Philosophy** (Indian and Western Logic, Gandhian Philosophy, Peace and Ahimsa Studies, Indian Philosophy-Sanskrit-Navya Nyaya and Bharatiya Tarka)
3. **Linguistics** (Computational Linguistics, Machine Translation, CALL, Computational Semantics, Grammar Formalism, Cognitive Linguistics, Sanskrit Computational Linguistics, Sociolinguistics, Lexicography)
4. **Psychology** (Social Psychology, Health and Wellbeing)
5. **Sociol ogy** (Environmental Studies, Sustainable Urbanization, Smart Cities, Gender Studies, Science, Technology and Society, Social and Cultural Anthropology in India, Ethnography of Performance, Post-colonialism and the Inter-disciplinary Dialogues on Caste and Literature in India, Critical Dance Studies)
6. **History (**Indian History and Culture, Archival Studies)

Infrastructure

S. No.	Particulars	Number
1	No. of Computers available for students in the Department	32

Unique Achievement / Preposition of the Department

1. Academic Programmes offered

New Courses Introduced

S. No.	Course Code	Course name	Course credit
1	HPH-306	Introduction to Nītiśāstras	09
2	HID-334	Climate change & Environment	09

Students on Roll *(Please give No. of students only in respective years)*

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	Ph. D (Under Institute Fellowship)	3	5	3	5	1

* PhD (Under External Fellowship Category - UGC JRF, NFSC) - 33, PhD (ASEAN-DIA Programme) - 02 and PhD (External Registration Category) - 01

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

S. No.	Name of Student/ Roll No.	Conference/Seminar/Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA				
1	Shubham Kumar Gupta 22191007	Presented a paper entitled " Metaphorical Imagination and Possible Futures in Kim Stanley Robinson's Mars Trilogy" in INTERNATIONAL CONFERENCE ON REIMAGINING PLANETARITY AND THE EARTH FAMILY, organised by Department of English, Banaras Hindu University.	24-25 November 2023 Dept. of English, Banaras Hindu University, Varanasi, Uttar Pradesh.	N/A
2	Pursotam kumar 19191504	Participated in "The Summer School in Computational Linguistics 2023", organised by the Linguistic Data Consortium for Indian Languages, Central Institute of Indian Languages Mysuru.	(June 19- July 03, 2023). Central Institute of Indian Languages Mysuru.	NA
		Presented a paper entitled "English-Hindi Divergence Study of Semantically Contrastive Pairs of English Verb-Particle Constructions" at the 50th ALL INDIA CONFERENCE OF DRAVIDIAN LINGUISTS & INTERNATIONAL SEMINAR ON CURRENT TRENDS IN LINGUISTICS.	21-23 June, 2023. Department of Linguistics, University of Kerala, Thiruvananthapuram.	NA
		Presented a paper entitled "Linguistic Analysis of Hindi Matrimonials: Probing theCultural Conceptualization" at the 50th ALL INDIA CONFERENCE OF DRAVIDIAN LINGUISTS & INTERNATIONAL SEMINAR ON CURRENT TRENDS IN LINGUISTICS.	21-23 June, 2023. Department of Linguistics, University of Kerala, Thiruvananthapuram	NA
3.	Jyoti Kumari 20191505	Presented a paper titled "Changing Trends of Grooming Products' Advertisements in India: A Study of Gender Metaphors" at the 50th ALL INDIA CONFERENCE OF DRAVIDIAN LINGUISTS & INTERNATIONAL SEMINAR ON CURRENT TRENDS IN LINGUISTICS.	21-23 June, 2023. Department of Linguistics, University of Kerala, Thiruvananthapuram. Mode: Online	NA
4.	Namrata Paul 21191503	Presented a paper titled "Changing Trends of Grooming Products' Advertisements in India: A Study of Gender Metaphors" at the 50th ALL INDIA CONFERENCE OF DRAVIDIAN LINGUISTS & INTERNATIONAL SEMINAR ON CURRENT TRENDS IN LINGUISTICS.	21-23 June, 2023. Department of Linguistics, University of Kerala, Thiruvananthapuram. Mode: Online	N/A
5.	Nidhila S 21191005	Presented a paper titled "Short Story to Film: Adaptational Shifts in P. Padmarajan's Arappatta Kettiya Graamathil (1986)" at the V Annual International Conference 'CULTURING TRANSLATIONS AND TRANSLATING CULTURES: SEMIOTIC AND TRANSSEMIOTIC PERSPECTIVES' organized by Cooch Behar College, Cooch Behar, West Bengal and Centre for Indian Arts and Cultural Studies, Cooch Behar Panchanan Barma University, West Bengal with Ceasurae Collective Society.	10th to 12th of April 2023, Cooch Behar College, Cooch Behar, West Bengal	RSGF
		Participated in 'Five-Day Online Academic Writing & Publishing Workshop' organized by the Dept. of HSS, NIT Tiruchirappalli & Dept. of Humanities, IIST Thiruvananthapuram	24th to 28th of July 2023, Online	RSGF
		Presented a paper titled "Alternate Motherhoods in Select Films of P. Padmarajan" in the two-day International Conference on Gender Studies, organized by the School of Humanities, Social Sciences and Management, National Institute of Technology, Karnataka	21st to 22nd September 2023, Online	RSGF
6.	Mihir Pandey 22191502	Presented Poster Titled, "Exploring the Process: How one forms caste-based prejudice against member of another caste" at 33rd Annual Convention organised by National Academy of Psychology and Gandhi Institute of Technology and Management, Visakhapatanam	14th to 16th February, 2024 Visakhapatnam Offline	STGS
7.	Akash Kumar Srivastava 221002	Participated in the International Conference on 'History, Science and Technology of South Asian Ceramics' jointly organised by IIT Gandhinagar, IIT Madras, IGRMS and Tamilnadu State Department of Archaeology at IIT Madras Campus, Chennai.	Date: 5th to 9th January 2024. Venue: IIT Madras. Mode: In-Person	Received a travel grant from Indira Gandhi Rashtriya Manav Snagrahalaya.

S. No.	Name of Student/ Roll No.	Conference/Seminar/Symposia/Workshop	Date & Venue	Financial Assistance From
8.	Abhijeet Satsangi 19191501	Presented a paper titled "Linguistic Analysis of Hindi Matrimonials: Probing the Cultural Conceptualization" at the 50th All India Conference of Dravidian Linguists and International Seminar on Current Trends on Linguistics	Date:21-23 June 2023 Venue: University of Kerala Mode: In-Person	Self-funded
		Presented a paper titled "A Comparative Analysis of Hindi and Bangla Tongue Twisters" at the 50th All India Conference of Dravidian Linguistics and International Seminar on Current Trends on Linguistics	Date: 21-23 June, 2023 Venue: University of Kerala Mode: In-Person	
9.	Sanmay Sarkar 22191510	Presented a paper entitled "Transforming Identities amidst Intersections of Tribe, Gender and Class in Select Indian Novels" at Kaadakam-III, Three Day International Tribal Conference	Date: 7-9 February, 2024 Venue: MES, Mamphad College (Autonomous) and Center for Dalit and Tribal Studies	
10.	Mahua Bhattacharyya 20191508	Presented a paper titled "To Weep or to Laugh: Studying Humour and Breast Talk in Breast Cancer Narratives" at 3rd International Conference on "Contemporary Perspectives in English Language, Literature, and Cultural Studies" organised by Dept. of English, Chandigarh University, Punjab, India.	Date: 14th to 15th July, 2023 Mode: Online	
		Attended and participated in the FDP on "Health Humanities" organised by School of Social Sciences and Languages, Vellore Institute of Technology, Chennai, India.	Date: 6th to 10th September, 2023 Mode: Online	
		Presented a Paper titled "Rethinking Epistemic Injustice in Healthcare: A Comparative Study of Male and Female Breast Cancer Memoirs" in a national seminar organised by Mahila Mahavidyalaya, BHU, Varanasi.	Date: 19-20 February, 2024 Venue: Mahila Mahavidyalaya, BHU campus, Varanasi	
11.	Animesh Roy 20191503	Attended and presented paper entitled "Politics of Land in Environmental Colonialism: An Assessment from the Perspectives of Global South" in 3rd International Conference on "Contemporary Perspectives in English Languages, Literature and Cultural Studies	Date: 14th-15th july, 2023 Venue: Chandigarh University in collaboration with University of Alcala, Spain Mode: Online	Self Funded
		Presented and participated research article in the International Conference 'Mapping the Marvelous: Mythopia, Multiverse, and Fantasy Across Literature(s), Films and Media being organised by the department of English, University of Rajasthan	Mode: Offline Date: 19 Dec to 21 Dec, 2023	Self Funded
		Presented research paper entitled "From Myth to Reality: An Assessment of Rewriting Environmental Derangement and Refugee Crisis in Amitav Ghosh's "Gun Island" in the International Conference named "Global Anthropocene: Rethinking Sustainability and Cultural Preservations organised by Jadavpur University, West Bengal	Mode: Offline Date: 30-31 January, 2024	Self Funded
12.	Ranjeet Verma 22191006	Participated in one week workshop, "Application of Geophysical, Geospatial and Machine Learning Techniques in Landslide Risk Assessment"	Science and Engineering Research Board and Department of Geology, Savitri Bai Phule Pune University, Pune.	SERB India
		Presented a paper, "Sustainable Utopias: A Comprehensive Exploration of Eco-village Planning for the Indian Context", in "International Conference in Rethinking Built Environment (InCORBE-2024)." Mizoram, India.	Date:23rd to 29 July, 2023. Department of Fine Arts, Architecture and Fashion Technology, University of Mizoram, Aizawl, Mizoram, India. Date: 6th to 8th March 2024.	Self Funded
		Participated in five days FDP cum Workshop on "Water Resources Management & Fluvial Hydraulics in Steep Mountain Streams."	CRG SERB Govt of India and the Department of Civil Engineering, Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab, 144008, India. Date: 27-03-2024 to 31-03-2024.	Self Funded

S. No.	Name of Student/ Roll No.	Conference/Seminar/Symposia/Workshop	Date & Venue	Financial Assistance From
13.	Abhitha S. J. 20191501	Presented a paper titled "Different Childhoods: Dalit Childhood Experiences within School Space and the Need for Inclusiveness" at the 1st Kerala School Education Congress for Quality interventions in School Education for Navakeralam organized by Department of General Education, Government of Kerala and State Council of Educational Research and Training (SCERT), Kerala.	Date: 01/04/2023 to 03/04/2023 Venue: Kerala Arts and Craft Village, Trivandrum Mode: In-person	Self Funded
		Presented a paper titled "Experiences of Schooling: Childhood in Dalit Autobiographies" at the International Young Researcher's Conference on New Research in English Studies organized by The English and Foreign Languages University, Hyderabad.	Date: 26/04/2023 to 28/04/2023 Venue: English and Foreign Languages University, Hyderabad Mode: Online	N/A
		Participated in the One Week Online Faculty Development Programme titled 'Children's Literature: Reading, Writing and Publishing' organised by the Department of Humanities and Social Sciences, NIT Tiruchirappalli.	Date: 17/07/2023 to 22/07/2023 Venue: NIT, Tiruchirappalli Mode: Online	Self Funded
14.	Ravikant Dubey 18191002	Presented a paper tilted 'Circular economy solutions for river health restoration through the implementation of extended producer responsibility in solid waste management': 3rd International conference on River Health : Assessment to Restoration (RHAR 2023).	Date:12-14 October 2023. Venue: Dept. of Civil Engg, IIT(BHU),Varanasi. (U.P)	Self Funded
		Presented a paper titled 'A Study of Municipal Solid Waste & Perception'in International Conference on Waste Recycling and Environmental Technology (WRET-2024).	Mode: In-person Date: FEB 8-9, 2024 Venue: BBAU,Lucknow. (U.P) Mode: In-person	Self Funded
ABROAD				
1	Namrata Paul 21191503	Presented a paper titled "The Taste of Anger: A Conceptual Metaphor Analysis of Anger in Bangla" at the 16TH INTERNATIONAL COGNITIVE LINGUISTICS CONFERENCE (ICLC16) held at the Heinrich-Heine-Universität Düsseldorf, University Street 1 40225 Düsseldorf, Germany, August 7 – August 11, 2023.	7 – 11 August, 2023 Heinrich-Heine-Universität Düsseldorf, University Street 1 40225 Düsseldorf, Germany Mode: In-Person	STGS: Department of Humanistic Studies, IIT BHU and R&D, IIT BHU
2	Pursotam Kumar 19191504	Presented a paper entitled "Symbols of Spatial Representation across Languages: From English Phrasal Verbs to Hindi Complex Predicates" at the SOAS GLOCAL Conference on Asian Linguistic Anthropology 2023 (CALA-2023).	16-19 May, 2023, University of the Philippines, Diliman, Philippines.	NA
		Presented a paper entitled "Sociolinguistic Aspects of the Linguistic Visuals across the Ganges in Varanasi" at the SOAS GLOCAL Conference on Asian Linguistic Anthropology 2023 (CALA-2023).	16-19 May, 2023, University of the Philippines, Diliman, Philippines.	NA
		Presented a paper entitled "English-to-Hindi Mapping of the Phrasal Verb Particles UP and DOWN" at the 37th South Asian Language Analysis Roundtable International Conference (SALA-37).	October 4-7, 2023.Ca` Foscari University of Venice, Venice, Italy	STGS: IIT (BHU) Varanasi
3	Nidhila S 21191005	Participated in the Online 10 Week Seminar "Designing Feminist Research" organised by Gender and Sexualities Studies Institute, The New School, New York	October 5th to December 14th 2023, Online	NA
4	Akash Kumar Srivastava 221002	Presented a paper titled Multivalence of Adivasi Culture and its Implication for Archaeology in India at 'The European Conference for South Asian Studies' held at the University of Turin, Turin, Italy.	Date: 26 to 29 July 2023. Venue: Turin, Italy. Mode: In-Person	STGS: IIT (BHU) Varanasi
5	Akanksha Yadav (with Dr. Vinita Chandra) 19191001	Presented a paper on 'Gender, Religion and Agency: Kinnars Claiming Death Rites' at the 27th European Conference on South Asian Studies held at the University of Turin, Turin, Italy.	Date: 26 to 29 July 2023. Venue: Turin, Italy. Mode: In-Person	STGS: IIT (BHU) Varanasi

S. No.	Name of Student/ Roll No.	Conference/Seminar/Symposia/Workshop	Date & Venue	Financial Assistance From
6	Anish Mazumder 21191502	Presented a paper on "Securitization of Migration in the Age of Social Credit System (SCS); Implications for Labour Citizenship and Social Rights in China: in 16th Next-Generation Global Workshop, entitled "International Conference on Migration and Quality of Life: Harnessing the Potential for Social Prosperity" held at Faculty of Letters, Kyoto University, Japan.	September 29th to 30th, 2023. Japan In-Person	Self-funded
7.	Samyamoy Khutia 21191008	Presented a paper titled "Fear of Queer Body: Body as Project in Contemporary Bengali Films" at TALKING BODIES (Tenth Anniversary Gathering) held at the University of Chester	Date: 12th–16th June 2023 Venue: University of Chester, UK Mode: In-person	STGS
8.	Abhitha S. J. 20191501	Presented a paper titled "Caste Passing: Migration, Middle-Class Aspiration and Historical Trauma in Dalit Life Writing" at the 7th Annual Interdisciplinary Graduate International Conference on Whither-isms: On the Imbrications of Theory and History held at Stony Brook University, New York, USA	Date: 29/09/2023 Venue: Department of History, Stony Brook University, New York, USA Mode: In-person	STGS from IIT (BHU), Varanasi
09.	Sooraj S S 18191004	Presented a paper titled "Menstruating Bodies and the Hypermasculine Deity: A Study of Masculinities Post the Sabarimala Verdict in Contemporary Kerala" at TALKING BODIES (Tenth Anniversary Gathering) held at the University of Chester	Date: 12th–16th June 2023 Venue: University of Chester, UK Mode: In-person	STGS

Names of Students/Scholars who went for foreign Internship

S. No.	Name of Student	Roll No.	Name of the Organization	Place of Internship	Country	Duration
1	Anuja Jose	20191504	South Asia Institute, Heidelberg University, Germany	Under the DAAD Project -Short Term Fellowship	Germany	01st April to 31st July 2023

2. Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
PROFESSORS			
1	Prasanta Kumar Panda Ph.D	Dec.1998	Literary Theory, Technical Communication, Creative Writing
ASSOCIATE PROFESSORS			
1	Dr. Sanjukta Ghosh, Ph.D. 17532	March, 2004	Cognitive semantics and its applications, Computational Semantics
2	Dr. Anil Kumar Thakur Ph.D. 17532	2005	Generative Syntax, Linguistic Analysis
3	Dr. Ajit Kumar Mishra Ph.D. 50196	2003	Narrative Studies (Culture, Medicine, Health); Visual Culture (Film, Television, Photography); Humanistic Communication (Healthcare, Management, Business, Wellbeing)
4	Dr. Nirmalya Guha Ph.D. 50221	May, 2009	Philosophy, Logic, Epistemology
5	Dr. Vinita Chandra M.A., Ph.D. 19253	March 4, 2009	Indian History, Gender Studies,Social and Cultural Anthropology
6	Dr. K V Cybil Ph.D. 50228	2003	Social Anthropology
ASSISTANT PROFESSORS			
1	Dr. Shail Shankar Ph.D. 50220	February, 2011	Crowd and group behaviour, Urban spaces, Social cognition

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
2	Dr. Swasti Mishra Ph.D. 50176	December 31, 2006	Sociolinguistics, Applied Linguistics, Computational Linguistics
3	Dr. Amrita Dwivedi Ph.D. 50177	2009	Environmental Studies including Sanitation & Human Health, Solid Waste Management, Livelihood, Slums, Applied Geography.
4	Dr. Sukhada Ph.D. 50178	August 12, 2017	Computational Linguistics, NLP, Sanskrit Paninian Grammar, Vedic Philosophy
5	Dr. Manhar Charan Ph.D. 50181	March 15, 2012	Humanistic Philosophy & Research, Gandhian Philosophy, Peace & Non-violence
6	Dr. Kavya Krishna K. R. MA, M.Phil., Ph.D. 50204	April 24, 2015	English, Gender Studies, Cultural Studies, Film Studies.
7	Dr. Vishwanath Dhital Ph.D. 50203 Resigned 05.10.2023(AN)	December 8, 2011	Bhāratīya tarkaśāstra , Indian Philosophy , Navya Nyaya & pāramparika śāstra adhyayana
8	Dr. Satish Kanaujia Ph.D. 13571	2013	Physical-Education
Visiting Faculty			
1	Dr. Sanjaya Kumar Lenka	Morphosyntax, Language & Communication, Academic Writing & Speaking	
2	Dr. Arvind Gupta	Data and Digital Economy	
3	Deepak Gandotra	Data and Digital Economy	
4	Arun Anant	Media Environment	
5	Bharath Ganapathi	Media Environment	
6	S Krishna Kumar	Quality Management and Business Strategy	
7	Vineet Suri	Quality Management and Business Strategy	
8	Krishnan Hariharan	Finance and Economics for Engineers	
9	Abhishake Mathur	Finance and Economics for Engineers	

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1.	Dr (Mrs) Sudha Mishra, Ph.D.	Senior Superintendent	09.05.2023
2.	Mr Alok Ranjan, B.A.	Junior Assistant	01.11.2023
3.	Amit Kumar Prajapati B.A. (Sociology)	Multi Tasking Staff	13.12.2016

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

S. No.	Coordinator	Title	Period
1	Vinita Chandra (Panel Convener)	Panel on 'Trans/ Third Gender Communities and Religion in South Asia', in the 27th European Conference on South Asian Studies, Turin, Italy.	26-29 July, 2023 (panel on 28th July, 2023)
2	Dr. Sukhada (Organizer)	Co-Organized a Two-day Workshop on "Various Dimensions of Sanskrit and Computer Science" at Veda Vijnana Kendra, BHU. Sponsored by Veda Vijnana Kendra, BHU, Varanasi, India	13th-14th Jan. 2024

S. No.	Coordinator	Title	Period
3	Dr. Sukhada (Organizer)	A 30 Day Training Workshop on "Developing Indian Grammatical Tradition based Universal Semantic Representation Bank (USR-Bank)" at IIIT-Hyderabad, India; Sponsored by Central Sanskrit University, Delhi, India	15th Aug. 2023 to 15th Sep. 2023
4	Dr. Sukhada (Organizer)	Co-Organized a Three day Workshop on Universal Semantic Grammar (USG) for language teachers at Chaman Vatika Gurukul, Ambala; Sponsored by Chaman Vatika Gurukul, Ambala	03rd - 05th July, 2023
5	Dr. Sukhada (Organizer)	A Three day Workshop on "Developing Indian Grammatical Tradition based Universal Semantic Representation (USR)" at Prayagraj, Ganganatha Jha Campus of the Central Sanskrit University, Sponsored by Central Sanskrit University, Government of India.	26th-28th June, 2023
7	Dr. Sukhada (Organizer)	A Four day Workshop on "Universal Semantic Grammar (USG) for language teachers" at Golden International School, Rau, Indore; Sponsored by Golden International School, Rau, Indore	25th - 29th April. 2023
8	Dr. Sukhada (Organizer)	A two-day workshop on "MAHAMANA MADAN MOHAN MALAVIYA JI AND HIS CONTRIBUTIONS FOR THE DEVELOPMENT OF SCIENCE & TECHNOLOGY" Sponsored by the Ministry of Culture, Government of India.	14th April - 15tt April 2023
9	Dr. Sukhada (Expert)	A One day workshop on "Common Tagset for Indian Languages" at Auroville, Pundichery, organized by IIT-Kanpur	17/02/2024
10	Dr Kavya Krishna K.R.	Co-ordinated Online Short-Term Course -Film Studies: Pedagogy and Research Methods, organised by the Department of Humanistic Studies, Indian Institute of Technology (BHU), Varanasi	6th to11th November 2023
11	Dr K V Cybil	Co-convener 'Commemorating Prof Dietr Kapp-Life and Works- A Roundtable', Tamil and Indology Studies, Institute for South and South East Asia, University of Cologne.	July 2nd, 2024

Short-term courses/workshops/seminars/symposia/conferences/training programmes attended by faculty members in academic institutions and public sector undertakings

S. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Vinita Chandra (with Akanksha Yadav)	Presented a paper on 'Gender, Religion and Agency: *Kinnars* Claiming Death Rites', in the 27th European Conference on South Asian Studies.	26-29 July, 2023,, Campus Luigi Einaudi, Turin, Italy.
2	Vinita Chandra (with Prof. Ute Huesken and Prof. H.N. Prasad)	Poster Presentation on 'Exploring Cultures of Learning in India and Germany (2019-2023), at the DAAD Conference on Innovation and Global Cooperation for Sustainability: Indo-German Conference	12-14 March, 2024, Taj Vivanta, Dwarka, New Delhi
3	Amrita Dwivedi (with Ranjeet Verma)	Paper presented on ,'Sustainable Utopias: A Comprehensive Exploration of Eco-village Planning for the Indian Context'. In: International Conference on Rethinking Built Environment (INCoRBE 2024)" Mizoram India'	Mizoram, India (March 6-8, 2024)
4	Amrita Dwivedi(with Ravikant Dubey & Deepak Rathore)	Presented a paper on 'Circular economy solutions for river health restoration through the implementation of extended producer responsibility in solid waste management': 3rd International conference on River Health : Assessment to Restoration (RHAR 2023)	Organized by Dept. of Civil Engineering, IIT(BHU) Varanasi, 12-14 October 2023.
5	Amrita Dwivedi (with Ravikant Dubey & Deepak Rathore)	Presented a paper on 'A Study of Municipal Solid Waste & Perception' In: International Conference on Waste Recycling and Environmental Technology	(WRET-2024), BBAU , Lucknow. dated FEB 8-9, 2024
6	Kavya Krishna K R	'Mono Acting Social Satire: Gender, Humour and Affect in Women's YouTube Vlogging practices in Malayalam' paper presented inIACLALS Annual Conference on Wit, Humour and Carnivalesque in Literature and Performance, BITS Pilani, Goa Campus	15-17 February 2024 BITS Pilani, Goa Campus
7	Prasanta Kumar Panda	Generative AI in research evaluation	Elsevier virtual Sep 27, 2023

S. No.	Name of Faculty Member	Title	Period and Venue
8	Prasanta Kumar Panda	3rd National Conference on Contemporary Perspectives in English Language, Literature, and Cultural Studies (ICCPE-2023)	Chandigarh University. 14-15 July 2023
9	Prasanta Kumar Panda	COPE Introduction to Publication Ethics workshop	26 February 2024

Special lectures delivered by faculty members in other institutions

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	Dr, Swasti Mishra	**"**Tradition of Architectural Description in Ancient & Contemporary Indian Literature**"**	Traditional Architectural Knowledge Systems an Online Teacher Training Program, MIT – ADT University, Pune.	11-05-2023
2	Dr Kavya Krishna K. R.	"Masculinity Studies: History and Theories"	Resource person at the National Level FDP on Modern Literary Theories: Trends and Influences, Presidency University, Bengaluru	1st December 2023 Mode: Online
		'Literature, Digital Popular Culture and Evolving Narrative'	Plenary Speaker at International Conference on 'Literature, Digital Popular Culture and Evolving Narrative', Christ University, Delhi NCR	9th February 2024
		'Invest in Women: Accelerate Progress'	International Women's Day Event, Distinguished Speaker, Mahila Maha Vidyalaya, BHU, Varanasi	7th March 2024
		"Masculinity Studies: Concepts and Research Possibilities"	Resource person at Short Term Faculty Development Programme (FDP) on Gender Studies, HRDC-Kannur University	19th March 2024
3	Prasanta Kumar Panda	Publication Ethics and present day academia	Institute of Science, BHU, Varanasi	21st March 2024
4	Ajit K Mishra	Do We Need Another Experience Machine? Doing Literature in the Era of Disruption	Shri Mata Vaishno Devi University, Katra	28/02/2024
		Understanding Mental Health through Literature: A Survival Value Perspective	Mahila Mahavidyalaya, BHU	21/02/2024
		Methodology, Pedagogy and Core Competencies in Literary Studies	IUCTE, BHU	20/02/2024
		Skill-based Education in India	Sambalpur University	19/02/2024
		English for Research Paper Writing	NIT Hamirpur	2/02/2024
		Skill-based Education in India	IIT Patna	28/01/2024
		Building Blocks of Research Writing and Research Article	Lovely Professional University, Punjab	16/06/2023
		Prerequisites of Academic and Professional Writing	Lovely Professional University, Punjab	17/06/2023
5	Dr. Sukhada	Indian Grammatical Tradition applied for overcoming language barrier in modern context	Veda Vijnana Kendra, BHU, Varanasi, India	14th Jan. 2024
6	Dr K V Cybil	Prof Kapp's Works- An Anthropological Reading	Tamil and Indology Studies, Institute for South and South East Asian Studies, University of Cologne	2nd July, 2024
7	Dr K V Cybil	Ambedkar's Perspectives on Education	Why Universities? Reimagining Higher Education, European Reform University Alliance Conference, Roskilde	11-12 October, 2023
8	Dr K V Cybil	Anna Bhau Sathe and the Dalit Recovery of the Political	European Conference on South Asia Studies, Turin, Italy	26-29 July 2023

Visits abroad by faculty members

S. No.	Name of Faculty Member	Country Visited	Date of Leaving India	Date of Returning India	Purpose of Visit	Funding from
1	Dr. Vinita Chandra	Turin, Italy	26th July, 2023	31st July, 2023	Conference Participation and Panel Member at the 27th European Conference on South Asian Studies.	CPDA, IIT (BHU)
2	Dr. Sanjukta Ghosh	Venice, Italy	4th October, 2023	7th October, 2023	37th South Asian Language Analysis Roundtable International Conference (SALA-37).	CPDA, IIT (BHU)
3	Dr K V Cybil	Roskilde , Denmark	8th October	15th October	Conference Participation	CPDA, IIT BHU
4	Dr K V Cybil	Cologne, Germany	1st June	15th July	Research Collaboration and Library Reference	CPDA, IIT BHU

Books, monographs authored/co-authored

S. No.	Name of Author/ Co- Author	Title	Publisher
1	Amrita Dwivedi (Edited Book 2023)	'Waste Management, Sanitation & Society', Cambridge Scholars Publishing,	https://www.cambridgescholars.com/resources/covers/9781527517820.jpghttps://www.cambridgescholars.com/product/978-1-5275-1782-0 https://play.google.com/store/books/details/Waste_Management_Sanitation_and_Society?id=uNPPEAAAQBAJ&hl=en_US&gl=US
2	Satsangi Abhijeet and Sanjukta Ghosh. (2024)	A Comparative Study of Hedges and Boosters in Indian English. In Select Papers from NCLL 2023. (ed.) Gautam k. Borah. Pp. 77-91.	Publisher: Tezpur University. ISBN: 978-81-968280-5-9.
3	Chauhan Siddharth and Sanjukta Ghosh. (2024).	Chauhan Siddharth and Sanjukta Ghosh. (2024). In Select Papers from NCLL 2023. (ed.) Gautam k. Borah. Pp. 77-91	Publisher: Tezpur University. ISBN: 978-81-968280-5-9.
4	K V Cybil (editor)	Biopolitics and Healing in a Mass Milieu	Routledge, London.

Editorial boards of journals

S. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Prof. Prasanta Kumar Panda	Editor	Nuances ISSN (2395-0943)
2	Prof. Prasanta Kumar Panda	Member, editorial Board	Platform ISSN(2347-5242)
3	Dr. K V Cybil	Contributing Editor	JMC Review
4	Dr. Kavya Krishna K.R.	Advisory Board/Editorial	Diotima's :A Journal of New Readings ISSN : 2319-4189
5.	Prof. Prasanta Kumar Panda	Editorial Board Member	Srujan: The Creativity Journal

Research and Consultancy

Sponsored research projects *(Ongoing only)*

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
1	Language Communicator Tool for End Users	03 Years	MeitY, NLTM, GoI	172 Lakhs	Dr. Sukhada (PI)
2	Neeti Shastras and Modernity: Understanding the Reflective Equilibrium between Hermeneutics of Normative Texts and Practice	02 Years	IKS Division of AICTE	10 Lakhs	Dr. Sukhada (PI)
3	Sanskrit Knowledge Accessor	02 Years	MeitY, NLTM, GoI	463 Lakhs	Dr. Sukhada (PI)

Faculty members' participation with other universities under MoUs *(Ongoing only)*

1. Dr. Sukhada:- Editorial Team member, OM RISE (Organizational Management (OM), Research (R), Innovation (I) and Sustainable Entrepreneurship (SE)), in The Netherlands (An online magazine from the Chair of Hindu Spirituality and Society Vrije Universiteit Amsterdam). Link: https://magazine.omrise.org/2020/10/editorial-note-spirituality-management-and-society-issue-4/
2. Dr. Vinita Chandra:- Participated as Core Member, Project Coordination Committee of the four years Project- 'Cultures of Learning in Academic and Non-Academic Institutions in India and Germany' sponsored by DAAD under the Program- 'A New Passage to India: German- Indian Higher Education Cooperations (2019-2023)', South Asia Institute, Heidelberg University; at the DAAD Conference on Innovation and Global Cooperation for Sustainability: Indo-German Conference, 12-14 March, 2024, Taj Vivanta, Dwarka, New Delhi.
3. Dr. Vinita Chandra:- Ongoing MoU with Institute of Cultural Studies of East and South Asia, Julius-Maximilians-Universität Würzburg, Germany.
4. Nirmalya Guha:- Research Collaboration with School of Philosophy, Fudan University, China.
5. Puneet K. Bindlish:- Research Collaboration with Faculty of Religion and Theology, Beliefs and Practices under an MoU with Vrije University, Amsterdam, Netherland

Research Publications

S. No.		No.
1	Total Number of Papers Published in Refereed National Journals	04
2	Total Number of Papers Published in Refereed International Journals	47
3	Total Number of Papers Presented in National Conferences	00
4	Total Number of Papers Presented in International Conferences	07

Refereed International Journals

1. Yadav, A. & Chandra, V. (2023) Conditional Vows: Exchange and Reciprocity between the Deity and Laity in *Chaṭha*. *Zeitschrift für Indologie und Sudasienstudien*, 40: 79-97.
2. Yadav, A., Pathak, S. & Chandra, V. (2024) Re-thinking Gender Portrayal through Language: An In-depth Analysis of Advertisements Featuring Chatha Puja. *Scope*. 13(1): 194-203. (Scopus)
3. Yadav, A. & Chandra, V. (2024). Chaṭ hī Māī in Popular Imagination: Exploring Narratives, Worship, and Rituals in North India. Rupkatha Journal 16:2. https://doi.org/10.21659/rupkatha.v16n2.02g (Web of Science (WoS) Core Collection: the Emerging Sources Citation Index (ESCI))
4. Mishra, A. & Chandra, V. (2024). Mapping the Politics of Adivasiyat in Jharkhand. *Economic & Political Weekly*. 59(13): 57-64. (Scopus Q3, Impact Factor: 0.9) https://www.epw.in/journal/2024/13/special-articles/mapping-politics-adivasiyat-jharkhand.html
5. Mishra, A. & Vinita, V. (2024). Rahul Ranjan. The Political Life of Memory: Birsa Munda in Contemporary India. *Memory Studies*. Vol.17 (3), 634-637. (SAGE, Scopus Q1 and Web of Science) https://doi.org/10.1177/17506980241240043
6. Jose, A., Singh, S. & Chandra, V. (2023). Can death be casual: the paradox in Death Café blogs. *Mortality*. DOI: 10.1080/13576275.2023.2279122 (Taylor & Francis, Scopus Q1 and many others; Impact Factor: 0.8)
7. Srivastava, A.K. & Chandra, V. (2023). Cooking with plants in Ancient Europe and beyond. Interdisciplinary approaches to the archaeology of plant foods, *Norwegian Archaeological Review*, DOI: https://doi.org/10.1080/00293652.2023.2268085 (Taylor & Francis, AHCI, WoS, Scopus Q1; Impact Factor: 0.6)
8. Srivastava, A.K. & Chandra, V. (2024). Enviro-Ethno-Archaeology in Northeast India: Prospects and Possibilities with Bodo-Kachari Tribe. *Scope*. 14 (1): 1353-1363. (Scopus)
9. Malik, E. & Shankar, S. (2023).Empowering nurses: Exploring self managed organizations in Indian healthcare. *BMC Nursing*, https://doi.org/10.1186/s12912-023-01647-5
10. Verma,V., Shankar, S. & N.V., Amrutha (2024). Everyday mobilization: Tibetan struggle for a nation in exile. *The Oriental Anthropologist*, https://doi.org/10.1177/0972558X241248710
11. Panda, Prasanta Kumar. (2023). A City in the hill or a dungeon in the valley: Where are we heading with our present culture. CICIMAR OCEÁNIDES, Vol.38 (1) 1-6..

12. Katyayani, S. (2024). Bound by Contract: Mapping Technologies of Migrant Control in the Kafala System. *The Indian Journal of Labour Economics*, 1-18.https://doi.org/10.1007/s41027-024-00488-3 .Indexed in SCOPUS(Q2) published by Springer Nature.IF- 1.0

13. Katyayani, S. (2023). Exploring the Role of Testimonio Method in Shaping Collective Memory of Indenture History: From Empathy to Empowerment. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, *15*(2):1-14(Web of Science (WoS) Core Collection: the Emerging Sources Citation Index (ESCI).https://doi.org/10.21659/rupkatha.v15n2.21

14. Shekhar, S. and Dwivedi, A. (2024)Gendered Disparities in Water and Sanitation through an Intersectional Lens: Emphasising Women's Perspectives. *Space and Culture, India*, 11(4), https://doi.org/10.20896/saci.v11i4.1410 Scopus indexed, IF: 0.7

15. Chatterjee, B. and Dwivedi, A. (2023): 'Social Inequality in the Context of Gender: a Study of Rural West Bengal, India', *Journal of Global Social welfare*, Springer nature Switzerland, WOS, Scopus indexed, IF: 1.4 https://doi.org/10.1007/s40609-023-00317-3

16. Chatterjee, B. and Dwivedi, A. (2023). 'Cultural Crisis, Deteriorating Heritage, and Placemaking: A Study of Rural West Bengal, India' India. *Space and Culture, India*, 11(3),56-68 https://doi.org/10.20896/saci.v11i3.1320 Scopus indexed, IF: 0.7

17. Dwivedi. A, Tiwari, D. and Seung, M. L. (2023): 'Arsenic Contamination of Groundwater a Grave Concern: Novel Clay-based Materials for Decontamination of Arsenic (V)', Applied chemistry, vol no.2, April 2023, 199-205. Scopus indexed IF: 0.7, https://doi.org/10.14478/ace.2023.1008

18. Dubey, R. Rathore, D. & Dwivedi, A. (2023), 'Organic waste decomposition by microbial inoculants as effective tool for environmental management',*Microbial inoculants: Recent progress and applications,* Elsevier. Scopus indexed, https://doi.org/10.1016/B978-0-323-99043-1.00010-4

19. Dubey, R. and Dwivedi, A. (2023), 'City Compost: - A Solution to Organic Waste Management & Boost to Urban Soil', Cambridge Scholars Publishing

20. Rathore, D. Dwivedi, A. and Singh, R. S.(2023), 'Role of Rag pickers in solid waste management',Cambridge Scholars Publishing

21. Shekhar, S. and Dwivedi, A. (2023),'Access to clean water and sanitation in India: A challenging journey to Sustainable Development Goals',Cambridge Scholars Publishing

22. Kanaujia, S., Saraswati, P., Singh, N., Singh, S., Kataria, N., & Yadav, P. (2023). Effect of yoga and mindfulness on psychological correlates in young athletes: A meta-analysis. *Journal of Ayurveda and Integrative Medicine*, *14*(3), 100725.

23. Sooraj, S. S., Krishna, K. R. K., & Mishra, A. K. (2023). The Male Householder and the Hypermasculine Deity: Malayalam-Language Films Based on the Sabarimala Temple in Kerala. Visual Anthropology, 36(2), 117–141. https://doi.org/10.1080/08949468.2023.2195342 (SCOPUS/SCI Q1 Journal)

24. Sooraj, S. S., Krishna, K. R. K. & Mishra, A. K. (2023). 'Undoing Masculine Hero: Fahadh Faasil's Stardom in Contemporary Malayalam Cinema'. Intersections: Gender and Sexuality in the Asia and the Pacific, Australian National University. (SCOPUS/Web of Science)

25. Sooraj, S. S., & Krishna, K. R. K. (2024). The Politics and Aesthetics of Male Homosexuality in Malayalam Cinema: Contextualizing the Film *Ka Bodyscapes* (2016). *Journal of Homosexuality*, 72(7), 1–24.https://doi.org/10.1080/00918369.2024.2321232 (SCOPUS/SCI Q1 Journal)

26. Mittal, N., Mishra, A.K. (2024). Masking Sexuality: Studying Gay Men's Closeting Strategies through Contemporary Bollywood. Quarterly Review of Film and Video. doi: 10.1080/10509208.2023.2293427. Scopus

27. Pramanik, P., Mishra, A. K. (2023).Trajectories of Care: Representations of Empowered Mothering in Contemporary Bollywood. SARE: Southeast Asian Review of English. doi: 10.22452/sare.vol60no2.2. WoS (ESCI) & Scopus

28. Bhattacharyya, M. Mishra, A. K. (2023). To Weep or to Laugh: Studying Humour and Breast Talk through Indian Breast Cancer Narratives. Literary Voice. WoS (ESCI)

29. Pramanik, P., Mishra, A. K. (2023). Bad Mothers, Bad Daughters: A Study of Maternal Ambivalence in Avni Doshi's Girl in White Cotton and Renuka Shahane's Tribhanga. Literary Voice. WoS (ESCI)

30. Pramanik, P., Mishra, A. K. (2023). Changing Stories, Changing Lives: Reconfiguration of Mothering Practices in Contemporary Bollywood. Quarterly Review of Film and Video. doi: 10.1080/10509208.2023.2235990. Scopus

31. Dwivedi, S., Ghosh, S. & Dwivedi, S. (2024). Navigating Linguistic Diversity: In-Context Learning and Prompt Engineering for Subjectivity Analysis in Low-Resource Languages. SN COMPUT. SCI. 5, 418 https://doi.org/10.1007/s42979-024-02770-z. (indexed in Scopus, IF 4.3)
32. Satsangi Abhijeet and Sanjukta Ghosh (2024). Cross-Cultural Conceptualizations of Love: Cognitive Linguistic Analysis of Metaphors in Poems of Kabir and Rumi. International Journal of Religion. Volume 5, No. 1. Pp. 732-742. DOI: https://doi.org/10.61707/wzzjvr70. (indexed in Scopus, IF 0.18)
33. Mahant Pratik K and Sanjukta Ghosh. (2024). Beyond the Classroom: A Comprehensive Study on Online Drama in Education for Second Language Pedagogy. International Journal of Education. 44(1-3): 1-14. DOI: 10.31901/24566322.2024/44.1-3.1317. (indexed in ESCI)
34. Dwivedi, Satyam, Sanjukta Ghosh, Shivam Dwivedi. (2023). Breaking the Bias: Gender Fairness in LLMs Using Prompt Engineering and In- Context Learning. Rupkatha Journal of Interdisciplinary Studies in Humanities 15:4. https://doi.org/10.21659/rupkatha.v15n4.10 (indexed in ESCI, IF 0.2)
35. Dwivedi Shivam, Sanjukta Ghosh and Satyam Dwivedi. (2023).Binary classifier for identification of stammering instances in Hindi speech data. International Journal of Speech Technology. 26:3. 765-774 https://doi.org/10.1007/s10772-023-10046-9. (indexed in Scopus, IF 4.2)
36. Mahant Pratik K, Sohaib Alam, Sanjukta Ghosh and Ismat Jabin. (2023). Shifting Learning Atmosphere through Process Drama: Teaching English Parts-of-Speech (PoS) in Indian Classroom. World Journal of English Languages. Vol. 13(8) DOI: 10.5430/wje.v13n8p288. (indexed in Scopus, IF 0.3)
37. Chauhan Siddharth, Abhijeet Satsangi, Pursotam Kumar and Sanjukta Ghosh. (2023). Evaluation of Cognitive and Argumentation Skills in Secondary English Textbooks. International Journal of Educational Sciences. Vol.42 (1-3). (2023) DOI: 10.31901/24566322.2023/42.1-3.1297. (indexed in ESCI)
38. Dwivedi Vandana and Sanjukta Ghosh. (2023). Semantic relations classification in Hindi compound nouns using embeddings International Journal of Information Technology (Singapore) https://doi.org/10.1007/s41870-023-01374-9. Springer. published online 25th July. (indexed in Scopus, IF 3.6)
39. Kumar, Pursotam and Thakur, Anil (2024). English-to-Hindi Mapping of compositional Verb-Particle Constructions. *International Journal of Religion, 5(4)*, 171-178. https://doi.org/10.61707/rvfr2948.
40. Sukhada, Shatrunjay Rawat, Sharda S. Nandram. The Spiritual Theory of Human Pursuits: Puruṣārtha Chatuṣṭaya. "Int. J. of Indian Culture and Business Management. 2024
41. Sukhada, Soma Paul. Theory of sāmarthya in Indian grammatical tradition: The foundation of universal semantic representation. Int J Sanskrit Res 2023;9(6):17-22. 2023. DOI: https://doi.org/10.22271/23947519.2023.v9.i6a.2235
42. Cybil K V Historicising the Spiritual–Political Fold in Asceticism: The Sree Narayana Gurukulam and Social Change. Social Change, 54(2), 179-192. https://doi.org/10.1177/00490857241252696
43. Rajesh Kumar Mundotiya, Shantanu Kumar, Ajeet Kumar,Swasti Mishra, Anil Kumar Singh, (2023), "Development of a Dataset and a Deep Learning Baseline Named Entity Recognizer for Three Low Resource Languages: Bhojpuri, Maithili", Journal: ACM Transactions On Asian And Low-Resource Language Information Processing (TALLIP),(SCOPUS (SCI))
44. Shubham Pathak, Swasti Mishra, (2023), "Discursive Strategies of Women's Use of Their Beauty and Body for Revenge: A Comparative Study of Classical and Contemporary Hindi Films", Journal: Quarterly Review of Film and Video (Routledge, Taylor & Francis Group), (SCOPUS (SCI)).
45. Shubham Pathak, Swasti Mishra, Ipsita Mondal (2023), "Representing Gender Equality through Advertisements from the Electronic Media: A Study in Discourse analysis", Journal: Rupkatha, Volume-15, Issue-3, (Web of Science indexed) (ESCI).
46. Milan Chauhan, Swasti Mishra, (2024), "Kajari Folk Songs: Mechanism for Emotional Regulation", Journal: Rupkatha, Volume-16, Issue-1, (Web of Science indexed) (ESCI).
47. Shubham Pathak, Ipsita Mondal, Swasti Mishra, (2024), "Unravelling the Linguistics Tapestry: A Discursive Study of Gender Portrayal in Select Indian Electronic Advertisement ", Rupkatha, Volume-16, Issue-1, (Web of Science indexed) (ESCI).

Papers Published in Refereed National Journals

1. Srivastava, A.K. & Chandra, V. (2023). *Swatantryottar Bharat mein Rashtriya Asmita ka Murta Vikas: Puratattva, Kalakriti evam Dharohar*. *Mekal Mimansa*. 15 (2): 93-100. (UGC-Care listed)
2. Srivastava, A.K. & Chandra, V. (2024). Addressing Gender in Archaeological Research: Some Reflections. *Heritage: Journal of Multidisciplinary Studies in Archaeology* 11: 487-498. (UGC-Care listed)
3. Chandra, V. & Shankar, S. (2023). COVID-19 and Healthcare in India: Call for Building up System Level Resilience. *Impact and Policy Research Review*. 2 (1): 12-17.
4. Satsangi Abhijeet and Sanjukta Ghosh. (2023). Hedging in Hindi academic Writing. Aligarh Journal of Linguistics. Volume No. 12, 2023-2024.Pp.49-64. (indexed in UGC-Care)

Papers Presented in International Conferences

1. Ghosh Sanjukta (2023). Pragmatics of Translating Tourism Texts: A Case of Spiritual Tourism in India. In the Proceedings of GLOCAL Conference on Asian Linguistic Anthropology 2022 (Virtual). SOAS University of London, UK. Michael Hadzantonis and Asmah Haji Omar. (eds.) The Global Council of Anthropological Linguistics GLOCAL e-ISSN 2707 8647. (indexed in Scopus)
2. Kumar Pursotam and Sanjukta Ghosh. (2023). Symbols of Spatial Representation Across Languages: From English Phrasal Verbs to Hindi Complex Predicates. In the Proceedings of GLOCAL Conference on Asian Linguistic Anthropology 2022 (Virtual). SOAS University of London, UK. Michael Hadzantonis and Asmah Haji Omar. (eds.) The Global Council of Anthropological Linguistics GLOCAL e-ISSN 2707 8647. (indexed in Scopus)
3. Kumari Jyoti and Sanjukta Ghosh. (2023). Use of Impersonal Emotions in Food and Beverage Advertisements in India. In the Proceedings of GLOCAL Conference on Asian Linguistic Anthropology 2022 (Virtual). SOAS University of London, UK. Michael Hadzantonis and Asmah Haji Omar. (eds.) The Global Council of Anthropological Linguistics GLOCAL e-ISSN 2707 8647. (indexed in Scopus)
4. Thakur, A. and Kumar, P. (2023). Sociolinguistic Aspects of Linguistic Visuals in Varanasi. In M. Hadzantonis and A. H. Omar (Eds.), the GLOCAL Conference Proceedings Series. *The GLOCAL in Asia 2022 (pp.* 151-165). London, U.K.: The GLOCAL, the Global Council for Anthropological Linguistics Publishers. doi: https://doi.org/10.47298/cala2022.4-4
5. Soma Paul, Sukhada, Kumari Riya, Adepu Varshith Kumar, Sanyam Jha, Isma Anwar. An Indian-Grammatical-Tradition Based Discourse Relation Marking Tool for Hind. 2024. 7th International Sanskrit Computational Linguistics Symposium. Feb. 15-17, 2024. Auroville, Puducherry, India
6. Sukhada, Veera Hymavathi Sirisipalli and Soma Paul. Generation of MRS Abstract Predicates from Paninian USR. HPSG 2023: 30th International Conference on Head-Driven Phrase Structure Grammar. University of Massachusetts Amherst, USA. July 2023. pp. 122–142. DOI: https://doi.org/10.21248/hpsg.2023.7
7. Kirti Garg, Soma Paul, Sukhada, Fatema Bawahir and Riya Kumari. Evaluation of Universal Semantic Representation (USR). DMR 2023, The 4th International Workshop on Designing Meaning Representation. in Nancy, France. June 2023. pp. 13–22. URL: https://aclanthology.org/2023.dmr-1.2

Articles from the Department with maximum no. of Citations in last 5 years

1. R. Mundotiya, M. Singh, R. Kapur, Swasti Mishra, Anil Kumar Singh, (2021), "Linguistic Resources for Bhojpuri, Magahi and Maithili: Statistics about them, their Similarity Estimates, and Baselines for Three Applications", Journal: ACM Transactions On Asian And Low-Resource Language Information Processing (TALLIP), (SCOPUS (SCI)), (Impact Factor: 1.420), Citations – 10.
2. Rajesh Kumar Mundotiya, Swasti Mishra, Anil Kumar Singh, (2021), "Hierarchical Self Attention based Sequential Labelling Model for Bhojpuri, Maithili and Magahi Languages", Journal of King Saud University – Computer and Information Sciences, https://doi.org/10.1016/j.jksuci.2021.09.022 (SCOPUS (SCI)), (Impact Factor: 13.473), Citations – 06.
3. Rajesh Kumar Mundotiya, Shantanu Kumar, Ajeet Kumar, Anil Kumar Singh, Swasti Mishra, (2023), "Development of a Dataset and a Deep Learning Baseline Named Entity Recognizer for Three Low Resource Languages: Bhojpuri, Maithili", Journal: ACM Transactions On Asian And Low-Resource Language Information Processing (TALLIP),(SCOPUS (SCI)), (Impact Factor: 1.420), Citations – 08.

18. School of Biochemical Engineering

Full Name of School: School of Biochemical Engineering

Year of Establishment: 1986

Coordinator of the School: Prof. Vikash Kumar Dubey w.e.f.: 18-02-2020

Brief introduction of the School:

The School of Biochemical Engineering (BCE) at the Indian Institute of Technology (BHU) was established in 1986 for accomplishing numerous standards in teaching as well as in the research of the current field of biochemical and bioengineering aspects. The School has kept on renovating its academic programs to impart contemporary education in upcoming areas of biochemical engineering. At present, the school of BCE offers academic courses, including Integrated Dual Degree, M. Tech, and Ph.D. in BCE. Not only this, the School of BCE also offers industrially oriented courses to students of other departments of IIT (BHU). In the new undergraduate program, the School has been assigned to offer a number of institute level courses either independently or jointly with other departments. The research facilities of the School are utilized not only by other departments of the institute and BHU but also by other teaching institutions and research laboratories across India. At present, there are ten highly dynamic faculty members in the School, who guide inter-departmental/interdisciplinary projects and dissertations. Faculty members are engaged in high-level fundamental and applied research funded by various funding agencies including DST, DBT, CSIR, ICMR, whereas some projects are also funded by the industries. The faculty members of the schools are trained very well in top tier national and international laboratories. The research domain of the School of BCE faculties comprises Bioprocessing, Bioreactor designing, Food engineering, Fermentation technology, Biofuel systems, Biochemical parasitology, Protein engineering Wastewater engineering, Bio-remediation, Bio-Physio Sensors, Nano-bio-engineering, Device Designs, Healthcare Technologies, etc. Now, the School of BCE has a new three-storied building, which includes all teaching classes and laboratories. The floor area of the new building of the School is 10,000 sq. feet. (Total 30,000 sqft). The School has 14 laboratories, 6 well-equipped lecture theatres, a well- equipped100-seater conference room, library, and internet facility. The School also has a well- furnished seminar room and few meeting rooms for faculty and students. The School enjoys an excellent professional interaction with various industrial organizations, experts, and consultants. Besides these, the School also provides expertise for process improvement/ development, raw materials and product analysis, microbiological testing, nano-sensors, etc. to the industries in and around Varanasi.

Major areas of Research

Bioprocessing, Bioreactor designing, Food engineering, Enzyme and Tissue Engineering, Fermentation technology, Biofuel systems, Biochemical parasitology, Protein engineering Wastewater engineering, Bioremediation, Bio-Physio Sensors, Nano-bio-engineering, Device Designs, Healthcare Technologies, Computational biology & Bioinformatics, Proteomics, glycobiology and glycoenginnering.

Area of the School (in square meters): 2787.0912

Infrastructure

Sl. No.	Particulars	Number
1	No. of classrooms	5
2	No. of lecture halls	1
3	No. of laboratory	15

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	Dual Degree (IDD)	19	27	22	14	12
2	M. Tech	12	06	-	-	-
3	Ph. D (Under Institute Fellowship)	06	01	01	-	11
4	Ph. D (Prime Minister Fellowship)	-	-	02	01	01
5	Ph. D (External fellowship)	04	02	06	03	06
6	Ph.D (QIP)	-	-	-	01	-

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of student	Roll no.	Conference/Seminar/Symposia/ Workshop	Date & venue	Financial assistance from
India					
1	Ms. Madhumita Priyadarsini	21011003	2nd International Conference on Advances and Innovation in Biotechnology for Sustainable Bioresources and Bioeconomy (AI-BSBB2023)	Nov 2023 Satana, MP	Conference Organizers & Institute
2	Santanu Singh	21011503	Advances in Proteomic Technologies Conference, IIT Mumbai	Feb 17-21, 2024, IIT Mumbai	PMRF
3	Kajal Kachhawaha	21011501	Advances in Proteomic Technologies Conference, IIT Mumbai	Feb 17-21, 2024, IIT Mumbai	PMRF
4	Santanu Singh	21011503	COE-CBT Course on Biopharmaceutical Technology, IIT Delhi	Dec 11-15, 2023, IIT Delhi	PMRF
5	Kajal Kachhawaha	21011501	COE-CBT Course on Biopharmaceutical Technology, IIT Delhi	Dec 11-15, 2023, IIT Delhi	PMRF
6	Jyoti Verma	23011502	International workshop an hands-on-training on next-generation sequencing technologies	15-21 March, 2024, BHU	Workshop organizers
7	Khyati Joshi	22011004	Hands-on training workshop on "Basic Cell Culture Technology	May 8-11, 2023, NCCS Pune	Workshop organizers
8	Shweata Maurya	22012007	International Conference on Structural Biology and Drug Discovery (ICSBDD-2023)	October 11-12, 2023 Gautam Buddha University	Conference Organizers & Institute
9.	Amar Jeet Yadav	23011004	Faculty Development Program on "Current Trends of Natural Language Processing and Deep Learning in Bioinformatics"	October 9-13, NIT Patna	Conference Organizers
10	Khushbo Bhagat	23011006	Faculty Development Program on "Current Trends of Natural Language Processing and Deep Learning in Bioinformatics"	October 9-13, NIT Patna	Conference Organizers
11.	Shweata Maurya	22012007	Faculty Development Program on "Bioinformatics and Computational Biology Approach in present day research"	November 6-10, University of Engineering and Management (UEM), Kolkata	Conference Organizers
12.	Amar Jeet Yadav	23011004	Faculty Development Program on "Bioinformatics and Computational Biology Approach in present day research"	November 6-10, University of Engineering and Management (UEM), Kolkata	Conference Organizers
13.	Kushal Bora	21011001	International Conference on Structural Biology and Drug Discovery (ICSBDD-2023)	11th -12th October 2023, Gautam Buddha University, Uttar Pradesh, India.	N/A
14.	Kushal Bora	21011001	4th world drug congress on drug discovery & development-2023	29th October 2023, Indian Institute of Science, Bengaluru, India.	Institute
15.	Kushal Bora	21011001	Hands-on training workshop on "Basic Cell Culture Technology"	1)6th -9th November 2023, National center for cell science, Pune, Maharashtra, India.	N/A
16.	Kushal Bora	21011001	Young scientist conference (9th India international science festival 2023)	Young scientist conference (9th India international science festival 2023), 17th – 20th January 2024, DBT THSTI-RCB campus, Faridabad, Haryana, India.	Government of India
17.	Kushal Bora	21011001	4th International flow cytometry course	22nd – 24th September 2023, TETC, India.	N/A
18.	Preeti Ranjan	19011008	6th international conference on Bio-Technological intervention for Health, Agriculture and Circular Economy	23th to 25th February, Motilal nehru National institute of technology, Allahabad, Prayagraj, India	PMRF

Sl. No.	Name of student	Roll no.	Conference/Seminar/Symposia/ Workshop	Date & venue	Financial assistance from
19.	Mr. Kailash Pati Pandey	21011005	Indo-US Workshop on "Emerging issues in Environmental Public Health: Dissecting Genetic and Exposome Perspectives"	Jan 3-5, 2024 CSIR-NEERI, Nagpur	Contingency
20	Rohini Kumari	21011004	BioHeal-2023 (Biomaterials and Health Care 2023)	Apr 13-16, 2023, Rishikesh	Institute (STGS)
21	Rohini Kumari	21011004	National Symposium on Electrochemical Science and Technology	Aug 17 -18, 2023, ARCI, Hyderabad	Self-assistance
22	Rohini Kumari	21011004	National Conference on Technological Advancements in Waste Management: Challenges and Opportunities	Dec 4-5, 2023, IIT ISM Dhanbad	Conference organizers
23	Rohini Kumari	21011004	National Conference on Emerging Trends in Implants and Diagnostics	Feb 1-2, 2024, NIPER Ahmedabad	Self-assistance
24	Shubhangi	19021007	National Symposium on Electrochemical Science and Technology	Aug 17 -18, 2023, ARCI, Hyderabad	Institute (STGS)
25	Shubhangi	19021007	National Conference on Emerging Trends in Implants and Diagnostics	Feb 1-2, 2024, NIPER Ahmedabad	Institute (STGS)
26	Shubhangi	19021007	National Conference on Technological Advancements in Waste Management: Challenges and Opportunities	Dec 4-5, 2023, IIT ISM Dhanbad	Conference organizers
27	Divya	20011501	BioHeal-2023 (Biomaterials and Health Care 2023)	Apr 13-16, 2023, Rishikesh	PMRF
28	Divya	20011501	IEEE SENSORS 2023	Oct 29 – Nov 01, 2023, Vienna, Austria	DST-SERB
29	Divya	20011501	Workshop on High-End Optoelectronics Devices: Fabrication, Characterization, and Functionalization	Jan 02 – 08, 2024, MNNIT, Prayagraj	Workshop organizers
30	Ruchita Jayant Chaudhari	22012006	National Conference on Emerging Trends in Implants and Diagnostics	Feb 1-2, 2024, NIPER Ahmedabad	Self-assistance
31	Daphika S Dkhar	21011002	BioHeal-2023 (Biomaterials and Health Care 2023)	Apr 13-16, 2023, Rishikesh	Institute (STGS)
32	Daphika S Dkhar	21011002	Asia-Pacific Conclave on Engineering Healthcare 2024	Jan 29 -31 2024, Mysuru	Contingency
33	Daphika S Dkhar	21011002	Recent Trends in Applied Sciences: A Special Focus on Nano-science & Nano-materials" (RTAS-2024)	Mar 22 – 23, 2024, NEHU, Shillong	Online
34	Darshna	19011007	BioHeal-2023 (Biomaterials and Health Care 2023)	Apr 13-16, 2023, Rishikesh	Institute (STGS)
35	Rahul Ranjan	19011001	ACS Naitonal meeting 2024	March 17-21, 2024.	SERB
36	Rahul Ranjan	19011001	SPSI-MACRO-2023	December 10-13, 2023	Institute (STGS)
37	Smruti Bhatt		SPSI-MACRO-2023	December 10-13, 2023	Institute (STGS)
38	Rohit Rai	20011506	SPSI-MACRO-2023	December 10-13, 2023	Institute (STGS)

Names of students/scholars who got prizes and awards outsidethe Institute

Sl. No.	Name of student	Roll no.	Name of prize	Date & venue	Prize awarded by
1	Ms. Madhumita Priyadarsini	21011003	Best Oral Presentation Award, 2nd International Conference on Advances and Innovation in Biotechnology for Sustainable Bioresources and Bioeconomy (AI-BSBB2023)	Nov 2023 Satna, MP	Conference Organizers
2	Ms. Shweata Maurya	22012007	Best Oral Presentation Award, International Conference on Structural Biology and Drug Discovery (ICSBDD-2023)	October 11-12, 2023 Gautam Buddha University	Conference Organizers
3	Daphika S Dkhar	21011002	BEST Poster Award International Conference on Biomaterials and Health Care (BioHeal-2023)	April 13th – 16th, 2023 Parmarth Niketan, Rishikesh	Conference Organizers
4	Darshana	19011007	BEST Poster Award International Conference on Biomaterials and Health Care (BioHeal-2023)	April 13th – 16th, 2023 Parmarth Niketan, Rishikesh	Conference Organizers

Sl. No.	Name of student	Roll no.	Name of prize	Date & venue	Prize awarded by
5	Divya	20011501	BEST Young Professional Poster Award, IEEE SENSORS Conference	Oct 29 – Nov 01, 2023, Vienna, Austria	Conference Organizers
6	Shubhangi	19021007	BEST Poster Award, Emerging Trend in Implants and Diagnostics-2024 (ETID-2024)	February 1-2, 2024, National Institute of Pharmaceutical Education and Research – Ahmedabad, Gujarat	Conference Organizers
7	Shubhangi	19021007	Best Poster Presentation Award, National Conference on Technological Advancements in Waste Management: Challenges and Opportunities (TAWMCO – 2023)	Dec 4-5, 2023, IIT ISM Dhanbad	Conference Organizers
8	Rohini Kumari	21011004	BEST Oral Presentation Award, Emerging Trend in Implants and Diagnostics-2024 (ETID-2024)	February 1-2, 2024, National Institute of Pharmaceutical Education and Research – Ahmedabad, Gujarat	Conference Organizers
9	Rohini Kumari	21011004	Best Oral Presentation Award, National Conference on Technological Advancements in Waste Management: Challenges and Opportunities (TAWMCO – 2023)	Dec 4-5, 2023, IIT ISM Dhanbad	Conference Organizers

Faculty and their areas of specialisation

Sl. No.	Name, Qualifications, Employee No.	Date of award of PhD degree	Major areas of specialization
Professors			
1	Pradeep Kumar Srivastava, (16831)	1998	Microbial Engg., Bioreactor Kinetics, Modelling & Scaleup, Downstream Processing, Recombinant Proteins, Drug Delivery Techniqu, Tissue Engineering and IPR & Technology Transfer
2	Dr. Vikash Kumar Dubey	2003	Biochemical Parasitology, Cell Death Pathways, Protein Aggregation and Misfolding
3.	Dr. Abha Misra, (16830)	2001	Drug Discovery and development, Drug delivery, vehicles, fermentation technology and Intellectual property rights.
Associate Professors			
4	Dr. Pranjal Chandra, PhD, (50237)	2013	Bio-Physio Sensors, Nanobioengineering, Microfluidics, Healthcare Technologies, Material Engineering for Diverse Applications
5	Dr. Sanjay Kumar, PhD, (50067)	2011	Biofuel research and bioprocess development of value added products
Assistant Professors			
6	Dr. Vishal Mishra, PhD, (50064)	2012	Artificial Intelligence and Machine Learning, Food Engineering and Technology, Food Biotechnology, Separation Process and Bioreactor Design, Wastewater treatment, Microalgae remediation, Bioenergy, Solid waste treatment
7	Dr. Prodyut Dhar, PhD, 50249	2017	Biomaterials, Biodegradable Polymers, Biopolymers & Bionanotechnology,
8	Dr. Abhishek Suresh Dhoble, PhD, 50264	2016	Bio-CNG/CBG, Biofuels, Anaerobic Digestion, Waste Management, Waste to energy, Bio-hydrogen, Yeast-Based Biorefinery, Agro-Food Studies, Composting, Cytomics, Microbiomes, Biostatistics, Sustainability Engineering
9	Sumit Kumar Singh, Ph.D. (50277)	2020	Glycoproteomics,Antibody Engineering, Glycan-based antibody-drug conjugates, Biopharmaceutical analytical characterization, Glycobiology-focused therapeutics, Fc receptor engineering for biotherapeutics.
10	Dr. Aditya Kumar Padhi, PhD, (50307)	2015	Computational Biology, Structural & Translational Bioinformatics, Computational Biophysics, Protein Design, Predictive Modeling, Biomolecular Modeling and Simulations, Conformational Analyses, Machine Learning, Disease Mechanisms
11	Dr. Sharon Mano Pappu J (50420)	2019	Bioprocess Digitalization, Model based Bioprocess development, Yeast based biorefineries
12	Dr. Rajendra Prasad Meena (FACVF31, on contract)	2017	Ultrabright nanoMedicine, Interventional Theranostics,Multimode Imaging, Cell and Liposomal Delivery Systems, Bioengineering of Cells and Nanoparticles,nanoBiosome, Power of nano-characterization

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

Sl. No.	Coordinator	Title	Period
1	Dr. Abhishek Suresh Dhoble	"Scientific Social Responsibility (SSR) Activity" sponsored by the Science and Engineering Research Board (SERB)	Feb 13, 2024
2	Dr. Abhishek Suresh Dhoble	"Industry Expert Interaction-Student Enrichment Activity" (interaction by Mr. Rajesh Date development of novel technologies for the conversion of agro-residue and waste into 2G CBG for transportation and industrial applications)	Octo 4, 2023
3	Dr. Aditya Kumar Padhi	Short-term course on Advanced Functional Materials and Informatics (AFMI-2023) at IIT (BHU) Varanasi (I-DAPT-Hub supported)	29 November - 03 December 2023.
4	Dr. Prodyut Dhar	Short-term course on Advanced Functional Materials and Informatics (AFMI-2023) at IIT (BHU) Varanasi (I-DAPT-Hub supported)	29 November - 03 December 2023.

Short-term courses/workshops/seminars/symposia/conferences/training programmes attended by faculty members in academic institutions and public sector undertakings

Sl. No.	Name of faculty member	Title	Period and venue
Seminars/Symposia/Conferences			
1.	Dr. Abhishek Suresh Dhoble	Exhibition to showcase the R&D on Therapeutics, Vaccines, and Diagnostics during Indian Presidency G-20 Health Working Group Meeting (3rd HWG)	June 4-6, 2023, Hyderabad
2.	Dr. Abhishek Suresh Dhoble	2nd International Conference on Advances and Innovation in Biotechnology for Sustainable Bioresources and Bioeconomy (AI-BSBB2023)	Nov 23, 2023, Satna
3.	Dr. Sumit K. Singh	Advances in Proteomic Technologies Conference, IIT Mumbai	February 17-20, 2024, Mumbai
4.	Dr. Sumit K. Singh	Center of Excellence- Center for Biopharmaceutical Technology course series, IIT Delhi	December 11-15, 2023,Delhi
5.	Dr. Sumit K. Singh	9th Metabolic Pathway Analysis Conference (MPA 2023)	July 24-27, 2023, Seoul South Korea
7.	Dr. Sumit K. Singh	Molecular Devices techtalk	May 26, 2023, Bangalore
8	Dr. Sumit K. Singh	Biopharma Workshop, CoE SCIEX India	May 25-26, 2023, Bangalore
9.	Dr. Pranjal Chandra	Smart Healthcare Systems Workshop organized by Taichung Veterans General Hospital	May 08 -10, 2023, Taichung, Taiwan
10.	Dr. Pranjal Chandra	Nanobioengineering for Medical Diagnosis, Kaohsiung Medical University (KMU), Taiwan	May 09, 2023, KMU, Taiwan
11.	Dr. Pranjal Chandra	Represented IIT (BHU) in the INDIA MEDTECH EXPO 2023	Aug 18-20, 2023, Gandhinagar, Gujrat
12.	Dr. Pranjal Chandra	Electrochemical Biosensors for Medical Biotechnology, organized by Gujarat Biotechnology University, Gandhinagar, Gujarat	Aug 19, 2023, Gandhinagar, Gujarat
13.	Dr. Pranjal Chandra	International Conference on "New Horizons in Drugs, Devices & Diagnostics (NIPER-PHARMACON 2023)	Sept 14-16, 2023, NIPER Hyderabad
14.	Dr. Pranjal Chandra	INYAS Technical Symposium on Science and Technology for Sustainable Future (STSF) organized by INYAS and IIT (ISM) Dhanbad	15-17 Sept, 2023, IIT (ISM) Dhanbad
15.	Dr. Pranjal Chandra	Point Of Contact Diagnosis Using Bio Sensor organized by KIIT Technology Business Incubator, and FICCI	Sept 23, 2023, KIIT, BHubneshwar
16.	Dr. Pranjal Chandra	7th International Conference on Biotechnology (BIOSPECTRUM) at the University of Engineering & Management, Kolkata	Nov 25-26, 2023, Kolkata
17.	Dr. Pranjal Chandra	Technological Advancements in Waste Management: Challenges and Opportunities – 2023 (TAWMCO - 2023)	Dec 4-6, 2023, IIT (ISM) Dhanbad
18.	Dr. Pranjal Chandra	16th International Conference on Sensing Technology (ICST2023)	Dec 17-20, 2023, BITS Pilani, Hyderabad
19.	Dr. Pranjal Chandra	5th International Conference on Renewable Energy, Sustainable Environmental, Agricultural and Artificial Intelligence Technologies (i-RESEAT-2023)	Dec 18 - 20 2023, Thammasat University, Pathumtani, Thailand

Sl. No.	Name of faculty member	Title	Period and venue
20.	Dr. Pranjal Chandra	28th ISCB International Conference Recent Advances in Biological, Chemical, And Pharmaceutical Sciences for Innovation in Healthcare	Jan 8 - 10, 2024
21.	Dr. Pranjal Chandra	National conference on Emerging Trend in Implants and Diagnostics	Feb 1 – 2, 2024, NIPER Ahmedabad
22.	Dr. Pranjal Chandra	Development of deployable and highly sensitive nanohybrid sensing platform for ultrafast detection of picloram in rice water and soil organised by Chhatrapati Shahu Ji Maharaj University, Kanpur	Feb 10, 2024, Kanpur
23.	Dr. Pranjal Chandra	BioSangam 2024, International Conference on "Bio-Technological Intervention for Health, Agriculture and Circular Economy"	Feb 23-25, 2024, MNNIT, Allahabad, Prayagraj
24.	Dr. Pranjal Chandra	Sustainable Sensing Devices in Healthcare: From Lab to Personalized Diagnosis organised by Siddharth University	Feb 28, 2024, Siddharth Nagar, Uttar Pradesh
25.	Dr. Pranjal Chandra	3rd DAE-BRNS Symposium on Current Trends in Analytical Chemistry (CTAC-2023)	Mar 06-09, 2024, BARC, Mumbai
26.	Dr. Pranjal Chandra	National Conference on "Medical Biotechnology for Enhanced Health and Well Being" organised by Gujarat Biotechnology University, Gandhinagar	Mar 14 – 16, 2024, GBU, Gandhinagar
27	Dr. Prodyut Dhar	17th International Conference on Polymer Science and Technology ("SPSI-MACRO-2023")	December 10-13, 2023
28	Prof. Vikash Kumar dubey	Nurturing Future Leadership, IIT Delhi	March 18-22, 2024

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of faculty member	Topic of lecture	Institution	Date
1	Dr. Sumit K. Singh	Mapping mAb critical quality attribute: Modeling glycosylation from mass spectrometry data	IIT Mumbai	Febraury 20, 2024
2	Dr. Sumit K. Singh	Characterization of proteins and polymers using mass spectrometry and other analytical methods	IIT Roorkee	December 16, 2023
3	Dr. Sumit K. Singh	PTM characterization of biotherapeutics using native mass spectrometry	IIT Delhi	December 11,2023
4	Dr. Sumit K. Singh	Introduction to native mass spectrometry	IIT Delhi	December 11,2023
5	Dr. Sumit K. Singh	Exploring high-resolution mass spectrometry for biopharma applications (Online)	SCIEX, Bangalore	September 5, 2023
6	Dr. Sumit K. Singh	Modeling N-Glycosylation in Chinese Hamster Ovary (CHO) cells expressing VRC-01 antibody	Sungkyunkwan University, South Korea	July 24, 2023
7	Dr. Aditya Kumar Padhi	FDP on "Bioinformatics and Computational Biology Approach in Present-day Research"	University of Engineering and Management (UEM), Kolkata	November 6-10, 2023
8.	Dr. Aditya Kumar Padhi	International Conference on Structural Biology and Drug Discovery 2023	School of Biotechnology,Gautam Buddha University	October 11-12, 2023
9.	Dr. Aditya Kumar Padhi	FDP on "Current Trends of Natural Language Processing and Deep Learning in Bioinformatics"	Department of Computer Science and Engineering, NIT Patna	October 9-13, 2023
10	Dr. Aditya Kumar Padhi	Extramural talk	Department of Biotechnology & Center of Excellence in Integrated OMICS and Computational Biology, Utkal University	May 25, 2023
11	Dr. Aditya Kumar Padhi	Faculty Development Program (FDP) on the "Development of Therapeutics using Bioinformatics: Recent Trends and Developments"	NIT Warangal	May 8-12, 2023
12	Dr. Pranjal Chandra	Nanobioengineering Approaches for Deployable Biosensing Systems	Taichung Veterans General Hospital, Taichung, Taiwan	May 08 -10, 2023
13	Dr. Pranjal Chandra	Nanobioengineering for Medical Diagnosis	KMU, Taiwan	May 09, 2023
14	Dr. Pranjal Chandra	Represented IIT (BHU) in the INDIA MEDTECH EXPO 2023	Gandhinagar, Gujrat	Aug 18-20, 2023

Sl. No.	Name of faculty member	Topic of lecture	Institution	Date
15	Dr. Pranjal Chandra	Electrochemical Biosensors for Medical Biotechnology	Gandhinagar, Gujarat	Aug 19, 2023
16	Dr. Pranjal Chandra	Affordable Healthcare Sensing Technologies based on Intelligent Nanobioengineering	NIPER Hyderabad	Sept 14-16, 2023
17	Dr. Pranjal Chandra	Nanobioengineering for Affordable Disease Diagnosis	IIT (ISM) Dhanbad	15-17 Sept, 2023
18	Dr. Pranjal Chandra	Point Of Contact Diagnosis Using Bio Sensor	KIIT	Sept 23, 2023
19	Dr. Pranjal Chandra	Analytical Aspects in Bio-Sensing Devices for it Translational	University of Engineering & Management, Kolkata	Nov 25-26, 2023
20	Dr. Pranjal Chandra	Ultrasensitive and portable Nanodevices for Carcinogenic Metal Detection is Ganga Water	IIT (ISM) Dhanbad	Dec 4-6, 2023
21	Dr. Pranjal Chandra	Interfacial Nanobioengineering for Deployable Bio-Sensing Devices based on Nanodendrites	BITS Pilani, Hyderabad	Dec 17-20, 2023
22	Dr. Pranjal Chandra	Deployable Sensing Technologies for Environmental Contaminants	Thammasat University, Pathumtani, Thailand	Dec 18 – 20, 2023
23	Dr. Pranjal Chandra	Device Nanoengineering for Analytical Applications in HealthCare Sector	NIPER Ahmedabad	Feb 1 – 2, 2024
24	Dr. Pranjal Chandra	Development of deployable and highly sensitive nanohybrid sensing platform for ultrafast detection of picloram in rice water and soil organised by	Chhatrapati Shahu Ji Maharaj University, Kanpur	Feb 10, 2024
25	Dr. Pranjal Chandra	Field Deployable Opto-Electronic Sensing Devices in Healthcare Industries	MNNIT, Allahabad, Prayagraj	Feb 23-25, 2024
26	Dr. Pranjal Chandra	Sustainable Sensing Devices in Healthcare: From Lab to Personalized Diagnosis	Siddharth University, Siddharth Nagar, Uttar Pradesh	Feb 28, 2024
27	Dr. Pranjal Chandra	Electrochemical Nanoengineering of Three Dimensional Dendritic Surface for Free Radical Sensing in Cellular Microenvironment	BARC, Mumbai	Mar 06-09, 2024
28	Dr. Pranjal Chandra	Nanobioengineering for Device Development and Deployment in Healthcare	GBU, Gandhinagar	Mar 14 – 16, 2024
29	Prof. Vikash Kumar Dubey	Refresher Course in Biosciences	UGC-Human Resource Development Centre, BHU	December 7-19, 2023

Honours and awards

Sl. No.	Name of faculty member	Details of award
1	Dr. Prodyut Dhar	BRICS Young scientist and Young Innovator prize 2023
2	Dr. Prodyut Dhar	Indo-France Scientific High Level Visiting Fellowships (SSHN) 2023
3	Dr. Aditya Kumar Padhi	Alexander Fleming Young Scientists Award by the Biofootprints Society, India for the Year 2023
4	Dr. Pranjal Chandra	Prof Sushil Kumar Innovation Award - 2023 (SKIA -2023) by the Flora Fauna Science Foundation (FFSF)
5	Dr. Pranjal Chandra	Listed among the WORLD'S TOP 2% SCIENTIST - YEAR 2023, prepared by the Stanford University, USA

Fellowships of academic and professional societies

Sl. No.	Name of faculty member	Details of fellowship
1	Dr. Prodyut Dhar	Awarded Ramalingaswami Fellowship by *Department of Biotechnology (DBT),* Govt. of India

Books, monographs authored/co-authored

Sl. No.	Name of author/ co-author	Title	Publisher
1	Dr. Aditya Kumar Padhi	Uncovering the secrets of resistance: An introduction to computational methods in infectious disease research	Elsevier
2	Dr. Prodyut Dhar	Cellulosic Nanomaterials and Its Derivatives from Agro-Waste for Food Packaging Applications	Wiley
3	Dr. Prodyut Dhar	Recalcitrance of Lignocellulosic Biomass and Pretreatment Technologies: A Comprehensive Insight	Springer
4	Uday P Azad & Pranjal Chandra (Editors)	Handbook of Nanobioelectrochemistry: Application in Devices and Biomolecular Sensing	Springer, Singapore

Editorial boards of journals

Sl. No.	Name of faculty member	Position (editor/ member)	Name of journal
1	Dr. Pranjal Chandra	Associate Editor	Frontiers in Bioengineering and Biotechnology, Lausanne, Switzerland
2	Dr. Pranjal Chandra	Editorial Board Member	Scientific Reports, Nature Publication Group
3	Dr. Pranjal Chandra	Associate Editor	Exploration of Digital Health Technologies
4	Dr. Pranjal Chandra	Editorial Board Member	Microchemical Journal, Elsevier
5	Dr. Pranjal Chandra	Editorial Board Member	Biotechnology and Genetic Engineering Reviews
6	Dr. Pranjal Chandra	Editorial Board Member	PLOS ONE
7	Dr. Pranjal Chandra	Editorial Board Member	Frontiers in Sensors
8	Dr. Pranjal Chandra	Editorial Board Member	Green Analytical Chemistry
9	Dr. Pranjal Chandra	Editor	Applied Biochemistry and Biotechnology

Patents filed

Sl. No.	Name of faculty member	Title of patent
1	Dr. Abhishek Suresh Dhoble	A Composting System for Waste Management
2	Dr. Prodyut Dhar	A method of preparation of a biodegradable packaging material from sugarcane bagasse
3.	Dr. Prodyut Dhar	Biodegradable bamboo-based drinking straws and a method of preparation thereof
4.	Dr. Prodyut Dhar	A method of preparation of biodegradable packaging material from rice straws
5	Dr. Pranjal Chandra	A Laser-Directed Multi-Functional Electrochemical Paper-Based Sensor and A Method of Fabrication Thereof
6	Dr. Pranjal Chandra	Watermelon Urease as a catalytic receptor system for Urea Detection in Milk Samples
7	Dr. Pranjal Chandra	A 3D nanodendritic electrochemical sensor and a method of preparation thereof.
8	Dr. Pranjal Chandra	A biosensing device and a method of fabrication thereof
9	Dr. Pranjal Chandra	Three dimensional Bi-metallic Nanodendritic system at flexible surface as a highly effective electro catalyst
10	Dr. Pranjal Chandra	A device for detection of an analyte and a method of fabrication thereof

Research and Consultancy

Sponsored research projects *(Ongoing during the period)*

Sl. No.	Title	Period	Funding agency	Amount (in lakhs of Rs.)	Project P.I
1	Characterization of indigenous cow's dung and urine for scientific advancement and development of utility items	2021-2024	DST (SUTRA-PIC)	31.04	Dr. Abhishek Suresh Dhoble
2	A novel, rapid, high-throughput characterization of microbiome dynamics through cytomics and machine learning	2022-2024	SERB (SRG)	28.61	Dr. Abhishek Suresh Dhoble
3	High solids anaerobic digestion for effective garbage disposal with forward linkage to power generation	2023-2026	MoE (SAP)	30.40	Dr. Abhishek Suresh Dhoble

Sl. No.	Title	Period	Funding agency	Amount (in lakhs of Rs.)	Project P.I
4	Microplastic mitigation via anaerobic digestion and a novel technology for the detection of microplastic via cytometric fingerprinting and machine learning (CFML)	2023-2026	DBT	33.79	Dr. Abhishek Suresh Dhoble
5	Non-conventional water treatment and monitoring for reuse in agriculture	2024-2026	SPARC	38.03	Dr. Abhishek Suresh Dhoble
6	Metabolic engineering of rapid-growing cyanobacteria for farnesene production and its scaleup studies	2023-2026	SERB/CRG	35.09	Dr. Sanjay Kumar
7	Complete Utilization of Banana from Farm till its Disposal: A Step Towards the Agricultural Circular Economy for Growth of Agriculture and Farmers of U.P.	2023-2026	Council of Science and Technology, Government	11.94	Dr. Vishal Mishra
8	Bioengineering of Living Materials to fabricate Functionalized Bacterial Nanocellulose for High-Performance Applications	2021-2026	DBT	42.5	Dr. Prodyut Dhar
9	Validation of glutathione synthetase from *Leishmania donovani* as new drug target for discovery of new drug candidate	2021-2024	ICMR	41.42	Prof. Vikash Kumar Dubey
10	How Beclin 1 mediates cross-talk between apoptosis and autophagy via its C- terminal fragment?	2019-2023 (extended)	CSIR	32.61	Prof. Vikash Kumar Dubey
11	Human IL-2 fused leishmanial trypanothione synthetase (TS) as protein vaccine candidates.	2021-2024	ICMR	46.13	Prof. Vikash Kumar Dubey
12	Integrated computational and experimental studies to potential therapy of kala-azar targeting Dephosphocoenzyme A Kinase (LdDPCK) of the pathogen as a target	2021-2024 (extended)	IDAPT Hub Foundation	20.00	Prof. Vikash Kumar Dubey
14	Design and validation of field deployable miniaturized nano-bio-sensing system for detection of the parasitic liver fluke Fasciola gigantica	2022 -2025	ICMR	45.37	Dr. Pranjal Chandra (PI at IIT BHU)
15	Development of Paper Based Analytical Device for Molecular Sensing	2023	IDAPT Hub Foundation	2.5	Dr. Pranjal Chandra
16.	Development of all-natural silk protein-Anthocyanin-based restorative hair-dye formulation	2023-2024	CGMFP	24.86	Dr. Sumit Kumar Singh
17	Biochemical transformation of natural products into functional bioactive cosmetics	2024-2025	CGMFP	125.0	Dr. Sumit Kumar Singh
18	Lignocellulose based scalable luminous photonic biopolymers for sustainable films and coatings	2024-2027	DBT	53.04	Dr. Prodyut Dhar
19	End functionalized cellulose nanocrsytals using integrated microfluidics for product ion of high-performance optically active coatings and fibers	2024-2026	DST	25.0	Dr. Prodyut Dhar
20	Reverse engineering and high-throughput redesigning of double-Ψ β-barrel core-folded proteins: Comprehending their functional diversity for augmenting therapeutics	2024-2026	SERB (SRG)	29.71	Dr. Aditya Kumar Padhi
21	Understanding the molecular mechanism of anti-thyroid drug (propylthiouracil)-induced 'redox imbalance and epigenetic alteration'	2023-2026	Odisha Council of Science and Technology	30	Dr. Aditya Kumar Padhi
22	Transcriptome analysis of Cancer cell line treated with Gedunin and ZINC000045971961 as novel Bruton's tyrosine kinase (BTK) inhibitor	2023-2026	LSRB, DRDO	58.67	Prof. Abha Mishra

Research publications

Refereed International journals

1. Singh, Abhishek, Baishakhi Mahapatra, Arpita Banerjee, Samer Singh, Sangram Singh, Vikash K. Dubey, Pradeep Das, and Rakesh K. Singh. "Leishmania antigens activated CD4+ T cells expressing CD200R receptors are the prime IL-10 producing phenotype and an important determinant of visceral leishmaniasis pathogenesis." *Cytokine* 173 (2024): 156435.
2. Rajendra Prasad, Berney Peng, Bárbara Mendes, Hailey I. Kilian, Mahadeo Gorain, Huijuan Zhang, Gopal Chandra Kundu, Jun Xia, Jonathan F. Lovell, João Conde, Biomimetic bright optotheranostics for metastasis monitoring and multimodal image-guided breast cancer therapeutics, *Journal of Controlled Release* 367, 300, 2024

3. Rawat, Shweta, Alok Kumar Singh, Jyoti Prasad Chakraborty, and Sanjay Kumar. "Characterization and mechanism elucidation of high-quality bio-oil production from co-pyrolysis of waste low-rank coal fines and de-oiled microalgae biomass using bimetallic (Cu-Cr) ZSM-5 catalyst." *Journal of Environmental Chemical Engineering* (2024): 113046.

4. Singh, Santanu, Kajal Kachhawaha, and Sumit K. Singh. "Comprehensive approaches to preclinical evaluation of monoclonal antibodies and their next-generation derivatives." *Biochemical Pharmacology* (2024): 116303.

5. Mahapatra, Supratim, Rohini Kumari, and Pranjal Chandra. "Fabrication of a laser-directed electrochemical paper analytical device and its deployment for multi-functional electrochemical sensing." *Chemical Engineering Journal* 486 (2024): 150232.

6. Yadav AJ, Kumar S, Maurya S, Bhagat K, & Padhi AK (2024) Interface design of SARS-CoV-2 symmetrical nsp7 dimer and machine learning-guided nsp7 sequence prediction reveals physicochemical properties and hotspots for nsp7 stability, adaptation, and therapeutic design. Physical chemistry chemical physics: PCCP, 26(18), 14046–14061.

7. Rai, Rohit, Rahul Ranjan, Chandra Kant, and Prodyut Dhar. "Microplastic and adhesive free, multifunctional, circular economy approach-based biomass-derived drinking straws." *Iscience* 27, no. 5 (2024).

8. Rajendra Prasad, V.G.S.S. Jyothi, N. Kommineni, R.T Bulusu, Bárbara Mendes, João Conde, Biomimetic ghost nanomedicine-based optotheranostics for cancer, *Nano Letters,* XX, 2024, just accepted

9. Ranjan R, Bhatt SB, Rai R, Sharma SK, Ranjan R, Bharti A, Dhar P. Rice husk valorisation by in situ grown MoS 2 nanoflowers: a dual-action catalyst for pollutant dye remediation and microbial decontamination. RSC advances. 2024;14(17):12192-203

10. Rawat, Shweta, and Sanjay Kumar. "Thermal response estimation of de-oiled fresh and marine microalgae based on pyrolysis kinetic studies and deep neural network modeling." *BioEnergy Research* 17, no. 1 (2024): 570-586.

11. Ojha R, Singh S, Gupta N, Kumar K, Padhi AK, & Prajapati VK (2023) Multi-pathogen based chimeric vaccine to fight against COVID-19 and concomitant coinfections. Biotechnology letters, 45(7), 779–797.

12. Kalita P, Tripathi T, & Padhi AK (2023) Computational Protein Design for COVID-19 Research and Emerging Therapeutics. ACS central science, 9(4), 602–613.

13. Subedi S, Nag N, Shukla H, Padhi AK, & Tripathi T (2023) Comprehensive analysis of liquid-liquid phase separation propensities of HSV-1 proteins and their interaction with host factors. Journal of cellular biochemistry, 10.1002/jcb.30480. Advance online publication. https://doi.org/10.1002/jcb.30480.

14. Chang J, Yamashita M, Padhi AK, Zhang KYJ, & Taniuchi I (2023) Impaired tissue homing by the Ikzf3N159S variant is mediated by interfering with Ikaros function. Frontiers in immunology, 14, 1239779.

15. Joshi A, Maurya S, Mahale A, Rath SL, Tripathi T, & Padhi AK (2023) Delineating the Structure-Dynamics-Binding Differences among BA.1, BA.4/5, and BF.7 SARS-CoV-2 Variants through Atomistic Simulations: Correlation with Structural and Epidemiological Features. ACS omega, 8(41), 37852–37863.

16. Padhi AK, Kalita P, Maurya S, Poluri KM, & Tripathi T (2023) From De Novo Design to Redesign: Harnessing Computational Protein Design for Understanding SARS-CoV-2 Molecular Mechanisms and Developing Therapeutics. The journal of physical chemistry. B, 127(41), 8717–8735.

17. Maurya S, Kumar S & Padhi AK* (2023) Interface-Guided Computational Protein Design Reveals Bebtelovimab-Resistance Mutations in SARS-CoV-2 RBD: Correlation with Global Viral Genomes and Bebtelovimab-Escape Mutations, ChemistrySelect. doi: 10.1002/slct.202302906.

18. Rani J. and Dhoble A.S. (2024) Adaptability and diversity of core microbiome in evaluating the effect of digested versus raw manure in anaerobic digestion of rice straw. *Fuel.* 357 : 130010.

19. Ranjan, Rahul, Smruti B. Bhatt, Rohit Rai, Sanju Kumari Sharma, Muskan Verma, and Prodyut Dhar. "Valorization of sugarcane bagasse with in situ grown MoS2 for continuous pollutant remediation and microbial decontamination." *Environmental Science and Pollution Research* (2024): 1-17.

20. Ranjan, Rahul, Rohit Rai, Kaustubh Naik, Avanish Singh Parmar, and Prodyut Dhar. "Scalable phosphorylated cellulose production with improved environmental sustainability, crosslinkability and processability using 3D bioprinting for dye remediation." *International Journal of Biological Macromolecules* 264 (2024): 130577.

21. Ranjan, Preeti, and Vikash Kumar Dubey. "Identification of potential anti-leishmanial compounds from natural sources against citrate synthase enzyme using structure-based drug designing." *Journal of Molecular Structure* 1295 (2024): 136556.

22. Prasad, Rajendra, and Kaliaperumal Selvaraj. "Choice of nanoparticles for theranostics engineering: surface coating to nanovalves approach." *Nanotheranostics* 8, no. 1 (2024): 12.

23. Borkotoky, Subhomoi, Archisha Prakash, Gyan P. Modi, and Vikash Kumar Dubey. "Computational Repurposing of Potential Dimerization Inhibitors against SARS-CoV-2 Main Protease." *Letters in Drug Design & Discovery* 21, no. 4 (2024): 799-808.

24. Rawat, Shweta, Lokesh Wagadre, and Sanjay Kumar. "Multi-objective genetic algorithm approach for enhanced cumulative hydrogen and methane-rich syngas emission through co-pyrolysis of de-oiled microalgae and coal blending." *Renewable Energy* 225 (2024): 120264.

25. Nandi, Indrani, Rohini Kumari, Kajal Kachhawaha, Sumit K. Singh, and Pranjal Chandra. "Electrochemical Sensor Based on a MXene Nanosheet–Gold Nanourchin Hybrid as a Superoxide Dismutase Mimic for Real-Time Detection of Superoxide Anions Released from Living Cells." *ACS Applied Nano Materials* (2024).

26. Rautela, Akhil, Rishika Chatterjee, Indrajeet Yadav, and Sanjay Kumar. "A comprehensive review on engineered microbial production of farnesene for versatile applications." *Journal of Environmental Chemical Engineering* (2024): 112398.

27. Purohit, Buddhadev, Ashutosh Kumar, Rohini Kumari, Kuldeep Mahato, Sharmilli Roy, Ananya Srivastava, and Pranjal Chandra. "3D gold dendrite and reduced graphene oxide-chitosan nanocomposite-based immunosensor for carcinoembryonic antigen detection in clinical settings." *Surfaces and Interfaces* 47 (2024): 104197.

28. Agendra Gangwar, Shweta Rawat, Akhil Rautela, Indrajeet Yadav, Anushka Singh and Sanjay Kumar, Current advances in produced water treatment technologies: A perspective of techno-economic analysis and life cycle assessment. Environment, Development and Sustainability. 2024, doi.org/10.1007/s10668-024-04558-w

29. Rautela, Akhil, Indrajeet Yadav, Agendra Gangwar, Rishika Chatterjee, and Sanjay Kumar. "Photosynthetic production of α-farnesene by engineered Synechococcus elongatus UTEX 2973 from carbon dioxide." *Bioresource Technology* (2024): 130432.

30. Kushwaha, Rajesh, Rohit Rai, Vedant Gawande, Virendra Singh, Ashish Kumar Yadav, Biplob Koch, Prodyut Dhar, and Samya Banerjee. "Antibacterial Photodynamic Therapy by Zn (II)-Curcumin Complex: Synthesis, Characterization, DFT Calculation, Antibacterial Activity, and Molecular Docking." *ChemBioChem* 25, no. 2 (2024): e202300652.

31. Divya and Chandra, Pranjal. "Bioengineered cellulosic paper micro-device for serum albumin detection in clinical range." *International Journal of Biological Macromolecules* 258 (2024): 128921.

32. Prakasham, Karthikeyan, Tzu-Yu Pan, Chun-Hsiang Tan, Chia-Fang Wu, Pranjal Chandra, Ching-Mei Cheng, Wei Chen, Wei-Chung Tsai, Vinoth Kumar Ponnusamy, and Ming-Tsang Wu. "A rapid and sensitive analytical methodology for the simultaneous biomonitoring of two direct oral anticoagulant drugs and their major metabolites in thromboembolic disordered patients samples for clinical evaluations." *Journal of Chromatography A* 1717 (2024): 464689.

33. Yadav, Indrajeet, Akhil Rautela, Agendra Gangwar, Lokesh Wagadre, Shweta Rawat, and Sanjay Kumar. "Enhancement of isoprene production in engineered Synechococcus elongatus UTEX 2973 by metabolic pathway inhibition and machine learning-based optimization strategy." *Bioresource Technology* 387 (2023): 129677.

34. Priyadarsini M., Kushwaha J., Pandey K.P., Rani J. and Dhoble A.S. (2023) Application of flow cytometry for rapid, high-throughput, multiparametric analysis of environmental microbiomes. *Journal of Microbiological Methods*. 214: 106841.

35. Mari, Elancheziyan, Murugesan Duraisamy, Muthusankar Eswaran, Senthilkumar Sellappan, Keehoon Won, Pranjal Chandra, Pei-Chien Tsai et al."Highly electrochemically active Ti3C2Tx MXene/MWCNT nanocomposite for the simultaneous sensing of paracetamol, theophylline, and caffeine in human blood samples." *Microchimica Acta* 191, no. 4 (2024): 1-14.

36. Tadepalli, Srinivas, K. S. R. Murthy, and Vishal Mishra. "Comparison of cadmium and copper removal by maize cobs and mixed adsorbent from industrial effluents." *Bioremediation Journal* (2024): 1-13.

37. Shubhangi, Rohini Kumari, S. K. Rai, and Pranjal Chandra. "Electrochemical Assembly of Nickel Metal Organic Framework-Decorated Nanoimprinted Gold Dendrites as Peroxidase Mimic for High-Performance Hydrogen Peroxide Sensing." *ACS Applied Nano Materials* 7, no. 1 (2023): 1388-1401.

38. Arnab Ghosh, Sagnik Nag, Alyssa Gomes, Rajendra Prasad, Rohit Srivastava, Bench to beside technology: Nanobios lab industry-academia translational, *Nanotheranostics* 2023; 7(4): 450, doi:10.7150/ntno.86618

39. Nagavendra Kommineni, Ruchita Chaudhari, João Conde, Sedef Tamburaci, BerivanCecen, Pranjal Chandra, Rajendra Prasad, Engineered Liposomes in Interventional Theranostics of Solid Tumors, *ACS Biomater. Sci. Eng.* 2023, 9, 8, 4527

40. Prasad, Rajendra, and Kaliaperumal Selvaraj. "Effective Distribution of Gold Nanorods in Ordered Thick Mesoporous Silica: A Choice of Noninvasive Theranostics." *ACS Applied Materials & Interfaces* 15, no. 40 (2023): 47615-47627.

41. Rajendra Prasad, Barabara Mendes, Mahadeo Gorain, Gopal Chandra Kundu, Narendra Gupta, Qing He, João Conde, Bioinspired and Biomimetic Cancer Cell-Membrane Derived Nanovesicles for Tumor Targeted Nanotheranostics, *Cell Reports Physical Science*, 2023, 101648

42. Chavda, Vivek P., Pankti C. Balar, Lakshmi Vineela Nalla, Rajashri Bezbaruah, Niva Rani Gogoi, Siva Nageswara Rao Gajula, Berney Peng, Avtar S. Meena, João Conde, and Rajendra Prasad. "Conjugated Nanoparticles for Solid Tumor Theranostics: Unraveling the Interplay of Known and Unknown Factors." *ACS omega* 8, no. 41 (2023): 37654-37684.

43. Mandal, Apurba, Rohit Rai, Sukanta Saha, Rajesh Kushwaha, Li Wei, Hemonta Gogoi, Arif Ali Mandal et al. "Polypyridyl-based Co (iii) complexes of vitamin B 6 Schiff base for photoactivated antibacterial therapy." *Dalton Transactions* 52, no. 46 (2023): 17562-17572.

44. Rawat, Shweta, and Sanjay Kumar. "Mechanical performance and thermal behavior assessment of de-oiled microalgae-blended coal composites using statistical and ANN modeling." *Biomass Conversion and Biorefinery* (2023): 1-22.

45. Kushwaha J., Priyadarsini M., Rani J., Pandey K.P., and Dhoble A.S. (2023) Aquaponic trends, configurations, operational parameters, and microbial dynamics: A concise review. *Environment, Development and Sustainability*. 1-34.

46. Rai, Rohit, Rahul Ranjan, Chandra Kant, Udita Uday Ghosh, and Prodyut Dhar. "Environmentally Benign Partially Delignified and Microwave Processed Bamboo-Based Drinking Straws." *Advanced Sustainable Systems* 7, no. 7 (2023): 2300057.

47. Sumit K. Singh, Sahil Khan, Aryaman Joshi. Modeling N-linked Glycosylation: Advances and Challenges in Predicting Glycan Structures during Biomanufacturing. Authorea. May 11, 2023, DOI: 10.22541/au.168382757.72018049/v1

48. Kachhawaha, Kajal, Santanu Singh, Khyati Joshi, Priyanka Nain, and Sumit K. Singh. "Bioprocessing of recombinant proteins from Escherichia coli inclusion bodies: insights from structure-function relationship for novel applications." *Preparative Biochemistry & Biotechnology* 53, no. 7 (2023): 728-752.

49. K Naik, P Singh, M Yadav, S Srivastava, S Tripathi, R Ranjan, P Dhar, A Verma, Sh Chaudhary and A S Parmar 3D Printable, injectable Amyloid-based composite Hydrogel of Bovine Serum Albumin-Aloe Vera for Rapid Diabetic Wound Healing, Journal of Material Chemistry B, 2023, doi.org/10.1039/D3TB01151H

50. Rani J. and Dhoble A.S. (2023) Effect of fungal pre-treatment by Pycnoporus sanguineus and Trichoderma longibrachiatum on the anaerobic digestion of rice straw. *Bioresource Technology*. 387:129503.

51. Yadav, A K, V Singh, R Kushwaha, D Dolui, RRai, P Dhar, A Dutta, B Koch, and S Banerjee. "Polypyridyl CoII-Curcumin Complexes as Photoactivated Anticancer and Antibacterial Agents." ChemBioChem (2023): e202300033. doi: 10.1002/cbic.202300033

52. Ranjan, Rahul, Rohit Rai, Smruti B. Bhatt, and Prodyut Dhar. "Technological road map of Cellulase: A comprehensive outlook to structural, computational, and industrial applications." *Biochemical Engineering Journal* (2023): 109020.

53. Ojha, Rupal, Satyendra Singh, Nidhi Gupta, Ketan Kumar, Aditya K. Padhi, and Vijay Kumar Prajapati. "Multi-pathogen based chimeric vaccine to fight against COVID-19 and concomitant coinfections." *Biotechnology Letters* 45, no. 7 (2023): 779-797.

54. Singh, Vishal, Manisha Verma, Mahesh Sanjay Chivate, and Vishal Mishra. "Machine learning-based optimisation of microalgae biomass production by using wastewater." *Journal of Environmental Chemical Engineering* 11, no. 6 (2023): 111387.

55. Rai R, Ranjan R, Kant C, Dhar P, Biodegradable, eco-friendly, and hydrophobic drinking straws based on delignified phosphorylated bamboo-gelatin composites. Chemical Engineering Journal. 2023, 144047. doi:10.1016/j.cej.2023.144047

56. Koner, Debaprasad, Niharika Nag, Parismita Kalita, Aditya K. Padhi, Timir Tripathi, and Nirmalendu Saha. "Functional expression, localization, and biochemical characterization of thioredoxin glutathione reductase from air-breathing magur catfish, Clarias magur." *International Journal of Biological Macromolecules* 230 (2023): 123126.

57. Ranjan, Preeti, and Vikash Kumar Dubey. "Novel chemical scaffold as potential drug against Leishmania donovani: Integrated computational and experimental approaches." *Journal of Cellular Biochemistry* 124, no. 9 (2023): 1404-1422.

58. Singh Y., Rani J., Kushwaha J., Priyadarsini M., Pandey K.P., Sheth P.N., Yadav S.K., Mahesh M.S. and Dhoble A.S. (2023) Scientific characterization methods for better utilization of cattle dung and urine: a concise review. *Tropical Animal Health and Production*. 55, no. 4: 274.

59. Mahapatra, Supratim, Rohini Kumari, and Pranjal Chandra. "Printed circuit boards: system automation and alternative matrix for biosensing." *Trends in Biotechnology* (2023).

60. Kumar, Ashutosh, Kuldeep Mahato, Daphika S. Dkhar, Ananya Srivastava, and Pranjal Chandra. "Self-signal generating bioelectronic sensor surface using gadolinium hexacyanoferrate nanocomposite for oral cancer diagnosis." *Sensors and Actuators B: Chemical* 397 (2023): 134605.

61. Rani J., Stablein M.J., Patel K., Pang X., Lahiri P., Bhalerao K.D. and Dhoble A.S. (2024) Monitoring effects of tetracycline and spectinomycin perturbations on biogas production and microbiome dynamics in a batch mesophilic anaerobic digester. *BioEnergy Research*. 17, no. 2 : 1263-1276.

62. Geetanjali, Shweta Rawat, Radha Rani, and Sanjay Kumar. "Kinetic modeling for miniaturize single-chambered microbial fuel cell: effects of biochemical reaction on its performance." *Environmental Science and Pollution Research* (2023): 1-10.

63. Mahapatra, Supratim, and Pranjal Chandra. "Decision-Making Software-Integrated Ultrafast Detection of Lead in Surface Water Using a Chemo-Nano Sensing Device." *ACS Sustainable Chemistry & Engineering* 11, no. 49 (2023): 17249-17261.

64. Rawat, Shweta, Akhil Rautela, Indrajeet Yadav, Sibashis Misra, and Sanjay Kumar. "A Comprehensive Review on Enhanced Biohydrogen Production: Pretreatment, Applied Strategies, Techno-Economic Assessment, and Future Perspective." *BioEnergy Research* (2023): 1-24.

65. Singh, Veer, Jyoti Singh, Nidhi Singh, Manoj Kumar Verma, Sarva Mangala Praveena, and Vishal Mishra. "Sustainable removal of Pb (II) from aqueous medium by using chitosan functionalized Citrus limetta peels biomass." *Bioremediation Journal* (2023): 1-21.

66. Yadav, Indrajeet, Akhil Rautela, Agendra Gangwar, Vigya Kesari, Aditya K. Padhi, and Sanjay Kumar. "Geranyl diphosphate synthase (crte) inhibition using alendronate enhances isoprene production in recombinant Synechococcus elongatus utex 2973: A step towards isoprene biorefinery." *Fermentation* 9, no. 3 (2023): 217.

67. Verma, Manisha, Vishal Singh, and Vishal Mishra. "Bioelectricity generation by using cellulosic waste and spent engine oil in a concentric photobioreactor-microbial fuel cell." *Journal of Environmental Chemical Engineering* 11, no. 5 (2023): 110566.

68. Pandey, Ashutosh, Sameer Srivastava, and Sanjay Kumar. "Carbon dioxide fixation and lipid storage of Scenedesmus sp. ASK22: A sustainable approach for biofuel production and waste remediation." *Journal of Environmental Management* 332 (2023): 117350.

69. Kumar, Ashutosh, and Pranjal Chandra. "Functionalization Strategies for the Development of Nano-Bio-Conjugates in Contemporary Point-of-Care Analytical Devices." In *Surface Engineering and Functional Nanomaterials for Point-of-Care Analytical Devices*, pp. 33-51. Singapore: Springer Nature Singapore, 2023.

70. Verma, Manisha, Vishal Singh, and Vishal Mishra. "Optimization of banana peel waste based microbial fuel cells by machine learning." *Biomass Conversion and Biorefinery* (2023): 1-16.

71. Singh, Jyoti, Santhosh Kumar Kumaresan, Sarvanshi Swaroop, and Vishal Mishra. "Development of predictive model for the fixed-bed column reactor." *Applied Water Science* 13, no. 5 (2023): 114.

72. Pradhan, Nirakar, Sanjay Kumar, Rangabhashiyam Selvasembian, Shweta Rawat, Agendra Gangwar, R. Senthamizh, Yuk Kit Yuen et al. "Emerging trends in the pretreatment of microalgal biomass and recovery of value-added products: A review." *Bioresource Technology* 369 (2023): 128395.

73. Divya, Darshna, Aditi Sammi, and Pranjal Chandra. "Design and development of opto-electrochemical biosensing devices for diagnosing chronic kidney disease." *Biotechnology and Bioengineering* 120, no. 11 (2023): 3116-3136.

74. Verma, Manisha, and Vishal Mishra. "Bioelectricity generation using sweet lemon peels as anolyte and cow urine as catholyte in a yeast-based microbial fuel cell." *Waste and Biomass Valorization* 14, no. 8 (2023): 2643-2657.

75. Kumari, Rohini, Akanksha Singh, Uday Pratap Azad, and Pranjal Chandra. "Insights into the Fabrication and Electrochemical Aspects of Paper Microfluidics-Based Biosensor Module." *Biosensors* 13, no. 9 (2023): 891.

76. Nandi, Indrani, S. K. Rai, and Pranjal Chandra. "MOF-based nanocomposites as transduction matrices for optical and electrochemical sensing." *Talanta* (2023): 125124.

77. Bora, Kushal, Manash Sarma, Shankar Prasad Kanaujia, and Vikash Kumar Dubey. "Dual-target drugs against Leishmania donovani for potential novel therapeutics." *Scientific Reports* 13, no. 1 (2023): 18363.

78. Singh, Gourav, Jobin Thomas, Sahil Wadhawa, Anurag Kashyap, Syed Ajijur Rahaman, Subhomoi Borkotoky, Agnisha Datta et al. "Repurposing the in-house generated Alzheimer's disease targeting molecules through computational and preliminary in-vitro studies for the management of SARS-coronavirus-2." *Molecular Diversity* (2023): 1-16.

79. Dastidar, Monalisha Ghosh, Supratim Mahapatra, Rohini Kumari, Daphika S. Dkhar, Sharmili Roy, and Pranjal Chandra. "Engineered nanomaterial based implantable MicroNanoelectrode for in vivo Analysis: Technological advancement and commercial aspects." *Microchemical Journal* 187 (2023): 108431.

80. Kumari, Rohini, Daphika S. Dkhar, and Pranjal Chandra. "Electrochemically nanotuned surface comprising 3D bimetallic dendrites fabricated on MWCNT for detection of 1, 4-dioxane in water." *Microchemical Journal* 191 (2023): 108845.

81. Kaur, Harleen, Prasanthi Chittineedi, Ravi Shankar Bellala, Venkata Madhavi Bellala, Sandeep Singh, Rohini Kumari, Pranjal Chandra, Santhi Latha Pandrangi, and Surinder P. Singh. "Clinically deployable bioelectronic sensing platform for ultrasensitive detection of transferrin in serum sample." *Biosensors* 13, no. 3 (2023): 406.

82. Kumari, Rohini, and Pranjal Chandra. "Electrochemical nano-imprinting of trimetallic dendritic surface for ultrasensitive detection of cephalexin in pharmaceutical formulations." *Pharmaceutics* 15, no. 3 (2023): 876.

83. Dkhar, Daphika S., Rohini Kumari, Shweta J. Malode, Nagaraj P. Shetti, and Pranjal Chandra. "Integrated lab-on-a-chip devices: Fabrication methodologies, transduction system for sensing purposes." *Journal of Pharmaceutical and Biomedical Analysis* 223 (2023): 115120.

84. Singh, Nandita, Daphika S. Dkhar, Pranjal Chandra, and Uday Pratap Azad. "Nanobiosensors design using 2D materials: Implementation in infectious and fatal disease diagnosis." *Biosensors* 13, no. 2 (2023): 166.

85. Mahapatra, Supratim, and Pranjal Chandra. "Development of a palm-sized bioelectronic sensing device for protein detection in milk samples." *International Journal of Biological Macromolecules* 230 (2023): 123132.

86. Jha, Niharika G., Daphika S. Dkhar, Sumit K. Singh, Shweta J. Malode, Nagaraj P. Shetti, and Pranjal Chandra. "Engineered biosensors for diagnosing multidrug resistance in microbial and malignant cells." *Biosensors* 13, no. 2 (2023): 235.

87. Kuldeep Mahato, Anupriya Baranwal, Rohini Kumari, Ananya Srivastava, Uday Pratap Azad, Pranjal Chandra, Differential electrochemical behaviour of phytofabricated and chemically synthesized silver nanoparticles towards hydrogen peroxide sensing, Electroanalysis, 2023, e202300094

88. Chandra, Pranjal. "Personalized biosensors for point-of-care diagnostics: from bench to bedside applications." *Nanotheranostics* 7, no. 2 (2023): 210.

89. Darshna, Rahul Kumar, Pradeep Srivastava, and Pranjal Chandra. "Bioengineering of bone tissues using bioreactors for modulation of mechano-sensitivity in bone." *Biotechnology and Genetic Engineering Reviews* (2023): 1-41.

90. Ranjan Srivastava, Vinish, Rohini Kumari, and Pranjal Chandra. "Miniaturized surface engineered technologies for multiplex biosensing devices." *Electroanalysis* 35, no. 8 (2023): e202200355.

91. Kumar, Rahul, Vinish Ranjan Srivastava, Supratim Mahapatra, Daphika S. Dkhar, Rohini Kumari, Kumari Prerna, Vikash Kumar Dubey, and Pranjal Chandra. "Drug encapsulated lipid-polymeric nanohybrid as a chemo-therapeutic platform of cancer." *Nanotheranostics* 7, no. 2 (2023): 167.

92. Malode, Shweta J., Mahesh M. Shanbhag, Rohini Kumari, Daphika S. Dkhar, Pranjal Chandra, and Nagaraj P. Shetti. "Biomass-derived carbon nanomaterials for sensor applications." *Journal of Pharmaceutical and Biomedical Analysis* 222 (2023): 115102.

93. Kumar, Ashutosh, Buddhadev Purohit, Uday Pratap Azad, Mohammad Tavakkoli Yaraki, Daphika S. Dkhar, Yen Nee Tan, Ananya Srivastava, and Pranjal Chandra. "Gold nanostar and graphitic carbon nitride nanocomposite for serotonin detection in biological fluids and human embryonic kidney cell microenvironment." *Microchimica Acta* 190, no. 1 (2023): 45.

94. Dkhar, Daphika S., Rohini Kumari, and Pranjal Chandra. "Chemically engineered unzipped multiwalled carbon nanotube and rGO nanohybrid for ultrasensitive picloram detection in rice water and soil samples." *Scientific Reports* 13, no. 1 (2023): 9899.

95. Srivastava, Ananya, Daphika S. Dkhar, Nandita Singh, Uday Pratap Azad, and Pranjal Chandra. "Exploring the Potential Applications of Engineered Borophene in Nanobiosensing and Theranostics." *Biosensors* 13, no. 7 (2023): 740.

96. Sarma, Manash, Subhomoi Borkotoky, and Vikash Kumar Dubey. "Structure-based drug designing against Leishmania donovani using docking and molecular dynamics simulation studies: exploring glutathione synthetase as a drug target." *Journal of Biomolecular Structure and Dynamics* (2023): 1-9.

97. Menpadi, Naveena, Jay Prakash, Debanjan Kundu, Pranjal Chandra, and Vikash Kumar Dubey. "Integrated computational and experimental approach for novel anti-leishmanial molecules by targeting Dephospho-coenzyme A kinase." *International Journal of Biological Macromolecules* 232 (2023): 123441.

98. Ranjan, Preeti, and Vikash Kumar Dubey. "Krebs cycle enzymes for targeted therapeutics and immunotherapy for anti-leishmanial drug development using: Pathways, potential targets, and future perspectives." *Life Sciences* 322 (2023): 121314.

99. Geetanjali, Shweta Rawat, Radha Rani, and Sanjay Kumar. "Kinetic modeling for miniaturize single-chambered microbial fuel cell: effects of biochemical reaction on its performance." *Environmental Science and Pollution Research* (2023): 1-10.

100. Ravi Saini, Sonali Kumari, Amit Singh & Abha Mishra (2023). "From nature to cancer therapy: Evaluating the Streptomyces clavuligerus secondary metabolites for potential protein kinase inhibitors." Journal of Cellular Biochemistry . doi: https://doi.org/10.1002/jcb.30501

101. Ravi Saini, Sonali Kumari, A. Singh & Abha Mishra(2023). "Discovery of the allosteric inhibitor from actinomyces metabolites to target EGFRCSTMLR mutant protein: Molecular modeling and free energy approach." Scientific Reports. doi: 10.1038/s41598-023-33065-7

102. Aditi Bhatnagar, Ravi Saini, Priya Dagar and Abha Mishra (2023) 'Molecular modelling and in vitro studies of Daruharidra as a potent alpha-amylase inhibitor', Journal of Biomolecular Structure and Dynamics. Taylor & Francis, 41(9), pp. 3872–3883. doi:10.1080/07391102.2022.2058093.

103. Sonali Kumari, Ravi Saini, Aditi Bhatnagar, & Abha Mishra (2023). "A Comprehensive Review on Ayurvedic Herb Leptadenia reticulata (Jeevanti): - A Phytochemistry and pharmacological Perspective." Natural Product Research . doi: https://doi.org/10.1080/14786419.2023.2282119

104. Sonali Kumari, Ravi Saini, Aditi Bhatnagar, & Abha Mishra (2023). "Exploring plant-based alpha-glucosidase inhibitors: promising contenders for combatting type-2 diabetes." Archives of Physiology and Biochemistry. doi: 10.1080/13813455.2023.2262167

105. Sonali Kumari, Ravi Saini & Abha Mishra (2023). "Phytochemical profiling and evaluation of the antidiabetic potential of Ichnocarpus frutescens (Krishna Sariva): kinetic study, molecular modelling, and free energy approach." Journal of Biomolecular Structure and Dynamics,. doi: 10.1080/07391102.2023.2248265.

106. Sonali Kumari, Ravi Saini, Aditi Bhatnagar, & Abha Mishra (2023). "HR-LCMS and evaluation of anti-diabetic activity of Hemidesmus indicus (anantmool): Kinetic study, and molecular modelling approach." Computational Biology and Chemistry doi: 10.1016/j.compbiolchem.2023.107896.

107. Shukla, P., Sinha, R., Anand, S., Srivastava, P., & Mishra, A. (2023). Tapping on the Potential of Hyaluronic Acid: from Production to Application. Applied Biochemistry and Biotechnology, 1-26.

108. Shukla, P., Srivastava, P., & Mishra, A. (2023). Downstream process intensification for biotechnologically generated hyaluronic acid: Purification and characterization. Journal of Bioscience and Bioengineering. Volume 136, Issue 3, 232-238,ISSN 1389-1723,https://doi.org/10.1016/j.jbiosc.2023.06.003.

109. Singh, Virendra, Pradeep Srivastava, and Abha Mishra (2023). "Design and modelling of photobioreactor for the treatment of carpet and textile effluent using Diplosphaera mucosa VSPA." 3 Biotech 13.7: 235.

110. Singh, V., Mehra, R., Ramesh, K. B., Srivastava, P. K., & Mishra, A. (2023). Treatment of carpet and textile industry effluents using Diplosphaera mucosa VSPA: A multiple input optimisation study using artificial neural network-genetic algorithms. Bioresource Technology, 129619.

111. Singh, V., Srivastava, P., & Mishra, A. (2023). Exploring the potential of Diplosphaera mucosa VSPA for the treatment of petroleum effluent with simultaneous lipid production. Environmental Science and Pollution Research, 1-15.

112. Singh, Virendra & Mishra Abha & Srivastava, Pradeep. (2023). Textile and domestic effluent treatment via co-cultivation of Diplosphaera mucosa VSPA and Scenedesmus obliquus. Biomass and Bioenergy. 172. 106756. 10.1016/j.biombioe.2023.106756.

113. Tripathi, A. D., Katiyar, S., & Mishra, A. (2023). Glypican1: a potential cancer biomarker for nanotargeted therapy. Drug Discovery Today, 103660.https://doi.org/10.1016/j.drudis.2023.103660.

114. Tripathi, A. D., Labh, Y., Katiyar, S., Singh, A. K., Chaturvedi, V. K., & Mishra, A. (2024). Folate-Mediated Targeting and Controlled Release: PLGA-Encapsulated Mesoporous Silica Nanoparticles Delivering Capecitabine to Pancreatic Tumor. ACS Applied Bio Materials.https://doi.org/10.1021/acsabm.4c00019.

115. Katiyar S, Singh D, Tripathi AD, Chaurasia AK, Singh RK, Srivastava PK, Mishra A. In vitro and in vivo assessment of curcumin-quercetin loaded multi-layered 3D-nanofibroporous matrix prepared by solution blow-spinning for full-thickness burn wound healing. Int J Biol Macromol. 2024 Jun;270(Pt 1):132269. doi: 10.1016/j.ijbiomac.2024.132269. Epub 2024 May 12. PMID: 38744363.

116. Katiyar S, Tripathi AD, Singh RK, Kumar Chaurasia A, Srivastava PK, Mishra A. Graphene-silymarin-loaded chitosan/gelatin/hyaluronic acid hybrid constructs for advanced full-thickness burn wound management. Int J Pharm. 2024 May 19;659:124238. doi: 10.1016/j.ijpharm.2024.124238. Epub ahead of print. PMID: 38768692.

117. Aditi Bhatnagar, Sonali Kumari, Ravi Saini and Abha Mishra (2024) 'HRLCMS based metabolite profiling of antioxidant and hypoglycaemic properties of Daruharidra (Berberis aristata): an in vitro and molecular modelling approach', New Journal of Chemistry. The Royal Society of Chemistry, 48(2), pp. 578–590. doi: 10.1039/D3NJ03494A.

118. Aditi Bhatnagar and Abha Mishra (2024) 'Development of Daruharidra (Berberis aristata) Based Biogenic Cadmium Sulfide Nanoparticles: Their Implementation as Antibacterial and Novel Therapeutic Agents against Human Breast and Ovarian Cancer', Current Pharmaceutical Biotechnology, pp. 1–12.doi:http://dx.doi.org/10.2174/0113892010244977231108043554.

Book Chapter

1. Aditya K. Padhi*, Shweata Maurya (2024) Uncovering the Secrets of Resistance: An Introduction to Computational Methods in Infectious Disease Research, Advances in Protein Chemistry and Structural Biology. doi: https://doi.org/10.1016/bs.apcsb.2023.11.004.

2. Parismita Kalita, Aditya K. Padhi, Timir Tripathi (2022) Immunoinformatics Protocol to Design Multi-epitope Subunit Vaccines. Methods in Molecular Biology, Springer, 2673:357-369. doi:10.1007/978-1-0716-3239-0_25.

3. Kushwaha J., Rani J., Priyadarsini M., Pandey K.P. and Dhoble A.S. (2024) Assessment of wastes for future bioprospecting. Processing of Biomass Waste Technological Upgradation and Advancement, Elsevier. doi.org/10.1016/B978-0-323-95179-1.00002-5

4. Priyadarsini M., Pandey K.P., Kushwaha J. and Dhoble A.S. (2023) Application of cutting-edge molecular biotechnological tools in microbial bioprocessing. Microbial products for future industrialization. Interdisciplinary Biotechnological Advances. Springer, Singapore. doi.org/10.1007/978-981-99-1737-2_5

5. Priyadarsini M., Rani J., Kushwaha J., Pandey K.P., Singh Y. and Dhoble A.S. (2023) An introduction to omics in relevance to industrial microbiology. Industrial Microbiology and Biotechnology. Springer, Singapore. doi.org/10.1007/978-981-99-2816-3_2

6. Abhay Dev Tripathi, Soumya Katiyar, Avinash K. Chaurasia and Abha Mishra (2023). "Nanomaterials for Biosensing Applications." *Recent Advances in Biosensor Technology vol 1*, Pp: 1-29 (29) https://doi.org/10.2174/9789815123739123010004

7. Abhay Dev Tripathi, Vivek Kumar Pandey, Soumya Katiyar and Abha Mishra (2023). "The Emerging Role of Biosensors in the Identification, Characterization, and use of Natural Bioactive Compounds." *Recent Advances in Biosensor Technology vol 2*, Pp: 1-15 (15) https://doi.org/10.2174/9789815136418123020005

8. Shukla, P., Srivastava, P., & Mishra, A**.** (2023). New Developments in the Production and Recovery of Amino Acids, Vitamins, and Metabolites from Microbial Sources. In *Industrial Microbiology and Biotechnology: Emerging concepts in Microbial Technology* (pp. 175-241). Singapore: Springer Nature Singapore.

9. Shukla, P., Srivastava, P., & Mishra, A. (2023). Hyaluronic Acid Microbial Synthesis and Its Explicit Uses in the Development of Nutraceuticals, Biomedicine, and Vaccine Development. In *Industrial Microbiology and Biotechnology: Emerging concepts in Microbial Technology* (pp. 381-401). Singapore: Springer Nature Singapore.

10. Tripathi, A. D., Bhatnagar, A., Katiyar, S., & Mishra, A. (2024). "Mesoporous Nanoparticles Silica for drug delivery in brain disorders." *Nanoarchitectonics for Brain Drug Delivery,* 106. http://dx.doi.org/10.1201/9781032661964-5

19. School of Biomedical Engineeering

Complete Name of Department: School of Biomedical Engineering, IIT (BHU) Varanasi

Year of Establishment: 1985

Coordinator of the School: Dr. Sanjeev Kumar Mahto

Brief Introduction of the School:

Biomedical Engineering (BME) is the most interdisciplinary and frontier technology field, endeavoring to cover the three uniquely divergent scientific fields: Biology, Engineering, and Medicine. The School of Biomedical Engineering is involved in Teaching, Outreach, Research, Translation, and Entrepreneurship, in collaboration with the Institute of Medical Sciences (BHU), Tata Cancer Centre (BHU campus), in-campus Innovation centre, and other Departments of IIT (BHU). The School has been a pioneer of nation-building in the BME sector for about 40 years, being set up by UGC during the 5th Five Year Plan in 1978, with a regular faculty appointment in 1985.

The school runs the following programs:

1. A five-year Integrated Dual Degree (IDD) program that conjointly offers B.Tech in Bioengineering and M.Tech in Biomedical Technology.
2. A two-year M.Tech program in Biomedical Engineering.
3. A rigorous Ph.D. program, both for young scholars as well as QIP-based engineering college teachers.
4. Intensive research setting for Post-Doctoral Fellows and Faculty Fellows (as 'Inspire' candidates).

The Banaras Hindu University ecosystem is a seminal paradigm of an Institute of Technology and an Institute of Medical Sciences thriving on the same campus. This results in excellent collaborative work in Healthcare Technologies and Medically oriented product or process development, Incubation of start-ups, and innovative entrepreneurship.

Major areas of Research:

- Brain-Computer Interfacing based on Motor Imagery and Visual Evoked Potential
- Biomedical signal and image processing
- Stem cell therapy, Tissue engineering, and Regenerative medicine
- Nanocomposites and Bio-devices
- Stem cell technology, Tissue engineering, and Regenerative medicine,
- Bio microfluidics, Neuro engineering, and Nanotoxicology
- BioMEMS and Biosensors.
- Brain Circulation, Autoregulation, Its Disturbance, and Neuroprotection
- Design and fabrication of low cost diagnostic and therapeutic instruments
- Functionally graded materials & conducting IPN composites and their medical application
- Control system modelling, analysis and simulation in health and diseases.
- Molecular pathogenesis and nanomedicine-based therapeutics for infectious diseases
- Computational Biomechanics (Design and modelling of Orthopaedics implants: Hip Joint, Knee Joint, Spine spacers, Bone Plates, and Screws, Dental implants).
- Cardiovascular Blood flow dynamics study, Stent and Heart valve design and development; FEA/CFD Simulation). Energy harvesting for biomedical applications.
- Improved Cancer Diagnostics, Radiation Oncology, and Chemotherapy enhancement.
- Neurotechnology, Brain Research, Cognitive Science, and Affordable Mental Health Care. Neurorehabilitation and Assistive Technology
- Neuromorphic Tactile Sensing for Robotic applications
- Developmental Psychology, Neuro-Informatics.

- Cell Therapy, Cell engineering, Implantable hydrogels, Biomaterials, Rare Genetic Disorders, Type-1 Diabetes, Tissue Engineering.
- Bioimplants, Medical Implants, Immunoprotection, Anti-fibrotic coating.
- Cancer Nanomedicine, Drug delivery, Gene therapy.

Area of the School (in square meters): New Building: 686.06 sq.m.

Infrastructure

Sl. No.	Particulars	Number
1	No. of Classrooms	03
2	No. of Lecture Halls (Seminar Hall)	01
3	No. of Laboratory	11
4	No. of Computers available for students in the School	25

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	IDD	18	20	17	13	12
2	M. Tech	10	09			
3	Ph. D (Under Institute Fellowship)	24				
4	Ph. D (Under Project Fellowship)	01				
5	Ph. D (Under Sponsored Category)	22				

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Sushmitha P	21021004	Conference	2nd to 3rd February 2024, ICT, Mumbai.	Institute
2	Parul Chaurasia	19021005	Conference	3-5 December 2023, BARC, Mumbai, Maharashtra	STGF
3	Parul Chaurasia	19021005	Conference	09- 10 December 2023, ESIC, Alwar, Rajasthan	STGF
4	Richa Singh	19021501	Workshop	18-19 December 2023	
5	Priya Singh	21021002	Conference	16th to 19th Nov 2023 AIIMS Jodhpur	STGF
6	Narayan Yadav	21021504	Workshop	18-19 December 2023	
7	Abhijeet Jaiswal	22021501	Workshop	18-19 December 2023	
8	Priya Singh	21021002	Workshop	18-19 December 2023	
9	Snehlata Yadav	19021010	Conference	2nd to 3rd February 2024, ICT Mumbai	STGF
10	Pooja Kumari	19021011	Conference	2nd to 3rd February 2024, ICT Mumbai	STGF
11	Lipi Pradhan	22021003	International Workshop '3D-LITHO-2023'	4/04/23 - 5/04/23, IIT Bombay	UGC
12	Devyani Yenurkar	22021504	International Workshop '3D-LITHO-2023'	4/04/23 - 5/04/23, IIT Bombay	MHRD
13	Anjali Upadhyay	22021502	International Conference on Translational materials for sustainable technology	1/02/24 to 4/02/24, IIT (BHU)	UGC
14	Malay Nayak	22021505	Workshop on computer-aided drug designing	13/03/23- 17/03/23, IIT (BHU)	MHRD

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
15	Devyani Yenurkar	22021504	International conference on Translational materials for sustainable technology	1/02/24 to 4/02/24, IIT (BHU)	MHRD
16	Devyani Yenurkar	22021504	Workshop on computer-aided drug designing	13/03/23- 17/03/23, IIT (BHU)	MHRD
17	Devyani Yenurkar	22021504	Workshop on exploring new avenues and innovations in drug delivery	27/10/23- 28/10/23, IIT BHU	SERB
18	Anjali Upadhyay	22021502	Workshop on exploring new avenues and innovations in drug delivery	27/10/23- 28/10/23, IIT BHU	SERB
19	Lipi Pradhan	22021003	Workshop on Advancement in Tissue Fabrication Technology	18/12/23- 19/12/23, IIT (BHU)	SERB
20	Malay Nayak	22021505	Workshop on Advancement in Tissue Fabrication Technology	18/12/23- 19/12/23, IIT (BHU)	SERB
21	Anjali Upadhyay	22021502	Workshop on Advancement in Tissue Fabrication Technology	18/12/23- 19/12/23, IIT (BHU)	SERB
22	Lipi Pradhan	22021003	International Conference on Advanced Materials for Better Tomorrow-II	10/10/23- 13/10/23, BHU	UGC
23	Lipi Pradhan	22021003	International Conference on Materials for Sustainable Environment	27/03/24- 28/03/24, Centurian University of Technology and Management, Bhubaneswar	UGC
24	Malay Nayak	22021505	International Conference on Advanced Materials for Better Tomorrow-II	10/10/23- 13/10/23, BHU	MHRD
25	Suparna Veeturi	21022004	IEEE 19th International Conference on Body Sensor Networks (BSN)	09/10/2023-11/10/2023, MIT Media Lab, Boston, USA	
26	Suparna Veeturi	21022004	IEEE SMARTCOMP 2023	26/06/2023-29/06/2023, Nashville, Tennessee, USA	

Names of students/scholars who got prizes and awards outsidethe Institute

Sl. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Parul Chaurasia	19021005	Best Poster Award	3-5 December 2023, BARC, Mumbai, Maharashtra	National Academy of Sciences (NASI), Allahabad
2	Parul Chaurasia	19021005	Young Researcher Award	09- 10 December 2023, ESIC, Alwar, Rajasthan	Society of Young Biomedical Scientists (SYBS) , AIIMS
3	Lipi Pradhan	22021003	2nd Prize for poster	28/03/24, Centurian University of Technology and Management, Bhubaneswar	Organizing committee of the International Conference on Materials for Sustainable Environment
4	Devyani Yenurkar	22021504	Best poster	4/02/24, IIT (BHU)	Organizing committee of the International Conference on Translational materials for sustainable technology

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
PROFESSORS			
1	Dr. Neeraj Sharma,Ph. D. Employee No. 16812	2009	Bioinstrumentation,Biomedical Signal and Image Processing.
ASSOCIATE PROFESSORS			
1	Dr Shiru Sharma, Ph.D. Employee No. 16829	2009	Bioinstrumentation Mathematical modeling and analysis of Physiological control system
2	Dr. Sanjay Kumar Rai, Ph.D. Employee No. 18117	1998	Biomechanics & Biomaterials
3	Dr. Pradip Paik, Ph.D. Employee No. 50168	2008	Materials for Translational Nanomedicine and Therapeutic Applications
4	Dr. Sanjeev Kumar Mahto, Ph.D. Employee No. 19842	2011	Cell and Tissue Engineering, Biomaterials, Lab-on-a-Chip/Organ-on-a-Chip, 3D Bioprinting and Scaffolds, Stem Cell Engineering
ASSISTANT PROFESSORS			
1	Dr. Jac Fredo, Ph.D. Employee No. 50253	2015	Bio-Medical Signal and Image Processing, Bio-Medical Instrumentation, Computational Neuroscience, Artificial Intelligence, Computational Biology
2	Dr. Deepesh Kumar, Ph.D, Employee No. 50275	2018	Neurorehabilitation engineering, Neuromorphic sensing, and Machine Learning, Biomedical Signal Processing
3	Dr. Sudip Mukherjee, Ph.D., Employee No. 50308	2017	Biomaterials, Cell Therapy for type-1 diabetes, cancer, wound-healing and rare genetic disorders, Anti-fibrotic coating to medical device, bioimplants, Nanomedicine
4	Dr. Brijesh Kumar, Ph.D. Employee No. 50328	2016	Breast and ovarian cancer initiation, progression and metastasis; Generation of cancer stem cells and tumor heterogeneity; Gene regulation and cell signaling in disease development; Development of effective therapeutic strategies for cancer treatment
5	Dr. Gowri Manohari Balachander, Ph.D. Employee No. 50332	2018	Liver regeneration, Organ-on-a-chip, Organoids, 3D Organotypic models, Breast Cancer

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Dr. Anuj Srivastava, D.M.L.T., B.Sc. MLT, M.Sc. (Microbiology), Ph.D	Jr. Technical Superintendent Emp. No. 18631	06.08.2008
2	Mr. Bharat Kumar Vishwakarma, B.Sc., B.Ed., P.G.D.C.A.	Senior Technician Emp. No. 19605	12.07.2012
3	Mr. Kamlesh Kumar B.A.	Superintendent Emp. No. 50160	18.04.2023
4	Mr. Divyanshu Singh, M.A. (Journalism & Mass Communication), D.C.A. (Diploma in Computer Application)	Senior Assistant Emp. No. 50100	20.05.2017
5	Ms. Priyanka, Graduate in Electrical Engineering (AMIE)	Junior Technician Emp. No. 50405	26.12.2023

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

Sl. No.	Coordinator	Title	Period
1	Dr. Deepesh Kumar	High-end workshop (KARYASHALA) titled "Artificial Intelligence for Biomedical Applications"	22/05/2023-28/05/2023
2.	Dr. S.K.Mahto	Advancement in Tissue Fabrication Technology	December 18th-19th 2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Dr. S.K.Mahto	Workshop on advancement in Tissue Fabrication Technology School of Biomedical Engineering,	IIT (BHU), Varanasi, (18.12.2023 – 19.12.2023)
2	Dr. S.K.Mahto	International Conference on Translational Materials for Sustainable Technology (TransMat-2k24)	Department of Physics, IIT (BHU), Varanasi (01.02.2024 – 04.02.204)
3	Dr. S.K.Mahto	ETMM 2024: A 2-day symposium on Emerging Technologies and Materials in Medicine	IIT Kanpur (03.05.2024 -04.05.2024)
4	Dr. S.K.Mahto	IInvenTiv-2024	IIT Hyderabad (19.01.2024 – 20.01.2024)

Special lectures delivered by faculty members in other institutions

1	Name of faculty Member	Topic of Lecture	Institution	Date
2	Jac Fredo AR	Applications of AI in Neuroimaging	Workshop SMARTBEING 2023 - Sensors and Wellbeing in Department of Biomedical Engineering, IIT Hyderabad,	22/11/2023
3	Jac Fredo AR	AI for Biomedical Applications	Seven days high-end workshop on "AI for Biomedical Applications", School of Biomedical Engineering, IIT (BHU), Varanasi,	22/05/2023-28/05/2023
4	Jac Fredo AR	Applications of Artificial Intelligence in NDD	IIT Palakkad	19/12/2023
5	Deepesh Kumar	Neuromorphic Signal Processing and Its Biomedical Applications	IIT Patna	16/03/2024
6	Deepesh Kumar	Neuromorphic Signal Processing for Healthcare Applications	University of Rhode Island, USA (Online mode)	21/08/2023
7	Shiru Sharma	Design and Development of Myoware Prosthetic hand	SERB Sponsored High-End Workshop on AI and Machine Learning Applications in Healthcare IIIT Raipur	14/09/2023
8	Shiru Sharma	DESIGN OF AN EFFECTIVE MYOELECTRIC PROSTHETIC HAND SYSTEM FOR GRASPING	FDP program Galgotia University Noida	20/02/2024
9	Dr. S.K.Mahto	Enabling Technologies for Tissue Engineering	Workshop on advancement in Tissue Fabrication Technology School of Biomedical Engineering, IIT (BHU), Varanasi,	19/12/2023
10	Dr. S.K.Mahto	Revealing Wound Healing Potential of Soy Protein for Skin Tissue Regeneration	International Conference on Translational Materials for Sustainable Technology (TransMat-2k24),Department of Physics, IIT (BHU), Varanasi	01/02/2024
11	Dr. S.K.Mahto	Revealing Functional Biomaterials and Scaffolds using Enabling Technologies for Regeneration of Tissues and Modeling of Organs	ETMM 2024: A 2-day symposium on Emerging Technologies and Materials in Medicine, IIT Kanpur	03.05.2024
12	Dr. Sudip Mukherjee	Perfusable cell-laden 3D-printed hydrogel constructs to guide patterned vascularization in vivo	International Workshop '3D-LITHO-2023' organized at IIT BOMBAY	04/04/23
13	Dr. Sudip Mukherjee	In vivo high-throughput screening using cellular barcoding identifies hydrogels that mitigate fibrosis'	International Conference (Hybrid) 'ICNP-2023' organized by Mahatma Gandhi University, Kerala	12/05/23
14	Dr. Sudip Mukherjee	Modification of materials surfaces with immunomodulatory small molecule reduces macrophage capture and fibrosis' at	International Conference AMBT-2023 organized by BHU at Varanasi	12/10/23
15	Dr. Sudip Mukherjee	Immunoprotective Coating to Biomaterials Reduces Macrophage Recognition and Prevents Fibrosis	International Workshop organized by Department of Pharmacology, IIT (BHU), Varanasi	27/10/23
16	Dr. Sudip Mukherjee	Talk given during the visit	Niigata University at Sakura Exchange Program, Japan	24/11/23

Books, monographs authored/co-authored

Sl. No.	Name of Author/ Co- Author	Title	Publisher
1	Dr. Sudip Mukherjee	Sudip Mukherjee,* Boram Kim, Andrea Hernandez. Immunomodulatory Biomaterials for Cell Therapy and Tissue Engineering. 2024, Springer Nature, Synthesis Lectures on Biomedical Engineering (SLBE) series, eBook ISBN 9978-3-031-50844-8, https://link.springer.com/book/9783031508431	Springer Nature
2	Dr. Brijesh Kumar	Chirag Varshney, Brijesh Kumar, Swapnil C Kamble. Natural compound-based scaffold to design in vitro disease systems; New Horizons in Natural Compound Research, 2023, 373-389.	Academic Press

Editorial boards of journals

Sl. No.	Name of Faculty Member	Position (Editor/Member)	Name of Journal
1	Dr. Sudip Mukherjee	Member (2020-Present)	Royal Society of Chemistry, UK (MRSC)
2	Dr. Sudip Mukherjee	Member (2024)	Society of Biomaterials and Artificial Organs, India
3	Dr. Sudip Mukherjee	Associate Member (2019-Present)	American Association for Cancer Research (AACR)
4	Dr. Sudip Mukherjee	Associate Editor (2021-Present)	Frontiers in Chemistry (Section: Nanoscience)
5	Dr. Sudip Mukherjee	Associate Editor (2021-Present)	BMC Cancer, UK
6	Dr. Sudip Mukherjee	International advisory board member (2017-Present)	Materials Research Express, IOPScience, UK
7	Dr. Sudip Mukherjee	Guest Editor (2019-Present)	Cancers (MDPI); Biomedical Materials (IOP)
8	Dr. Brijesh Kumar	Member (2018-Present)	American Association for Cancer Research (AACR)
9	Dr. Brijesh Kumar	Member (2018-Present)	American Association of Indian Scientists in Cancer Research (AAISCR)

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1	Dr. Pradip Paik	"A polymers-siRNA formulation for anticancer activity there off" (application submitted, 2024)
2	Dr. Pradip Paik	(A process of preparation of polymers for Heparinase activity and anticancer activity)," (application pending, 2024)
3	Dr. Pradip Paik	A biomaterial-based composition and a method of preparation thereof, Application No.: 202311065055, September 27, 2023. (Filed)
4	Dr. Pradip Paik	A nano-formulation and a method of preparation thereof, Patent Application No.: 02311051276, date of filing: 31-07-2023. (Filed)
5	Dr. Pradip Paik	A Polymeric Nanoparticle Formulation and A Method Of Preparation Thereof, Patent Application No.: 202311041625, June 19, 2023. (Filed)
6	Dr. Pradip Paik	A polymeric nano-hydrogel composition and a method of preparation thereof Patent Application No.: 202311038604, Date of filing: June 5th, 2023. (Filed)
7	Dr. Pradip Paik	A novel hydrogel with high mechanical stability and a method of making the same, (GRANTED, Application No. 201811045481, Patent No.: 419638, Granted on. 30-01-2023.
8	Dr. Sanjeev Kumar Mahto	"Superabsorbent Soy-based Cryogel and a Method of Preparation Thereof" Application No.: 202311023611 March 30, 2023, India Patent. (Filed)
9	Dr. Sanjeev Kumar Mahto	"A Method of Three Dimensional Bioprinting of Chitosan Bio-Ink to Prepare Printed Structures" Application No.: 202311057796 August 29, 2023, India Patent. (Filed)
10	Dr. Sanjeev Kumar Mahto	"Luffa-PDMS-based Composite Scaffold and a Method of Preparation Thereof" Application No.: 202311017933 March 16, 2023, India Patent. (Filed)

Research and Consultancy

Sponsored research projects (Ongoing only)

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	Development of EEG-based biometric system to identify friend and foe in defense application	07/07/2023 to 06/07/2024	DRDO	68.68 L	Jac Fredo AR
2	Design and Development of Skin-inspired Electronic-Sole (E-Sole) for Tactile Feedback in Lower Limb Prosthetics	07/06/2024 to 07/06/2027	DBT	36.75 L	Deepesh Kumar
3	Hybrid EEG-EMG based Prosthetic hand for transradial amputees to perform reach and grasp task	17/02/2022	TIDE DST	37 L	Shiru sharma
4	Portable smart in-vitro diagnostic platform for monitoring thyroid	2021-2024	Council of Science and Technology, Uttar Pradesh	11.94 L	Dr. Sanjeev Kumar Mahto
5	Engineered Cell Therapy in Gaucher's Disease	27/10/23 to 26/10/26	ICMR	32.645 L	Sudip Mukherjee
6	An immunoprotective hydrogel-based implantable construct containing xenogeneic islets for type 1 diabetes therapy.	25/01/24 to 24/01/26	SERB	29.44 L	Sudip Mukherjee
7	Engineered Cell Therapy in All Round Rapid Wound Repair (ARRWR) in Diabetic Wound	29/12/23 to 29/06/25	DBT	21.796 L	Sudip Mukherjee
8	Implantable Cell-based Therapy in Intraperitoneal Cancers	2023-2026	MoE-STARS, IISC Bangalore	67.60 L	Sudip Mukherjee (Co-PI)
9	Investigation of Cell-of-Origin of TNBCs andLuminal-types of Breast Cancer, and Development of Targeted Therapy.	2023-2028	DBT	52.5 L	Brijesh Kumar
10	Polymer-Mangiferin-Inorganic-Nano antibiotic" combination for eliminating Intracellular and Intraperitoneal drug resistant microbial infections"	IIRP-2023-4724/F1	ICMR	68.78 L	Pradip Paik
11	Development of Implantable hydrogel based immunotherapeutic patch for Treatment of Oral cancer and associated microbial infections through Cell therapy approach.	CRG/2023/005576)	CRG (SERB)	65.00 L	Pradip Paik
12	Development of Implantable Engineered-Cells-Nano-Polymer-hydrogel-based immune therapeutic tool for pancreatic cancer	MoE/ STARS/2023-0318	STARS (IISc. Bangalore)	67.6 L	Pradip Paik
13	Novel Ploymeric Nanomedicine for Cancer therapy Based on the Bio-informatics and Data analysis	1-DAPT/IT (BHU)/2023-24/ Project Sanction/47	IDAPT-HUB Foundation, IIT(BHU)	21.7 L	Pradip Paik
14	Development of Cardiac Model for Prediction of Human Heart Failure using Noninvasive medical imaging and Computational Fluid Dynamics techniques	25/11/2021 – 24/11/2024	ICMR	52.0 L	Sanjay Kumar Rai
15	Developing Psyllium Husk Based Polysaccharide Hydrogel intoElectrospinable and 3D Printable Materials: Towards Fabrication and Comparative Evaluation of Lyophilized, Electrospun and 3D Bioplotted Scaffolds for Liver Tissue Engineering	CRG/2020/000235	CRG-SERB	42.52 L	Sanjeev Kumar Mahto
16	Development of bio-resources for the generation of hepato-biliary tissues for mechanistic insights into liver regeneration	13/03/2024-13/03/2026	SERB SRG	30 Lakhs	Gowri Manohari Balachander

Research Publications

Sl. No.		No.
1	Total Number of Papers Published in Refereed International Journals	58
2	Total Number of Papers Presented in International Conferences	02

Refereed International Journals

1. Wasnik, K., Gupta, PS., Singh, G., Patra, S., Maity, S., Pareek, D., Kumar, S., Rai, V., Prakash, R., Acharya, A., Maity, P., Mukherjee, S., and Mastai, Y., Paik, P. Neuroprotective and Non-Tumorigenic Polymeric Nanohydrogel Promotes Vasculogenesis Mediated Neurite Growth Under Oxidative Stress. Journal of Materials Chemistry B. (Accepted May, 2024).
2. Pradhan, L., Sah, P., Nayak, M., Upadhyay, A., Pragya, P., Tripathi, S., & Mukherjee, S. (2024). Biosynthesized silver nanoparticles prevent bacterial infection in chicken egg model and mitigate biofilm formation on medical catheters. JBIC Journal of Biological Inorganic Chemistry, 1-21.
3. Maity, S., Modak, M. D., Tomar, M. S., Wasnik, K., Gupta, P. S., Patra, S., & Paik, P. (2024). Facile cost-effective green synthesis of carbon dots: selective detection of biologically relevant metal ions and synergetic efficiency for treatment of cancer. Biomedical Materials.
4. Gupta, P. S., Wasnik, K., Patra, S., Pareek, D., Singh, G., Yadav, D. D., & Paik, P. (2024). Nitric oxide releasing novel amino acid-derived polymeric nanotherapeutic with anti-inflammatory properties for rapid wound tissue regeneration. Nanoscale, 16(4), 1770-1791.
5. Patra, S., Pareek, D., Gupta, P. S., Wasnik, K., Singh, G., Yadav, D. D., & Paik, P. (2024). Progress in Treatment and Diagnostics of Infectious Disease with Polymers. ACS Infectious Diseases.
6. Varshney, N., Singh, P., Rai, R., Vishwakarma, N. K., & Mahto, S. K. (2023). Superporous soy protein isolate matrices as superabsorbent dressings for successful management of highly exuding wounds: In vitro and in vivo characterization. International Journal of Biological Macromolecules, 253, 127268.
7. Vishwakarma, N. K., & Mahto, S. K. (2023). Growth and metal-decorated catalytic applications of silicon nanowires: A review. Bulletin of Materials Science, 46(3), 174.
8. Sahoo, K., Varshney, N., Das, T., Mahto, S. K., & Kumar, M. (2023). Copper oxide nanoparticle: multiple functionalities in photothermal therapy and electrochemical energy storage. Applied Nanoscience, 13(8), 5537-5558.
9. Kumari, P., Raval, A., Rana, P., & Mahto, S. K. (2023). Regenerative Potential of Human Breast Milk: A Natural Reservoir of Nutrients, Bioactive Components and Stem cells. Stem Cell Reviews and Reports, 19(5), 1307-1327.
10. Gundu, S., Sahi, A. K., Kumari, P., Vishwakarma, N. K., & Mahto, S. K. (2023). Assessment of various forms of cellulose-based Luffa cylindrica (mat, flakes and powder) reinforced polydimethylsiloxane composites for oil sorption and organic solvents absorption. International Journal of Biological Macromolecules, 240, 124416.
11. Vishwakarma, N. K., & Mahto, S. K. (2023). An universal approach of catalyst immobilization inside hydrophobic PFA tubing under well dispersed manner for continuous-flow applications. Chemical Engineering Journal, 452, 139347.
12. Tekam, C. K. S., Majumdar, S., Kumari, P., Prajapati, S. K., Sahi, A. K., Shinde, S., ... & Mahto, S. K. (2023). Effects of ELF-PEMF exposure on spontaneous alternation, anxiety, motor co-ordination and locomotor activity of adult wistar rats and viability of C6 (Glial) cells in culture. Toxicology, 485, 153409.
13. Balachander, G. M., Nilawar, S., Meka, S. R. K., Ghosh, L. D., & Chatterjee, K. (2024). Unravelling microRNA regulation and miRNA–mRNA regulatory networks in osteogenesis driven by 3D nanotopographical cues. Biomaterials Science, 12(4), 978-989.
14. Ram, R., Kumar, D., Paik, P., & Sarkar, A. (2023). A simple and low-cost paper-based device for simultaneous determination of hematocrit and hemoglobin levels in point-of-care settings. Physics of Fluids, 35(12).
15. Wasnik, K., Gupta, P. S., Mukherjee, S., Oviya, A., Prakash, R., Pareek, D., ... & Paik, P. (2023). Poly (N-acryloylglycine-acrylamide) Hydrogel Mimics the Cellular Microenvironment and Promotes Neurite Growth with Protection from Oxidative Stress. ACS Applied Bio Materials, 6(12), 5644-5661.
16. Gupta, P. S., Wasnik, K., Singh, G., Patra, S., Pareek, D., Yadav, D. D., ... & Paik, P. (2023). In vivo potential of polymeric N-acryloyl-glycine nanoparticles with anti-inflammatory activities for wound healing. Materials Advances, 4(20), 4718-4731.

17. Amgoth, C., Patra, S., Wasnik, K., Maity, P., & Paik, P. (2023). Controlled synthesis of thermosensitive tunable porous film of (pNIPAM)-b-(PCL) copolymer for sustain drug delivery. Journal of Applied Polymer Science, 140(20), e53854.

18. Kumar, S., Kumar, B. V., & Rai, S. K. (2023). Influence of abdominal aortic aneurysm shape on hemodynamics in human aortofemoral arteries: A transient open-loop study. Physics of Fluids, 35(4).

19. Kumar, S., Kumar, B. R., Rai, S. K., & Shankar, O. (2024). Effect of rheological models on pulsatile hemodynamics in a multiply afflicted descending human aortic network. Computer Methods in Biomechanics and Biomedical Engineering, 27(1), 116-143.

20. Yenurkar, D., Ruocco, M., Liang, L., & Mukherjee, S. (2024). Small molecule conjugation reduces macrophage uptake and increases in vivo blood circulation of polystyrene nanoparticles. Biomedical Materials, 19(2), 025017.

21. Pragya, P., Govarthan, P. K., Nayak, M., Mukherjee, S., & Agastinose Ronickom, J. F. (2024). Establishment of Three Gene Prognostic Markers in Pancreatic Ductal Adenocarcinoma Using Machine Learning Approach. Journal of Medical and Biological Engineering, 1-9.

22. Septiana, W. L., Ayudyasari, W., Gunardi, H., Pawitan, J. A., Balachander, G. M., Yu, H., & Antarianto, R. D. (2023). Liver organoids cocultured on decellularized native liver scaffolds as a bridging therapy improves survival from liver failure in rabbits. In Vitro Cellular & Developmental Biology-Animal, 59(10), 747-763.

23. Setia, A., Kumari, P., Mehata, A. K., Malik, A. K., Mahto, S. K., & Muthu, M. S. (2024). Cetuximab decorated redox sensitive D-alpha-tocopheryl-polyethyleneglycol-1000-succinate based nanoparticles for cabazitaxel delivery: Formulation, lung targeting and enhanced anti-cancer effects. International Journal of Pharmaceutics, 123881.

24. Shukla, V. N., Mehata, A. K., Setia, A., Kumari, P., Mahto, S. K., Muthu, M. S., & Mishra, S. K. (2023). Rational design of surface engineered albumin nanoparticles of asiatic acid for EGFR targeted delivery to lung cancer: Formulation development and pharmacokinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 676, 132188.

25. Vikas, Mehata, A. K., Viswanadh, M. K., Malik, A. K., Setia, A., Kumari, P., ... & Muthu, M. S. (2023). EGFR targeted redox sensitive chitosan nanoparticles of cabazitaxel: dual-targeted cancer therapy, lung distribution, and targeting studies by photoacoustic and optical imaging. Biomacromolecules, 24(11), 4989-5003.

26. Setia, A., Mehata, A. K., Priya, V., Pawde, D. M., Jain, D., Mahto, S. K., & Muthu, M. S. (2023). Current advances in nanotheranostics for molecular imaging and therapy of cardiovascular disorders. Molecular Pharmaceutics, 20(10), 4922-4941.

27. Shukla, V. N., Mehata, A. K., Setia, A., Kumari, P., Mahto, S. K., Muthu, M. S., & Mishra, S. K. (2023). EGFR targeted albumin nanoparticles of oleanolic acid: In silico screening of nanocarrier, cytotoxicity and pharmacokinetics for lung cancer therapy. International Journal of Biological Macromolecules, 246, 125719.

28. Sriram K. P., Kumar P. G., Aleem, A. SG., Nagarajan G, Fredo AR. J., (2024). Deep Learning-Based Automated Emotion Recognition Using Multimodal Physiological Signals and Time-Frequency Methods. IEEE Transactions on Instrumentation & Measurement.

29. Govarthan, P. K., Peddapalli, S. K., Ganapathy, N., & Ronickom, J. F. A. (2024). Emotion classification using electrocardiogram and machine learning: A study on the effect of windowing techniques. Expert Systems with Applications, 124371.

30. Rakshe, C., Kunneth, S., Sundaram, S., Murugappan, M., & Agastinose Ronickom, J. F. (2024). Autism spectrum disorder diagnosis using fractal and non-fractal-based functional connectivity analysis and machine learning methods. Neural Computing and Applications, 1-21.

31. Manoj, G., Gupta, V., Bhattacharya, A., Aleem, S. G. A., Vedantham, D., & Agastinose Ronickom, J. F. (2024). Diagnostic classification of autism spectrum disorder using sMRI improves with the morphological distance-related features compared to morphological features. Multimedia Tools and Applications, 1-22.

32. Sriram, K. P. and Fredo AR. J. (2024). Optimal Electrodermal Activity Segment for Enhanced Emotion Recognition Using Spectrogram-based Feature Extraction with Machine Learning Approach. International Journal of Neural Systems

33. Jain, V., Rakshe, C. T., Sengar, S. S., Murugappan, M., & Ronickom, J. F. A. (2024). Age-and Severity-Specific Deep Learning Models for Autism Spectrum Disorder Classification Using Functional Connectivity Measures. Arabian Journal for Science and Engineering, 49(5), 6847-6865.

34. Kumar, P. S., Govarthan, P. K., GANAPATHY, N., & RONICKOM, J. F. A. (2023). A comparative analysis of eda decomposition methods for improved emotion recognition. Journal of Mechanics in Medicine and Biology, 23(06), 2340043.

35. Sriram Kumar, P., Govarthan, P. K., Ganapathy, N., & Ronickom, J. F. A. (2023). Electrodermal activity-based analysis of emotion recognition using temporal-morphological features and machine learning algorithms. Journal of Mechanics in Medicine and Biology, 23(06), 2340044.

36. Kumar, M., Hiremath, C., Khokhar, S. K., Bansal, E., Sagar, K. J. V., Padmanabha, H., ... & Bharath, R. D. (2023). Altered cerebellar lobular volumes correlate with clinical deficits in siblings and children with ASD: evidence from toddlers. Journal of Translational Medicine, 21(1), 246.

37. M Singh, S Kumar, R Mondal, P Singh, R Prakash, N Sharma, (2023), Combustion-Synthesized KNiPO4: A Non-toxic, Robust, Intercalating Battery-Type Pseudocapacitive Electrode for Hybrid Supercapacitors as a Large-Scale Energy storage solution, Energy & Fuels 37 (5), 4094-4105

38. Kumar C, P., Aggarwal, L. M., Bhasi, S., & Sharma, N. (2023). Unified Dosimetry Quality Audit Index: an integrated Monte Carlo model-based quality assurance ranking for radiotherapy treatment of glioblastoma multiforme. Radiation Effects and Defects in Solids, 178(3-4), 258-299.

39. Sharan, T. S., Bhattacharjee, R., Tiwari, A., Sharma, S., & Sharma, N. (2023). Cascaded model (conventional+ deep learning) for weakly supervised segmentation of left ventricle in cardiac magnetic resonance images. IETE Technical Review, 40(1), 63-75.

40. Sharma, N., Prakash, A., & Sharma, S. (2023). An optoelectronic muscle contraction sensor for prosthetic hand application. Review of Scientific Instruments, 94(3).

41. Negi, P. C., Pandey, S. S., Sharma, S., & Sharma, N. (2024). Scalogram-Based Gait Abnormalities Classification Using Deep Convolutional Networks for Neurological and Non-Neurological Disorders. Journal of Medical and Biological Engineering, 1-15.

42. Bhavsar, P., Shah, P., Sinha, S., & Kumar, D. (2024). Musical Neurofeedback Advancements, Feedback Modalities, and Applications: A Systematic Review. Applied Psychophysiology and Biofeedback, 1-17.

43. Barigala, V. K., Govarthan, P. K., Pj, S., Aasaithambi, M., Ganapathy, N., Pa, K., ... & Fredo, J. (2023). Identifying the Optimal Location of Facial EMG for Emotion Detection Using Logistic Regression. In Healthcare Transformation with Informatics and Artificial Intelligence (pp. 81-84). IOS Press.

44. Kumar, B., Khatpe, A. S., Guanglong, J., Batic, K., Bhat-Nakshatri, P., Granatir, M. M., ... & Nakshatri, H. (2023). Stromal heterogeneity may explain increased incidence of metaplastic breast cancer in women of African descent. Nature communications, 14(1), 5683.

45. Wang, R., Kumar, B., Bhat-Nakshatri, P., Khatpe, A. S., Murphy, M. P., Wanczyk, K. E., ... & Nakshatri, H. (2023). A human skeletal muscle stem/myotube model reveals multiple signaling targets of cancer secretome in skeletal muscle. Iscience, 26(4), 106541.

46. Mukherjee, S., Kim, B., Cheng, L. Y., Doerfert, M. D., Li, J., Hernandez, A., ... & Veiseh, O. (2023). Screening hydrogels for antifibrotic properties by implanting cellularly barcoded alginates in mice and a non-human primate. Nature Biomedical Engineering, 7(7), 867-886.

47. Schreib, C. C., Jarvis, M. I., Terlier, T., Goell, J., Mukherjee, S., Doerfert, M. D., ... & Veiseh, O. (2023). Lipid deposition profiles influence foreign body responses. Advanced Materials, 35(21), 2205709.

48. Das, S., Tripathy, S., Sreedhar, B., Mukherjee, S., & Patra, C. R. (2023). Design of Lysozyme-Templated Biocompatible Fluorescent Nanocomposites and Their Potential Applications for Cell Imaging, Hydrogen Peroxide Sensing, and Cancer Therapy. Advanced Therapeutics, 6(6), 2200293.

49. Parkhideh, S., Calderon, G. A., Janson, K. D., Mukherjee, S., Mai, A. K., Doerfert, M. D., ... & Veiseh, O. (2023). Perfusable cell-laden matrices to guide patterning of vascularization in vivo. Biomaterials Science, 11(2), 461-471.

50. Karinja, S. J., Bernstein, J. L., Mukherjee, S., Jin, J., Lin, A., Abadeer, A., ... & Spector, J. A. (2023). An Antifibrotic Breast Implant Surface Coating Significantly Reduces Periprosthetic Capsule Formation. Plastic and Reconstructive Surgery, 152(4), 775-785.

51. Wright, M. A., Miller, A. J., Dong, X., Karinja, S. J., Samadi, A., Lara, D. O., ... & Spector, J. A. (2023). Reducing Peri-Implant Capsule Thickness in Submuscular Rodent Model of Breast Reconstruction with Delayed Radiotherapy. Journal of Surgical Research, 291, 158-166.

52. Kim, B., Pradhan, L., Hernandez, A., Yenurkar, D., Nethi, S. K., & Mukherjee, S. (2023). Current Advances in Immunomodulatory Biomaterials for Cell Therapy and Tissue Engineering. Advanced Therapeutics, 6(8), 2300002.

53. Yenurkar, D., Nayak, M., & Mukherjee, S. (2023). Recent advances of nanocrystals in cancer theranostics. Nanoscale Advances.

54. Pradhan, L., Mounika, B., & Mukherjee, S. (2023). Plant Leaf-Based Compounds and Their Role in Nanomaterials Synthesis and Applications. In Secondary Metabolites Based Green Synthesis of Nanomaterials and Their Applications (pp. 209-225). Singapore: Springer Nature Singapore.

55. Vydiam, K., & Mukherjee, S. (2023). 3D and 4D nanocomposites. In Advances in Smart Nanomaterials and their Applications (pp. 505-522). Elsevier.

56. Vydiam, K., & Mukherjee, S. (2023). Smart nanomaterials—environmental safety, risks, legal issues, and management. In Advances in Smart Nanomaterials and their Applications (pp. 619-634). Elsevier.

57. Pradhan, L., Yenurkar, D., & Mukherjee, S. (2023). Toxicity Assessment of Gold Ions and Gold Nanoparticles on Plant Growth. In Nanomaterials and Nanocomposites Exposures to Plants: Response, Interaction, Phytotoxicity and Defense Mechanisms (pp. 175-189). Singapore: Springer Nature Singapore.

58. Vydiam, K., Ahmad, J., & Mukherjee, S. (2024). Development of metal–polymer composite nanomaterials for diagnosis and phototherapy. In Organic Nanomaterials for Cancer Phototheranostics (pp. 171-194). Woodhead Publishing.

Proceedings of National Conferences

1. Al Rumon, M. A., Ravichandran, V., Veeturi, S., Owens, J., Kumar, D., Solanki, D., & Mankodiya, K. (2023, October). ElboSense: A Novel Capacitive Strain Sensor for Textile-Based Elbow Movement Monitoring. In 2023 IEEE 19th International Conference on Body Sensor Networks (BSN) (pp. 1-4). IEEE.

2. Negi, P. C., Pandey, S. S., Sharma, S., & Sharma, N. (2023, August). Classification of Gait Abnormalities Using Transfer Learning with EMG Scalogram Features. In International Conference on ICT for Sustainable Development (pp. 407-415). Singapore: Springer Nature Singapore.

Distinguished Visitor

Sl. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	Dr. Saugat Bhattacharya, Assistant Professor, Ulster University, Derry~Londonderry Campus, United Kingdom	04/03/2024-06/03/2024	Research collaboration and delivering expert talk
2	Dr.ShubhamSahu, Laboratoire Physico-Chimie Curie – InstitutCurie, Institut de Chimie du CNRS, SorbonneUniversité, Centre National de la RechercheScientifique – Paris, France, and Cold Spring Harbor Laboratory – UnitedStates	18/03/2024	Guest Lecture
3	Dr. CamilleLambert, Laboratory of Biophysics and Evolution(LBE), UMR 8231, ESPCI-PSL, Paris, France, and Laboratory of Computational andQuantitative Biology (LCQB), UMR 7238,Sorbonne Université, Paris, France	18/03/2024	Guest Lecture
4	Dr. Nagarajan Ganapathy, Assistant Professor, Department of BiomedicalEngineering,Indian Institute of TechnologyHyderabad,Kandi, Sangareddy,Telangana, India.	22/03/2024	Guest Lecture
5	Dr. Amit Vaish, Principal Scientist, Amgen Research, Amgen Inc.,Thousand Oaks, California, USA	05/04/2024	To deliver expert talk
6	Dr. AdityaShekhar Nittala, Director, DIFF Lab Faculty of Science Department of ComputerScience University of Calgary, Canada	10/04/2024	Guest lecture
7	Dr. Kirti Prakash, FRMS, Senior StaffScientist, Integrated Pathology Unit, Center for Molecular Pathology, The Royal Marsden Trust, The Institute of CancerResearch, United Kingdom	11/10/2023	Guest Lecture

20. School of Materials Science and Technology

Name of School: Materials Science and Technology

Year of Establishment: 1978

Coordinator of the School: Prof. Akhilesh Kumar Singh, w.e.f. 1st January 2023

Brief introduction of the School

The School of Materials Science and Technology is an internationally renowned Centre of Materials Research and Education. It was established in 1978 following the recommendations of the V Plan Visiting Committee of the UGC. It serves as the Institute's nodal center for fostering interdisciplinary teaching and research in the field of materials science and technology. School runs successful Ph.D., M.Tech. and Integrated Dual Degree (IDD) programmes since 1982, 1984 and 2005, respectively. All these students are gainfully employed, several of them in premier Research and Development organizations, industry and teaching institutions. The syllabi of different programs are revised periodically to include topics of current significance in the field. Integrated 5-year dual degree programme is leading to combined B.Tech. & M.Tech. degrees. This program has been initiated from the session 2005-06 through JEE.

The School has a modest four floor building. The laboratories are equipped with modern and sophisticated equipment for materials preparation, characterization, processing and phase transformation studies. Working in these frontiers areas the faculty members of the School have generated more than Rs. 15 crores during the last five years through various projects/ schemes funded by agencies like DST, SERB, DBT, IMPRINT, DST-Nanomission, BRNS, SPARC, DRDO, UGC-DAE-CSR, etc. and have published more than 250 research papers in reputed journals such as Nature Comm., Signal Transduct Target Ther, Appl. Phys. Lett., Phys. Rev. B, J. Phys. Cond. Matter, J. Appl. Phys., Macromolecules, Dalton Trans., J. Controlled Release, J. Mater. Chem, J. Phys Chem., Nanoscale, RSC Advances, Langmuir, Sensors and Actuators B., Scientific Report etc.

Major areas of Research

- Nanomaterials for Energy, Health and Electronics
- Magnetic materials and Nanomagnetism
- X-ray and Neutron Crystallography
- Ferroics and Multiferroics
- Metals, alloys and multifunctional materials
- Functional Materials and Devices
- Biopolymers for drug delivery
- Polymer nanocomposites
- Sensors and Biosensors
- Thin film devices and organic electronics
- Advanced Ceramics

Area of the Department (in square meters): The School has a modest building of about 16,000 sq. ft. floor area.

Infrastructure

S. No.	Particulars	Number
1	No. of classrooms	One
2	No. of lecture halls	One
3	No. of laboratory	Nineteen
4	No. of computers available for students in the School	Thirty five

Academic Programmes offered

Ph.D., M. Tech and Integrated Dual Degree (B.Tech+M.Tech.)

Students on Roll

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1.	Dual Degree	27	23	28	14	23
2.	M. Tech	16	18	-	-	-
3.	Ph. D (Under Institute Fellowship)=22	4	1	6	8	3
4.	Ph. D (Under Project Fellowship)=03	-	-	-	1	2
5.	Ph. D (Under Sponsored external fellowship)=14	5	-	2	4	3

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1.	Rajnandini Sharma	18111007	International Conference on Nanotechnology for Better Living (NBL-23)	NIT, Srinagar, from 25th May to 29th May 2023.	IIT (BHU)
2.	Pawan Kumar Ojha	18111503	International Conference on Nanotechnology for Better Living (NBL 2023). NIT, Srinagar	25-29 May- 2023	IIT (BHU)
3.	Simran Sahoo	20111519	Workshop on Rietveld Refinement of X-Ray Diffraction Data using FullProf Package (Hands-on-Training) Center of Advanced Computational Research, New Delhi.	22 March 2024 – 28 March 2024	IIT (BHU)
4.	Taranga Dehury	181110012	34th Annual General Meeting of MRSI and 5th Indian Materials conclave	December 12 - 15, 2023 and IIT(BHU), Varanasi	Self
5.	Taranga Dehury	181110012	International chemical congress (ICC_2023)	25-27 May 2023, Central department of Chemistry, Tribhuvan University, Kathmandu, Nepal	IIT (BHU)
6.	Akhilesh Kumar Yadav	19111001	34th Annual General Meeting of MRSI and 5th Indian Materials conclave	December 12 - 15, 2023 and IIT(BHU), Varanasi	Self
7.	Sanjna Rajput	19111503	34th Annual General Meeting of MRSI and 5th Indian Materials conclave	December 12 - 15, 2023 and IIT(BHU), Varanasi	Self
8.	Priyanka	21111007	Two Days National Conference on Functional Materials and Sensors	16-17 Feb. 2024 Maharishi Dayanand University Rohtak (Haryana)	Institute
9.	Akhilesh Kumar Yadav	19111001	2nd International Conference on recent trend in Materials Science and Devices (ICRTMD- 2023)	December 29th to 31st, 2023 and online	Self
10.	Akhilesh Kumar Yadav	19111001	"DATA ANALYTICS WITH PYTHON PROGRAMMING" conducted by the iHUB DivyaSampark, Indian Institute of Technology Roorkee	31- Jul -23 to 25-Aug-23 and online	Self
11.	Sanjna Rajput	19111503	"DATA ANALYTICS WITH PYTHON PROGRAMMING" conducted by the iHUB DivyaSampark, Indian Institute of Technology Roorkee	31- Jul -23 to 25-Aug-23 and online	Self
12.	Pallavi Singh	21111006	NMD-ATM CONFERENCE 2023	21-24 November 2023	IIT BHU
13.	Ravi Kumar Singh	201111516	NMD-ATM CONFERENCE 2023	21-24 November 2023	IIT BHU
14.	Nidhi Chaubey	19111502	NMD-ATM CONFERENCE 2023	21-24 November 2023	IIT BHU
15.	Shivani Rastogi	20111521	India@DESY User's Workshop, JNCASR Bengaluru	12 March 2024	JNCASR + PMRF

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
17.	Vishal Kumar	19111009	Physics of Strongly Correlated Electron Systems (PSCES) 2024 IISER Bhopal	8-10 april 2024	Self
18.	Gaurav Kumar Shukla	18111502	Physics of Strongly Correlated Electron Systems (PSCES) 2023 IISER Pune	15-17 March 2023	IISER Pune
19.	Nisha Shahi	18111005	Physics of Strongly Correlated Electron Systems (PSCES) 2023 IISER Pune	15-17 March 2023	IISER Pune
20.	Ravi Kumar Singh	20111516	International conference on Metallurgical Engineering and Centenary Celebration (METCENT 2023), Varanasi	26-28 October 2023	PMRF
21.	Sanjeev Kumar	20111519	International Conference on Nanotechnology for Better Living (NBL 2023)	25-29 May,2023, Nit Srinagar	IIT (BHU), Varanasi, UP, India - 221005
22.	Sudarshan Sarkar	21111014	International Conference on "Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Applications" (ICM-2024)	12 - 14 January, 2024	IIT (BHU), Varanasi, UP, India - 221005
23.	Amit Bar	19111002	International Conference on Nanotechnology for Better Living (NBL 2023)	25-29 May,2023, Nit Srinagar	IIT (BHU), Varanasi, UP, India - 221005
24.	Sunayana Bora		International Conference on Nanotechnology for Better Living (NBL 2023)	25-29 May,2023, Nit Srinagar	IIT (BHU), Varanasi, UP, India - 221005
25.	Sunayana Bora		International Conference on Functional Materials -ICFM 2024	09-01-2024 to 11-01-2024, IIT Kharagpur	IIT (BHU), Varanasi, UP, India - 221005
26.	Anupama Devi	23111004	MSMICFP-2023 Department of Physics, University of Allahabad, Prayagraj-211002 India	(Novmber 22-24 2023) University of Allahabad	Self
27.	Anupama Devi	23111004	(AFMI-2023) 29TH I-DAPTHUB Foundation,IIT (BHU)	Nov-3rd Dec 2023 IIT(BHU)	Self
28.	Amita Santra	20111502	Conference (MRSI AGM 2023)	12-15 Dec, 2023 SMST, IIT-BHU	
29.	Alok Kumar	23111003	(AFMI-2023) 29TH I-DAPTHUB Foundation,IIT (BHU)	Nov-3rd Dec 2023 IIT(BHU)	Self
30.	Avishek Mallick Choudhury	21111004	(AFMI-2023) 29TH I-DAPTHUB Foundation,IIT (BHU)	Nov-3rd Dec 2023 IIT(BHU)	Self
31.	Avishek Mallick Choudhury	21111004	One Day workshop on Instrumentations and Characterizations of 2D-Materials" (IC-2D 2024)	April 24th 2024 IIT (BHU)	Self
32.	Swapan Maity	19111007	(Government of West Bengal DSTBT , 28/29 th February,2024)	28/29 th Feb 2024,Science City,Kolkata	Self
33.	Swapan Maity	19111007	(SPSI-MACRO, 10-13 th December,2023)	10-13th December IIT Guwahati	Self
34.	Upakar Patel	23111008	(AFMI-2023) 29TH I-DAPTHUB Foundation,IIT (BHU)	Nov-3rd Dec 2023 IIT(BHU)	Self
35.	Swikriti Tripathi	20111523	(AFMI-2023) 29TH I-DAPTHUB Foundation,IIT (BHU)	Nov-3rd Dec 2023 IIT(BHU)	Self

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
36.	Swikriti Tripathi	20111523	One Day workshop on Instrumentations and Characterizations of 2D-Materials" (IC-2D 2024)	April 24th 2024 IIT (BHU)	Self
37.	Dr. Vijayeta Pal	Chanakya Post-Doctoral Fellow	Materials for Energy & SustainableDevelopment (MESD) (Oral presentation)	October 27–29, 2023, Jawaharlal Nehru University, New Delhi	
38.	Deep Mala (Research Scholar)	20111504	International Conference on Condensed Matter and Device Physics (ICCMDP) (Poster)	September 27-29, 2023, Pandit Deendayal Energy University, Gandhinagar, Gujarat, India	IIT(BHU)
39.	Deep Mala (Research Scholar)	20111504	International Conference on Energy and Advanced Materials (ICEAM) (Poster)	November 2-4, 2023, Jaypee Institute of Information Technology, Noida, India	Self
40.	Prosun Mondal(Research Scholar)	21111008	International Conference On Functional Materials (ICFM 2024) (Poster Presentation).	January 9-11,2024, IIT Kharagpur .	IIT (BHU)
41.	Prosun Mondal(Research Scholar)	21111008	NPCM 2024	FEBRUARY 5-11,BARC, MUMBAI, INDIA	BARC, INDIA
42.	Satyendra Kumar Satyarthi		International Conference on Energy and Advanced Materials (ICEAM-2023)	JIIT, Noida, India	
43.	Sadhana Yadav	21111011	(ICLA-2023) Poster	3th – 6th July 2023 CSIR-IICT, Hyderabad-500007, India	IIT (BHU)
44.	Sadhana Yadav	21111011	Advances in Spectroscopic Techniques and Materials (ASTM-2024) Poster	18th - 20th January 2024Indian Institute of Technology(ISM), Dhanbad	IIT (BHU)
45.	Radhe Shyam	20111513	International conference on advanced materials for better tomorrow	10-13 October 2023, Varanasi.	RSGF
46.	Radhe Shyam	20111513	34th Annual General Meeting of MRSI	12-15 December 2023 Varanasi	Self
47.	Nupur kumari	19111003	Immunological and Molecular Techniques for Detection and Quantification of Cancer Biomarkers	5 to 14th September ICAR-IVRI, Izatnagar, U.P.	Selection basis
48.	Nupur kumari	19111003	Disease diagnosis using machine learning techniques	20th April, Goa	Self
49.	Nupur kumari	19111003	34th Annual General Meeting of MRSI	12-15 December 2023 Varanasi	Self
ABROAD					
1.	Ms. Rajnandini Sharam	18111007	MagIC + (2023)	24th July to 28th July 2023 Bedlewo, Poland	International Travel Grant, SERB
2.	Nitipriya Triapthi	20111509	Japan Society of Applied Physics Autumn meeting (JSAP) 2023.	22nd- 25th Sep 2023	NIMS, Japan
3.	Akhilesh Kumar Yadav	19111001	Annual Techno-Management Fest	15-17 March 2024 and TECHNEX 24 IIT(BHU) Varanasi.	Technex'24
4.	Vishesh Tiku	22112021	Annual Techno-Management Fest	15-17 March 2024 and TECHNEX 24 IIT(BHU) Varanasi	Technex'24
5.	Radhe Shyam	20111513	Internationational conference on Molecular electronics and Bioelectronics- 11	19-21 June 2024	Self

Names of students/scholars who got prizes and awards outsidethe Institute

S. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1.	Rajnandini Sharma	18111007	Best Paper Presentation	May 25-29 NIT Srinagar	International Conference on Nanotechnology for Better Living (NBL-23) 2023
2.	Rajnandini Sharma	18111007	SERB, International travel grant	24th July to 28th July 2023	Poland
3.	Sudarshan Sarkar	21111014	First Position in Poster Presentation	12 - 14 January, 2024 Mahatma Gandhi University, Kottayam, Kerala, India, 686560	International Conference on "Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Applications (ICM-2024)
4.	Swapan Maity	19111007	Outstanding Paper	28/29 February 2024, Science City , Kolkata	DSTBT Government of West Bengal

Names of Students/Scholars who went for foreign Internship

S. No.	Name of Student	Roll No.	Name of the Organization	Place of Internship	Country	Duration
1	Nitipriya Tripathi	20111509	NIMS-IIT(BHU) MOU/ ICGP	NIMS, Japan	NIMS, Tsukuba, Japan	1.0 Year
2	Radhe Shyam	20111513	Tokyo Institute of Technology, Tokyo Japan	Tokyo Japan	Japan	5 months 15 days
3	Keshav Kumar		Synchrotron x-ray diffraction	India-Desy collaboration	Germany	9-10th October 2023
4	Aiswarya Bastia		Synchrotron x-ray diffraction	India-Desy collaboration	Germany	9-10th October 2023

Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
PROFESSORS			
1	Rajiv Prakash (Ph.D.) 17100	January, 2000	Organic Conducting Polymers; Organic Electronics and Sensors/Biosensors
2	Pralay Maiti (Ph.D.) 17337	1996	Biomaterials; Energy materials; Drug delivery
3.	Dr. (Mrs.) Chandana Rath (Ph.D.) 17280	December, 2000	Nanostructured materials, Magnetism, Ion Irradiation
4.	Dr. Akhilesh Kumar Singh (Ph.D.) 17387	2006	Smart Materials, Structural Phase Transitions in Electroceramics, Synthesis and Characterization of Novel Electroceramics,
ASSOCIATE PROFESSORS			
1.	Dr. Chandan Upadhyay (Ph.D.) 18433	2004	1.Static and dynamic magnetic properties of Nanoparticles 2.Quantum Materials 3.Computational Materials Science
2.	Dr. Bhola Nath Pal (Ph.D.) 19817	November, 2005	Optoelectronic devices; Memory, switching and synaptic devices; Energy harvesting devices; Plasmonic thin film & devices
3.	Dr. Ashish Kumar Mishra, (Ph.D.) 50065	July, 2011	Carbon and TMDs nanomaterials, Energy and Environmental Applications, Optoelectronic Applications
4.	Dr. Shrawan Kumar Mishra, (Ph.D.) 50071	March, 2010	Quantum materials, magnetism, condensed matter, memory and spintronics devices, magnetic thin films and multilayers,, neuromorphic devices
5.	Dr. Sanjay Singh (Ph.D.) 50072	2013	Heusler alloys, X-ray & Neutron Diffraction, Quantum Transport & Quantum Materials
ASSISTANT PROFESSORS			
1.	Dr. Nikhil Kumar, (Ph.D.) 50250	2017	Mechanical Behaviour of Materials, Additive Manufacturing, Development of high strength ferrous and non-ferrous alloys
2.	Dr. Ravi Panwar (Ph.D.) 50316	2022	Electrical & Electronics Materials, Electromagnetic Metamaterials, Frequency Selective Surfaces

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
3.	Dr. Uday Shankar (Ph.D) 50419	August, 2021	Polymer Chemistry, Polymer Processing, Polymer Composite
Institute Professors			
1.	Dr. Anuj Kumar(Ph.D) (DBT-Ramalingaswami Fellow)	September, 2014	Polymer Chemistry, Biomaterials for tissue Engineering, Hydrogels for Bioelectronics

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1.	Ankit Jain MCA	Senior Assistant (50140)	10/01/2020
2.	Shashank Saurabh, B.Tech (Electrical & Electronics) and MBA (HR and Finance)	Junior Assistant (50374)	15/11/2023
3.	Samir Kumar Dubey, B.A., M.A. (Sociology), Diploma in Electrical Engg.	Jr. Technical Superintendent (18632)	06/08/2008
4.	Sitaram Tiwari Diploma in Mechanical Engg. (Pursuing)	Senior Technician(19592)	04/09/2012
5.	Mahendra Kumar Patel B.A., COPA and B.Sc. (Physics, Chemistry, Mathematics)	Senior Technician (19599)	04/09/2012
6.	Satyam Pandey B.Tech (Mechanical Engineering)	Junior Technician (50361)	14/11/2023

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

S. No.	Name of Faculty Member	Title	Period
1.	Prof Chandana Rath	34th Annual General Meeting of MRSI and 5th Indian Materials conclave	December 12 - 15, 2023 and IIT(BHU), Varanasi
2.	Nikhil Kumar	Metal and Alloys for Defense Applications	2nd to 6th march at IIT(BHU), Varanasi
3.	Dr. Sanjay Singh	Metal and Alloys for Defense Applications	2nd to 6th march at IIT(BHU), Varanasi

Short-term courses/workshops/seminars/symposia/conferences/training programmes attended by faculty members in academic institutions and public sector undertakings

S. No.	Seminars/Symposia/ Conferences	Title	Period and Venue
1.	Prof. (Mrs.) Chandana Rath	Structural transformation, Jahn-Teller distortion, Photoluminescence and Magnetic switching behavior in Cr doped $GdMnO_3$, International Conference on Functional Materials,	9-11 January 2024, IIT Kharagpur
2.	Prof. (Mrs.) Chandana Rath	Magnetic Properties of Dy Doped α-MnO_2 Nanorods and its Supercapacitor Application, International Chemical congress, chemistry for sustainable development	25-27 May 2023, Central department of Chemistry, Tribhuvan University, Kathmandu, Nepal
3.	Dr. Sanjay Singh	India@DESY User's Workshop,	12/03/2024 to 14/03/2024 JNCASR, Bengaluru
4.	Dr. Sanjay Singh	International conference on Advanced Materials for Better Tomorrow	10/10/2023 to 13/10/2023 Banaras Hindu University, Varanasi
5.	Dr. Sanjay Singh	Invited talk on "Understanding the atomic ordering and magnetic structure: Fundamental and analysis tool"	25/06/2023 IIIT Allahabad
6.	Dr. Bhola Nath Pal	Deliver Lecture & Research Work XXII International Workshop on Physics of Semiconductor Devices (2023) Fabrication of low operating voltage memory transistor by interfacial ionic polarization of a ferroelectric gate dielectric	13-17 December, 2023. IITM, Chennai, India

S. No.	Seminars/Symposia/ Conferences	Title	Period and Venue
7.	Dr. Bhola Nath Pal	Deliver Lecture & Research Work, ICLED (2023), Singapore, Fabrication of non-volatile memory transistor by charge compensation of interfacial ionic polarization of a ferroelectric gate dielectric	29th June-1st July 2023.
8.	Ashish Kumar Mishra	67th DAE Solid State Physics Symposium, Gandhi Institute of Technology and Management (GITAM) Vishakhapatnam, Andhra Pradesh, India	December 19-24, 2023
9.	Ashish Kumar Mishra	INYAS program on Energy for Society at ICT Mumbai	December 04, 2023
10.	Shrawan Mishra	Advanced Materials for Better Tomorrow-II, BHU, Varanasi	10/10/2023 to 13/10/2023
11.	Shrawan Mishra	MRSI, IIT (BHU)	12/12/2023 -15/12/ 2023
12.	Shrawan Mishra	ICMAGMA–2023, Hyderabad	04/12/2023-06/122023
13.	Uday Shankar	Invited lecture on "Recent Advances in Mechanical Engineering" in a short-term course	01/05/2023-10/05/2023, Dept. of Mechanical Engineering, NIT Patna
14.	Uday Shankar	Invited lecture at the 17th International Conference on Polymer Science & Technology ("SPSI-MACRO")	10/12/2023-13/122023, IIT Guwahati, India.
15.	Dr. Ravi Panwar	Invited talk at IEEE International Conference on Electrical, Electronics, Communications, and Computers (IEEE ELEXCOM'23)	IIT Roorkee, August 26, 2023
16.	Prof. Pralay Maiti	National Conference on Futuristic Materials (NCFM-2023) to be held at the Department of Chemistry Govt. V.Y.T. PG Autonomous College Durg, Chhattisgarh, during Sustainable Energy using Polymers and Composites	Department of Chemistry Govt. V.Y.T. PG Autonomous College Durg, Chhattisgarh 22 to 23rd June, 2023
17.	Prof. Pralay Maiti	58th Assembly of Advanced Materials Congress held at MSC Cruise Conference Center, Miami, USA,	MSC Cruise Conference Center, Miami, USA during 26th February to 1st March, 2024
18.	Prof. Pralay Maiti	Annual Convention of Indian National Academy of Engineering 2023	Siksha 'O' Anusandhan University Bhubaneswar during December 9 -11, 2023
19.	Prof. Pralay Maiti	17th International Conference on Polymer Science and Technology on topic Design of Drug Delivery Vehicles for Healthcare	Society for Polymer Science India (SPSI-Macro 2023) held at IIT Guwahati during December 10-13, 2023
20	Prof. Akhilesh Kumar Singh	Invited talk at the International Conference on New Emerging Dimension in Science Technology and Management	12-13 March 2024, R.G Govt. P. G College, Ambikapur, Surguja (C.G)
21.	Prof. Akhilesh Kumar Singh	Invited talk at the International Conference on Advances in Spectroscopic Techniques and Materials (ASTM-2024)	18-19 January 2024, IIT(IMS) Dhanbad
22.	Prof. Akhilesh Kumar Singh	Invited talk at the International Conference on Materials for Energy and Sustainable Development, MESD 2023	27-29 Oct 2023, JNU, New Delhi
23.	Prof. Akhilesh Kumar Singh	Workshop at NIT Rourkela, Sundargarh, Odisha	11-13 July 2023, NIT Rourkela
24.	Prof. Akhilesh Kumar Singh	Conference at Govt V.Y.T PG Autonomous college Durge, Chhattisgarh.	22-23 June 2023, Govt V.Y.T PG college Durg, Chhattisgarh
25.	Dr. Anuj Kumar	34th Annual General Meeting of MRSI and 5th Indian Materials conclave	December 12 - 15, 2023 and IIT(BHU), Varanasi
Meetings			
1.	Shrawan Mishra	Soleil, Paris, France	13/06/2023
2.	Prof. (Mrs.) Chandana Rath	Investigation on structure dependent Physical properties in Nanostructured oxide materials, 21st Refresher Course in Physical Sciences & Nano Sciences,	JNU, New Delhi, September 28, 2023, JNU, New Delhi
3.	Dr. Chandan Upadhayay	Brainstorming meeting for National Quantum Mission	20/02/2024

Special lectures delivered by faculty members in other institutions

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1.	Prof. (Mrs.) Chandana Rath	Investigation on structure dependent Physical properties in Nanostructured oxide materials, 21st Refresher Course in Physical Sciences & Nano Sciences,	JNU, New Delhi	September 28, 2023, JNU, New Delhi
2.	Ashish Kumar Mishra	INYAS program on Energy for Society	ICT, Mumbai	December 04, 2023
3.	Shrawan Mishra	Metal Insulator Transition in VO2	Soleil, Paris, France	23/06/2023
4.	Shrawan Mishra	Magnetic thin films deposition with sputtering (Keynote Lecture)	Central University of South Bihar (CUSB) Gaya	21-23/02/2024
5.	Dr. Ravi Panwar	Expert talk on "Harmonizing periodic electromagnetic structures and heterogeneous composite innovations: A path of intersection"	IIT Patna	March 18, 2024
6.	Dr. Ravi Panwar	Expert talk on "Innovations at the intersection: periodic electromagnetic structures meet heterogeneous composites"	NIT Patna	October 15, 2023
7.	Dr. Ravi Panwar	Expert talk on "Circular economy in action: Transforming electronic waste into next-generation microwave absorbers"	IIT Roorkee	August 24, 2023
8.	Prof. Pralay Maiti	International Conferene on Biomaterials and Healthcare (Bio Heal 2023) held at	Rishikesh	April 13-16, 2023
9.	Prof. Pralay Maiti	Expert lecture in "Advances in Composite Materials: Design Manufacturing, & Applications (ACM- DMA: 2023)" Advancements in Nanocomposites	MNNIT Allahabad	June 28-July 02, 2023
10.	Prof. Pralay Maiti	Invited lecture in "Polymer Processing Society Asia-Australasia Regional Conference (PPS-2023)" on Sustainability in Energy Sector using Polymers	Thiruvanathapuram	29 Novemebr to 2nd December, 2023
11.	Prof. Pralay Maiti	Annual Convention of Indian National Academy of Engineering 2023	Siksha 'O' Anusandhan University Bhubaneswar	December 9 -11, 2023
12.	Prof. Pralay Maiti	58th Assembly of Advanced Materials Congress	MSC Cruise Conference Center, Miami, USA,	26th February to 1st March, 2024
13.	Dr. Anuj Kumar	Invited lecture on "Nano-composite biomaterials for tissue engineering applications" in One-Week International FDP on "Emerging Trends and Innovations in Composite Materials for Engineering Applications	ACPCE, Navi Mumbai	June 24-28, 2024.
14.	Dr. Anuj Kumar	Invited Lecture on "Prospects of scaffolds for cultured meat production", in Graduate Program in Food Science (PPGCAL)	Federal University of Santa Catarina, Brazil	June 14, 2024
15.	Dr. Anuj Kumar	Invited lecture on "Design of functional nanocomposite biomaterials for tissue engineering" in One-Week International FDP on "Significance of Composite Materials & AI in Industry 4.0	ACPCE, Navi Mumbai	July 3-7, 2023

Visits abroad by faculty members

S. No.	Name of Faculty Member	Country Visited	Date of Leaving India	Date of Returning India	Purpose of Visit	Funding from
1.	Dr. Sanjay Singh	Hamburg, Germany	29/04/2023	01/05/2023	Synchrotron x-ray diffraction	DST
2.	Dr. Nikhil Kumar	Hamburg, Germany	15/06/2023	18/06/2023	Synchrotron x-ray diffraction	India-Desy collaboration
3.	Dr. Nikhil Kumar	Hamburg, Germany	07/09/2023	11/09/2023	Synchrotron x-ray diffraction	India-Desy collaboration
4.	Dr. Shrawan Mishra	France	20.05.2023	27/06/2023	Synchrotron experiments	Soleil, Paris, France
5.	Prof. Chandana Rath	Germany	09/10/2023	13/10/2023	Synchrotron x-ray diffraction	India-Desy collaboration

Honours and awards

S. No.	Name of Faculty Member	Details of Award
1.	Dr Ashish Kumar Mishra	Listed in top 2% scientist in his field by the the list from Stanford University in 2023
2.	Prof. Pralay Maiti	Advanced Materials Award by International Association of Adv. Materials(2024),
3.	Prof. Pralay Maiti	Dare to Dream 4.0 by DRDO Individual Category First Prize(2024)
4.	Prof. Pralay Maiti	Fellow of Indian National Academy of Engineering (FNAE)
5.	Dr. Anuj Kumar	Listed in Top 2% scientists in his field by the list from Stanford University, since 2021

Fellowships of academic and professional societies

S. No.	Name of Faculty Member	Details of Fellowship
1.	Shrawan Mishra	Expert member, DCC Sub-Committee of Quantum Technology Division, Telecommunication Engineering Centre (TEC)
2.	Prof. Pralay Maiti	Fellow of Indian National Academy of Engineering (FNAE)

In past Fellowships are listed below.

S. No.	Name of Faculty Member	Details of Fellowship
1.	Prof. Pralay Maiti	Fellow of West Bengal Academy of Science and Technology (FAScT)

Books, monographs authored/co-authored

S. No.	Name of Author/ Co- Author	Title	Publisher
1.	Taranga Dehury and Chandana Rath	Green Synthesized Metal Oxide Nanostructures for Sensing Applications	Springer Nature
2.	Prof. Pralay Maiti	Piezo-energy Harvesting and Application Prospects" in "Energy Harvesting Trends for Low Power Compact Electronic Devices	Publisher: Springer Cham; Edn.: 1; ISSN: 2522-8595; Pg. 23 – 42 (2023)
3.	Dr. A. K. Mishra	Carbon and TMDs Nanomaterials for Energy Applications,	Publisher: World Scientific Publishing Company, ISBN: 978-981-12-8339-0, Pages: 312, 2024, https://doi.org/10.1142/13596 .
4.	Dr. D. K. Singh, Dr. A. K. Mishra and Prof. A. Materny	Raman Spectroscopy: Advances and Applications	Publisher: Springer Nature, ISBN: 978-981-97-1702-6, Pages: 375, 2024, https://doi.org/10.1007/978-981-97-1703-3.
5.	Akhilesh Kumar Singhand Vijayeta Pal	New Developments in Piezoelectric Polymeric Composite Materials for Environmental Energy Usages, a Novel Polymeric Materials for Environmental Applications	World ScientificPublisher, 411-456 (2023), https://doi.org/10.1142/9789811265938_0011
6.	Anuj Kumar and Vijay Kumar Thakur	Functional Nanocomposite Hydrogels: Synthesis, characterization, and biomedical applications	Elsevier (Paperback ISBN: 9780323996389; eBook ISBN: 9780323996396), June 20, 2023, pp 591
7.	Anuj Kumar, Durgalakshmi Dhinasekaran, Irina Savina, and Sung Soo Han	Functional Biomaterials: Advances in design and biomedical applications	CRC Press/Taylor&Francis (ISBN: 9781032170893) Sep 22, 2023, pp 324

Editorial boards of journals

S. No.	Name of Faculty Member	Position (Editor/Member)	Name of Journal
1.	Ashish Kumar Mishra	Associate Editor	Mapana Journal of Sciences
2.	Prof. Chandana Rath	Member	Annals of Applied Sciences

Design and Development Activities

New facilities added

S. No.	Details (Infrastructure, Equipments, etc.)	Value (in Lakhs of Rupees)
1.	AFM/MFM/SNOM	86.00
2.	Fluoroscence spectrophotometer	28.50
3.	High Temperature and High Pressure Autoclave	16.00 (Donation)
4.	Magnetron Sputtering	45.90

Patents filed

S. No.	Name of Faculty Member	Title of Patent
1.	Prof. Pralay Maiti	A Film for Daylight Radiative Cooling and a Method of Preparation ThereofJay Prakasj Bijarniya, Sudepta Bauri, Swikriti Tripathi, Jahar Sarkar and Pralay Maiti Indian Patent Application No. 202311079464 filed on November 22, 2023
2.	Prof. Pralay Maiti	A Bio-composite Material and a Method of Preparation Thereof Pralay Maiti, Hans Raj, Swikriti Tripathi, Avishek Mallick Chaudhary Indian Patent Application No. 202311063585 filed on September 21, 2023
3.	Prof. Pralay Maiti	A Copolymeric Formulation and A Method of Preparation Thereof Pralay Maiti and Amita Santra Indian Patent Application No. 202311044454 filed on July 03, 2023
4.	Prof. (Mrs.) Chandana Rath	A bioactive glass nanocomposite and a method of preparation thereof
5.	Prof. (Mrs.) Chandana Rath	High-performance aqueous asymmetric supercapacitor device using ABO_2-type pseudocapacitor electrodes.
6.	Dr. A.K. Mishra	An electrolyzer for electrochemical water splitting, Indian Patent Application 202411005013, Date- 24-01-2024.
7.	Dr. A.K. Mishra	A biosensor for detection of a biochemical analyte and a method thereof, Indian Patent Application 202311076099, Date- 07-11-2023.
8.	Prof. Akhilesh Kumar Singh	Polyvinylidene difluoride (PVDF)/nitrogen-doped carbon dots nanocomposite film based capacitive energy storage device. Application No. 202211048961; Published: 23.12.2022 (Indian patent)
9.	Prof. Akhilesh Kumar Singh	Poly-vinylidene fluoride/hydrated antimony pentoxide (pvdf/hap) based nanocomposite film-based capacitive energy storage device, Applied to Indian patent office, Application No.: 202211050354; Dated 02.09.2022
10.	Prof. Akhilesh Kumar Singh	A dielectric material based capacitive energy storage device and preparation method thereof, Applied to Indian patent office, Application No.: 202311018983; Dated: 21.03.2023

Research and Consultancy

Sponsored research projects *(Ongoing only)*

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
1.	Nano-ion Chromatograph in Action Sustainable and scalable quantum dots paves a Facile route for Rare Earth Ions Separation Through Advanced Hydrometallurgy	2023-2025	Ministry of Mines (MoM)	11.00	Prof. Pralay Maiti
2.	Exploration of Indian Clays for the Development of Functional Materials through Surface Modification	2023-2026	SERB	19.95	Prof. Pralay Maiti
3.	Transparent thermal regulating radiative coating development for smart windows	2024-2026	SERB	48	Prof. Pralay Maiti

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
4.	Development of mesoporous hybrid carbonaceous support catalysts based high-performance electrocatalytic electrodes for PEM electrolyzers	2024-2027	DRDO	45.37	Prof. Pralay Maiti
5.	Transparent thermal regulating radiative coating development for smart windows	2024-2026	SERB	45.80312	Prof. Pralay Maiti
6.	An Experimental-Numerical study of improved Delamination toughness in Polymer Composite Laminates through the incorporation of Nano graphene particles	30.08.2023 to 29-8-2025	SPARC	67,19,998/-	Prof. Chandana Rath,Co-PI
7.	Correlation studies of copper artifacts (2500-200BCE) from Varanasi region and copper mining and smelting in tribal areas of Singhbhum as PI	2022-2024	Ministry of Education	15.20 Lakhs	Dr.Chandan Upadhyay
8.	Development of stable & high luminescence colloidal quantum dots and its light emitting device application	February-2024-February-2026	SPARC	48	Dr. Bhola Nath Pal
9.	Fabrication of low power consuming inverted near-infra red AMOLEDs	March 2021-September- 2024	DST, India	47.82	Dr. Bhola Nath Pal
10	Investigation of two dimensional transition metal dichalcogenides nanostructures as effective SERS substrates	December 2020- March 2024	SERB, India	43.82	Dr. Ashish Kumar Mishra
11.	Investigation of Anomalous Nernst effect in shape memory Heusler alloys	2022-2025	SERB-DST	~68.42 lakhs	Dr. Sanjay Singh
12.	DNN-derived innovative flexible frequency selective surfaces for stealth and 5G electromagnetic shielding applications	2023-26	SERB, DST	~36	Dr. Ravi Panwar
13.	Experimental investigations on machine learning aided cost effective electromagnetic wave absorber coatings using microwave heat-treated heterogeneous electronic waste	2023-26	CSIR	~25	Dr. Ravi Panwar

Industrial consultancy projects*(Ongoing only)*

S. No.	Name of Faculty Member	Title	Industry	Amount (in lakhs of Rs.)
1.	Prof. Chandana Rath	Testing and consultancy fees for Mossbauer characterization and analysis	MicroLabs Ltd	0.59Lakhs
2.	Prof. Pralay Maiti	Testing of plastic materials by Simplex Apex Encon; Radha Bhawan, Jorethang, South Sikkim 737121	Simplex Apex Encon	Rs. 1 Lakh
3.	Dr. Ravi Panwar	Smart radio environments: Implementation and deployment for targeted use-cases	IIITB COMET Foundation, the TIH under NM-ICPS	~46 Lakhs

Faculty members' participation with other universities under MoUs *(Ongoing only)*

Dr. Shrawan Mishra coordinating the ongoing MOU between IIT(BHU) and NIMS, Japan

Research Publications

S. No.		No.
1	Total Number of Papers Published in Refereed International Journals	122
2	Total Number of Papers Presented in National Conferences	03
3	Total Number of Papers Presented in International Conferences	14

Refereed International Journals

1. Ujjawal Modanwal, Gaurav K. Shukla, Ajit K. Jena, Satadeep Bhattacharjee, Sunil Wilfred D'Souza, Jan Minár, and Sanjay Singh*, Tuning of nodal line states via chemical alloying in Co_2CrX (X = Ga, Ge) Heusler compounds for a large anomalous Hall effect, Phys. Rev. Mater. 8, 034203 (2024).
2. A. Tripathy, K. Dey, S. R. Sahu, Najnin Bano, Vishal Kumar, P. Garg, Sanjay Singh, Vishnu Kumar, Local structural disorder and charge inhomogeneity induced relaxor ferroelectricity in $CuCrO_2$, Phys. Rev. B 109, 134206 (2024).
3. Shamim SK, P Devi, Sanjay Singh, Sudhir K Pandey, Thermoelectric properties of Fe_2VAl in the temperature range 300–800 K: A combined experimental and theoretical study, J. Phys. B: Condens. Matter 673, 415496 (2024).
4. Shivani Rastogi, Nisha Shahi, Vishal Kumar, Gaurav K. Shukla, Satadeep Bhattacharjee, and Sanjay Singh*, Revealing the origin of the topological Hall effect in the centrosymmetric shape memory Heusler alloy Mn_2NiGa: A combined experimental and theoretical investigation, Phys. Rev. B 108, 224108 (2023).
5. Srishti Dixit, Swayangsiddha Ghosh, Neha Patel, Mohd Alam, Krishanu Bandyopadhyay, Nisha Shahi, Yogendra Kumar, M Sawada, Kenya Shimada, Satyen Saha, Sanjay Singh, Sandip Chatterjee, Raman effect and unusual transport properties of Co-doped Mn_2FeAl Heusler alloy, Europhys. Lett. 144, 56003 (2023).
6. E Ketkar, Gaurav K Shukla, Seung-Cheol Lee, Satadeep Bhattacharjee, Sanjay Singh*, Enhanced spin Hall conductivity and charge to spin conversion efficiency in strained orthorhombic SnSe through orbital selective hybridization, Appl. Phys. Lett. 123, 182403 (2023).
7. Nisha Shahi, Shivani Rastogi, Sanjay Singh*, Possible Topological Hall Effect in a Spin Gapless Semiconductor Mn_2CoAl Heusler Compound, Phys. Status Solidi RRL, 2300352 (2023).
8. Vishal Kumar, Gaurav K. Shukla, Nisha Shahi, Sanjay Singh*, Topological Hall Effect in $(Mn_{1-x}Fe_x)_{3.25}Ge$ (x = 0.4) Hexagonal Magnet, Phys. Status Solidi RRL 17, 2300174 (2023).
9. Anupam K Singh, Parul Devi, Nisha Shahi, KK Dubey, Sanjay Singh*, Dhananjai Pandey, Nature of magnetic transitions and evidence for magnetoelastic coupling in the biskyrmion-host hexagonal compound MnNiGa, J. Alloys and Comp 954, 170082 (2023).
10. Gaurav K. Shukla, Ujjawal Modanwal, Sanjay Singh*, Nodal-line symmetry breaking induced colossal anomalous Hall and Nernst effect in Cu_2CoSn Heusler compound, Appl. Phys. Lett. 123, 052402 (2023).
11. Shrishti Dixit, Labanya Ghosh, Mohd Alam, Satya Vijaya Kumar, Neha Patel, Swayangsiddha Ghosh, Nisha Shahi, Sanjay Singh, Sandip Chatterjee*, Existence of exotic magnetic phases along with exchange bias and memory effect in frustrated beta-Mn Heusler alloy, J. Appl. Phys. 133, 013904 (2023).
12. Blue sensitive sub-band gap negative photoconductance in SnO2/TiO2 NPs bilayer oxide transistor, U Pandey, N Pal, A Ghosh, S Suman, S Biring, BN Pal, Nanoscale, 2024, 16, 8504–8513
13. Shivam Awasthi, Subarna Pramanik, Kamalesh Singh, Anita Mohan and Bhola Nath Pal, Highly Flexible non-Volatile Resistive Memory Device based on ZnO Nanoparticle/Graphene Heterostructures Embedded in Poly(Methyl Methacrylate); ACS Appl. Nano Mater. 2024, 7, 6392–6400
14. Ummiya Qamar, Sobhan Hazra, Chandra Kant, Udita Uday Ghosh, Bhola Nath Pal, Santanu Das; Two-dimensional silver nanonetwork on Ag4Ti5O12 film as highly efficient SERS substrate; Microchemical Journal, 2024, 196, 109686
15. Satya Veer Singh, Sobhan Hazra, Sandeep Dahiya, Utkarsh Pandeya Sajal Biring and Bhola Nath Pal, Plamonic Hot-Electron Induced Narrowband Photodetector by using In-Situ Grown Ag/TiO2 Nano-Heterojunction Thin Films; Optical Materials, 2024, 148, 114874
16. Ranjeev Parashar, Suchita Kandpal, Nila Pal, Debashree Manna, Bhola Nath Pal, Rajesh Kumar, Prakash Mondal; Coexistence of electrochromism and bipolar non-volatile memory in a single viologen; ACS Applied Materials & Interfaces; 2023, 15 (44), 51527-51537
17. Utkarsh Pandey, Akhilesh Kumar Yadav, Nila Pal, Pijush Kanti Aich and Bhola N. Pal; Enhanced sub-band gap photosensitivity by an asymmetric source-drain electrode low operating voltage oxide transistor, J. Mater. Chem. C, 2023 11 (43), 15276-15287
18. Swati Suman, Sandeep Dahiya, Ravi P. Jaiswal, Parasuraman Swaminathan and Bhola N. Pal Fabrication of Red Sensitive Heterojunction Photodetector by using a Narrowband Organic Dye; J. Phys. Chem. C 2023 127 (38), 19182-19188

19. Ade Kurniawan, Chih-Chien Lee, Johan Iskandar, Chih-Yi Liu, Bhola Pal, Hsin-Ming Cheng, Shun-Wei Liu, Sajal Biring; Optimization of Triazine-Based Acceptor (CN-T2T) as Electron Transport Layers for Highly Efficient Near-Infrared Perovskite Light-Emitting Diodes; J. Mater. Chem. C, 2023 11 (34), 11564-11570

20. Sobhan Hazra, Satya Veer Singh, Sandeep Dahiya, Pijush Kanti Aich, Bhola Nath Pal, Solution Processed Ag/TiO2 Nanostructure-Based Schottky Junction Thin Films for Narrowband Hot-Electron Photodetectors, ACS Appl. Nano Mater. 2023 6 (16), 15119-15127

21. Shipra Gupta, Bhola Nath Pal, Rajiv Prakash, Enhancement of ammonia gas sensitivity and selectivity by depleted layer of PBTTT-C14/MoS_2-QDs heterojunction based thin film transistor, Sens. Actuators B Chem. 2023, 393, 134251

22. Nila Pal, Rajarshi Chakraborty,.... and Bhola Nath Pal, 2023, Solution Processed Li-Al_2O_3/$LiNbO_3$/Li-Al_2O_3 Stacked Gate Dielectric for a Non-volatile Ferroelectric Thin Film Transistor, J. Alloys Compd. 2023, 960, 170691

23. Rajarshi Chakraborty, Nila Pal,.... and Bhola Nath Pal, Fabrication of non-volatile memory transistor by charge compensation of interfacial ionic polarization of a ferroelectric gate dielectric, Appl. Mater. Today, 2023, 33, 101862

24. Utkarsh Pandey, Nila Pal, Vishwas Acharya, Pijush Kanti Aich, Akhilesh Kumar Yadav, Bhola Nath Pal, Dual gated Low Operating Voltage Metal Oxide Thin film transistor for highly sensitive and fast-response pressure sensing application, IEEE Sens. J., 2023 (DOI: 10.1109/JSEN.2023.3265992)

25. K. K. Mishra, P. K. Maurya and A. K. Mishra*, Dual electrolyte based aluminium air battery using NiCo2O4-MoSe2 hybrid nanocomposite, International Journal of Hydrogen Energy 69 (2024) 252.

26. B. P. Majee, P. Jangra, and A.K. Mishra*, CVD grown bi-layer MoS2 as SERS substrate: Nanomolar detection of R6G and temperature response, Materials Letters: X 22 (2024) 100229.

27. P. K. Maurya and A.K. Mishra*, Ni-Fe/C0-Fe oxides-MoSe2 hybrid nanostructures as novel electrocatalysts for high performance rechargeable zinc air battery, Journal of Physical Chemistry Letters 15 (2024) 1246.

28. A. Singh, R.K. Gupta and A.K. Mishra*, Thermal transport and optical anisotropy in CVD grown large area few-layer MoS_2 over FTO substrate, Applied Physics Letters 124 (2024) 031106.

29. P. K. Maurya and A.K. Mishra*, In Situ Grown Vertically Oriented Wrinkled $MoSe_2$ Nanosheets over Different Substrates as Bifunctional Electrocatalysts for Water Splitting, ACS Applied Energy Materials 7(2024) 487.

30. S Mishra, RK Gupta, AK Mishra*, Efficient hydrogen evolution and high energy density solid state supercapacitors using rGO/MoS2 heterostructure electrodes, Materials Science and Engineering: B, 300 (2024) 117129.

31. A. Singh and A.K. Mishra*, Large area CVD grown vertically and horizontally oriented MoS2 nanostructures as SERS biosensors for single molecule detection, Nanoscale, 13 (2023) 16480.

32. J. D. Gupta, P. Jangra, B. P. Majee and A.K. Mishra*, Morphological dependent exciton dynamics and thermal transport in $MoSe_2$ films, Nanoscale Advances, 5 (2023) 2756 .

33. A. Singh, B.P. Majee, J.D. Gupta and A.K. Mishra*, Layer dependence of thermally induced quantum confinement and higher order phonons scattering for thermal transport in CVD grown triangular MoS2, Journal of Physical Chemistry C, 127 (2023) 3787.

34. P.K. Maurya, S. Mishra and A.K. Mishra*, MoSe2 and NiCo2O4/NiO based hybrid nanostructure as novel electrocatalyst for high performance rechargeable zinc-air battery, Electrochimica Acta, 439 (2023) 141689.

35. H. Soni, A. Singh and A. K. Mishra*, Biaxial strain induced tunable electronic properties: study of ZnO nanoparticles via first principles density functional theory, Materials Science & Engineering B, 288 (2023) 116186.

36. R. Sharma, P. K. Ojha, S. Choudhary, S. K. Mishra, Magnetic ordering in sol-gel-based Tm3Fe5O12 thin films, Materials Letters, 352, 35154 (2023).

37. P. K. Ojha, R. Sharma, S. K. Mishra, S. Ram,Charge ordering at a dielectric gate in itinerant metallic states with low-field memristor properties in VO2 thin films,Surfaces and Interfaces, 42, 103445 (2023).

38. P. K. Ojha, R. Sharma, V. G. Sathe, S. Ram, S. K. Mishra, Dynamics of phonons, charge-regulated itinerant VO2 states, and their impacts on the memristor properties of thin VO2 films, Surfaces and Interfaces46, 104029 (2024).

39. R Hissariya, R Sharma, S. K. Mishra, Antisites disorder mediated magnetization relaxation and polydispersity in La2NiMnO6 crystallites, Journal of Physics and Chemistry of Solids, 181, 111549 (2023).

40. R. Hissariya, V. G. Sathe, S. K. Mishra, Antisite disorder mediated exchange bias effect and spin-glass state in La2-xSmxNiMnO6, Journal of Magnetism and Magnetic Materials, 578, 170769 (20023).

41. R. Sharma, P. K. Ojha, S. K. Mishra, Magnetic energy dissipative factors of spin-coated Y3Fe5O12 thin films, Thin Solid Films, 764, 139625 (2023).

42. Md Mathenulla Shariff, G. R. Arpitha, Naman Jain, Uday Shankar, Akarsh Verma, and N. D. Shivakumar. "A comparative study on the effect of reinforcing boron nitride/alumina in epoxy-based hybrid composite with Millettia pinnata leaf powder and glass sheets: Experimental fabrication, mechanical and micro-structural characterization." Hybrid Advances 4, 100095, 2023.

43. Rupam Gogoi, Uday Shankar, Shweta Rawat, Gaurav Manik, and Anasuya Bandyopadhyay. "Interfacial shear strength of surface functionalized and functionalized CNT coated carbon fiber: A single fiber fragmentation study." Journal of Thermoplastic Composite Materials 37, 3 1242-1267, 2023.

44. Progress on nature and sustainable materials for daytime radiative cooling" Jay Prakash Bijarniya, Swikriti Tripathi, Sudepta Bauri, Jahar Sarkar, Pralay Maiti ACS Applied Optical Materials (2024)

45. Shelf-life prediction of silicone-hollow glass microsphere composite as liner material and its accelerated aging Anupama Devi, Kheyanath Mitra, Shivam Tiwari, Tanu Srivastava, C. Ramakrishna, S. Krishna Mohan, Pralay Maiti Journal of Applied Polymer Science e55823 (1-13) (2024)

46. Evaluation of anticancer activity of Gmelina asiaticaleaves,in-vitroandin-silicostudies Rasha Ksirri, Kancharla Bhanukiran, Swapan Maity, Pralay Maiti, Siva Hemalatha, Journal of Biomolecular Structure and Dynamics (2024)

47. Allylthiourea-Mediated Self-Healing Hydrogels Based on Poly(Vinyl Alcohol): Enhanced Cell Viability / Biocompatibility and Sustained Drug Release ParamjeetYadav, ShereAfgan, KrishtanPal, Sheetal Jaiswal, Pooja Goswami, Ravi Prakash, Rajesh Kumar, BiplobKoch, Pralay Maiti, Journal of Polymer Science1, (1-19) (2024)

48. Experimental performance characteristics of the daytime radiative cooler at various surface orientations Jay Prakash Bijarniya, Jahar Sarkar, Pralay Maiti Solar Energy Materials and Solar Cells272, 112906 (1-9) (2024)

49. Fluorescent rotor: labeling lysosomes, mitochondria and lipid droplets through polarity and viscosity assessment Athul K. K, Swapan Maity, Niharika Pareek, Premjit Kar, Pralay Maiti, Sankarprasad Bhuniya Journal of Photochemistry & Photobiology A: Chemistry454, 115727 (1-9)(2024)

50. Paper-based sustainable biosensors, Anuj Kumar and Pralay Maiti, Materials Advances5, 3563–3586 (2024)

51. Ordered Mesoporous Silica Delivering siRNA as Cancer Nanotherapeutics: A Comprehensive Review Anuradha Gupta, Avishek Mallick Choudhury, Jairam Meena, Sudepta Bauri, Pralay Maiti ACS Biomaterials Science & Engineering 10 (5), 2636–2658 (2024)

52. Core-shell Structure of Photopolymer Grafted Polyurethane as Controlled Drug Delivery Vehicle for Biomedical Application Amita Santra, Ravi Prakash, Swapan Maity, Sagar Nilawar, Kaushik Chatterjee, Pralay Maiti ACS Applied Materials & Interfaces 16 (14), 17193–17207 (2024)

53. Plasmonic Au_3Cu Ordered Nanocrystals Induced Phase Transformation in 2D-MoS_2 for Efficient Hydrogen Evolution Ummiya Qamar, Sayak Roy, Sooraj Kumar, Bratindranath Mukherjee, Assa Aravindh Sasikal Devi, Ankur Goswami, Pralay Maiti, Santanu Das Advanced Functional Materials 2311943 (1-13) (2024)

54. Rheological, Textural and Sensorial Properties of Quarg-Type Cheese Incorporated with Encapsulated Terminalia Arjuna V.P. Aparnna, Anil Kumar Chauhan, Shubhendra Singh, Ravi Prakash, Pralay Maiti Food Chemistry Advances 4, 100549 (2024)

55. Pyrene-tagged poly(N-vinyl pyrrolidone) as efficient nano-carrier for anticancer drug delivery, Kheyanath Mitra, Swapan Maity, Archismita Hajra, Shikha Singh, Sourov Mondal, Jaydeep Singh, Pralay Maiti, Biswajit Ray, International Journal of Polymeric Materials and Polymeric Biomaterials 73 (7), 533-543 (2024)

56. A naphthalimide appended rhodamine based biocompatible fluorescent probe: Chemosensor for selective detection of Hg^{2+} ion, live cell imaging and DFT study Tanushree Mishra, Subhajit Guria, Juheli Sadhukhan, Debojyoti Das, Manas Kumar Das, Susanta Sekhar Adhikari, Swapan Maity, Pralay Maiti, Journal of Photochemistry and Photobiology A: Chemistry 446, 115168 (1-13) (2024)

57. Poly(N-acryloylglycine-acrylamide) Hydrogel Mimics the Cellular Microenvironment and Promotes Neurite Growth with Protection from Oxidative Stress Kirti Wasnik, Prem Shankar Gupta, Sudip Mukherjee, Alagu Oviya, Ravi Prakash, Divya Pareek, Sukanya Patra, Somedutta Maity, Vipin Rai, Monika Singh, Gurmeet Singh, Desh Deepak Yadav, Santanu Das, Pralay Maiti, Pradip Paik ACS Applied Bio Materials 6(12), 5644–5661 (2023)

58. Nanomaterials as Theranostic Agent for Cancer Therapy Sudepta Bauri, Swikriti Tripathi, Avishek Choudhury, Subham Mandal, Hans Raj, Pralay Maiti ACS Applied Nano Materials 6 (23), 21462–21495 (2023)

59. Quarg Cheese: The Impact of Fat Content Change on its Microstructure, Characterization, Rheology, and Textural Properties Shubhendra Singh, Anil Kumar Chauhan, VP Aparnna, Ravi Prakash, Pralay Maiti, Rajeev Ranjan Current Research in Nutrition and Food Science Journal 11(3), (2023)
60. Green Composites Using Naturally Occurring Fibers: A Comprehensive Review Hans Raj, Swikriti Tripathi, Sudeepta Bauri, Avishek Choudhary, Subham Mandal, Pralay Maiti Sustainable Polymer & Energy 1(2), 10010 (2023)
61. Review on Functional Electrolyte, Redox Polymers and Solar Conversions in 3G Emerging Photovoltaic Technologies: Progress and Outlook Sunil Kumar, Pralay Maiti Energy & Fuels 37 (19), 14473–14511 (2023)
62. Piezoelectric nanogenerators for self-powered wearable and implantable bioelectronic devices Kuntal Kumar Das, Bikramjit Basu, Pralay Maiti and Ashutosh Dubey Acta Biomaterialia 171, 85–113 (2023)
63. 3D printing of tough nature inspired hierarchical architecture using chicken bone and eggshell biowaste for biomedical applications Manojit Das, Arijit Jana, Astha Dixit, Rajat Mishra, Swapan Maity, R Karthik, Shaik Salam Basha, Pralay Maiti, Sushanta Kumar Panda, Amit Arora, Peter Samora Owuor, Chandra Shekhar Tiwary Ceramics International 49(17), 29274-29287 (2023)
64. Gas Barrier Properties of Polyurethane nanocomposites Shruti Pandey, Pralay Maiti, Karun K Jana, Dipak Rana, Vinod K. Aswal Journal of Applied Polymer Science 140(32), e54256 (2023)
65. Development and degradation analysis of novel three-layered sustainable composite coating for daytime radiative cooling Jay Prakash Bijarniya, Jahar Sarkar, Shivam Tiwari, Pralay Maiti Solar Energy Materials and Solar Cells 257, 112386 (1-9) (2023)
66. Development and experimental performance characteristics of composite coated daytime radiative water cooler Jay Prakash Bijarniya, Jahar Sarkar, Shivam Tiwari, Pralay Maiti Science and Technology for the Built Environment 29 (6), 606-617 (2023)
67. Mesoporous Fe3O4 nanoparticle: A prospective nano heat generator for thermo-therapeutic cancer treatment modality S.K. Shaw, A. Sharma, J. Kailashiya, Santosh K. Gupta, Sher Singh Meena, D. Dash, P. Maiti, N.K. Prasad Journal of Magnetism and Magnetic Materials 578,170817 (1-14) (2023)
68. Lignin-containing nanocelluloses (LNCs) as renewable and sustainable alternatives: Prospects and challenges Anuj Kumar, Ankur Sood, Pralay Maiti, Sung Soo Han Current Opinion in Green and Sustainable Chemistry 41:100830 (1-7) (2023)
69. Anuj Kumar* and Pralay Maiti, "Paper-based sustainable biosensors", Materials Advances 2024, 5, 3563-3586.
70. Naveen Kumar, Sauraj Singh, Piyush Sharma, B. Kumar, and Anuj Kumar*, "Recent advances in stimulus-responsive nanohydrogels for biomedical applications", Gels 2024, 10, 61. (*Corresponding author) (IF: 4.6)
71. Ankur Sood, Ritu Singhmar, Yumi Son, Soon Mo Choi, Anuj Kumar*, Sung Soo Han, "Tuning the efficacy of decellularized apple by coating with alginate/gelatin to behave as a bioscaffold for cultured meat production", Food Research International 2024, 177, 113907.
72. Ankur Sood, Ritu Singhmar, Sumanta Sahoo, Dahae Lee, Chul Min Kim, Anuj Kumar*, and S.S Han "Physicochemical, electrochemical, and biological characterization of field assisted gold nanocluster-coated barium titanate nanoparticles for biomedical applications", Journal of Materials Chemsitry B 2024, 12, 525-539.
73. Shivraj Sahu, Sneh Gautam, Atul Singh, Pushpa Loahni, Chhavi Sharma, Puneet Pathak, Anuj Kumar, H. Singh, "Synthesis and Characterization of Chitosan-Zinc-Salicylic Acid Nanoparticles: A Plant Biostimulant", International Journal of Biological Macromolecules 253, 127602, 2023.
74. Ankur Sood, Sabya Sachi Das, Atul Dev, Dimpy Bhardwaj, Anuj Kumar*, Garima Agrawal, and Sung Soo Han "A systematic review on fluorescent nanoparticles conjugated hydrogels for theranostic applications", European Polymer Journal 196, 112323, 2023.
75. Anuj Kumar*, Amkur Sood, Garima Agrawal, Sourbh Thakur, Vijay Kumar Thakur, Masaru Tanaka, Yogendra Kumar Mishra, Graham Christie, Ebrahim Mostafavi, Rabah Boukherroub, Dietmar W. Hutmacher, and Sung Soo Han "Polysaccharides, proteins, and synthetic polymers based multimodal hydrogels for various biomedical applications: A review", International Journal of Biological Macromolecules 247, 125606, 2023. (IF: 8.2) (*Corresponding author)
76. AK Yadav, H Tripathi, AK Dubey, C Rath (2024)In-vitro assessment of biocompatibility and antimicrobial properties of 85S bio-glass and SrTiO3 composites. Materials Chemistry and Physics 320, 129442

77. AK Yadav, H Tripathi, P Singh, AK Dubey, C Rath (2024)Exploring the Physicomechanical Properties and Biocompatibility Traits of CuO Substituted 45S5 Bioactive Glass through In-Vitro Analysis . SURFIN 104524
78. T Dehury, S Kumar, ASK Sinha, M Gupta, C Rath (2024)Thickness dependent phase transformation and resistive switching performance of HfO2 thin films. Materials Chemistry and Physics, 129035
79. AK Yadav, H Tripathi, S Rajput, P Singh, AK Dubey, K Kumar, R Chawla, C Rath (2024) Drug kinetics and antimicrobial properties of quaternary bioactive glasses 81S (81SiO2-(16-x) CaO-2P2O5-1Na2O-xMgO); an in-vitro study. Biomaterials Advances 157, 213729
80. AN Singh, AK Yadav, A Gupta, C Rath, P Singh (2023) Fabrication and electrochemical performance of pseudocapacitive ABO2-type AgFeO2@C||K0.4MnO2. xH2O battery-type supercapacitive asymmetric cell for large-scale energy storage applications. Journal of Energy Storage 74, 109276
81. AK Yadav, H Tripathi, A Bastia, P Singh, AK Dubey, NS Anuraag, NK Prasad, C Rath (2023) Synergistic effect of CoFe2O4–85S nano bio-glass composites for hyperthermia and controlled drug delivery Materialia 32, 101884
82. T Dehury, C Rath, S Panigrahi (2023)Ammonia Sensing Behavior of Green Synthesized ZnO Nanoparticles using Optical Density as Sensing Parameter
83. T Dehury, C Rath, S Panigrahi (2023)Green Synthesis and Sensing Assessment of HfO_2 Nanoparticles for Detecting Liquid NH_3 Using Electrochemical Impedance Spectroscopy
84. S Rajput, M Yadav, T Dehury, AK Yadav, PK Sahoo, C Rath (2023)Coexistence of tetragonal and cubic phase induced complex magnetic behaviour in CoMn2O4 nanoparticles. Nanotechnology 34 (42), 425702
85. Band-gap tuning in Mn-doped Er2Ti2O7: Insight from the experimental and theoretical approach R Upadhyay, M Shukla, RK Pandey, C Upadhyay - Journal of Alloys and Compounds, 2024
86. Development of cost-effective proton exchange membrane using agro waste-based biochar for application in microbial fuel cell (MFC) A Bar, OJ Kupkar, C Upadhyay, RS Singh - Biomass Conversion and Biorefinery, 2024
87. Nanoparticle-Mediated Defense Priming: A Review of Strategies for Enhancing Plant Resilience Against Biotic and Abiotic Stresses N Yadav, S Bora, B Devi, C Upadhyay, P Singh - Plant Physiology and Biochemistry, 2024
88. Prevention of White Spot Lesion during Orthodontic Treatment: A Novel Bioactive Glass Nanobioadhesive A Parihar, S Swaraj, C Upadhyay, M Nethivalavan... - Journal of Indian Association of Public Health Dentistry, 2024
89. Mechanochemical synthesis of MnBi/Fe3C@ C exchange coupled hard magnetic nanocomposites NS Anuraag, SK Shaw, C Upadhyay, NK Prasad - Journal of Solid State Chemistry, 2024
90. Integration of Nanobioadhesion in Orthodontic Bonding: An In Vitro Study M Nethivalavan, AV Parihar, C Upadhyay, VK Sharma... - Journal of Indian Orthodontic Society, 2023
91. Effect of Mn doping on the electronic and optical properties of Dy2Ti2O7: a combined spectroscopic and theoretical study R Upadhyay, M Shukla, RK Pandey, C Upadhyay - Journal of Physics: Condensed Matter, 2023
92. Evaluation of surface-modified orthodontic wires by different concentration and dipping duration of titanium oxide (TiO2) nanoparticles TP Chaturvedi, P Indumathi, VK Sharma, A Agrawal... - Journal of Orthodontic Science, 2023
93. Pallavi Singh, D Atchuta Ramacharyulu, Nikhil Kumar,Kuldeep K. Saxena, Sayed M. Eldin.Change in the Structure and Mechanical Properties of Al-Mg-Si Alloys Caused by the Addition of Other Elements: A Comprehensive Review. Journal of Materials Research and Technology27:1764-1796.doi.org/10.1016/j.jmrt.2023.09.220. (2023)
94. AD Nakhate, N Kumar, P Sharma, PC Yadav. Mechanical properties of cross rolled CoCrFeMnNi high entropy alloyJournal of Alloys and Compounds. 96 :172307.doi.org/10.1016/j.jallcom.2023.1
95. Ravi Kumar Singh, Sunkulp Goel, Nikhil Kumar, B. D. Y. Sunil, Soni Kumari, Sayed M. Eldin, and Kuldeep K. Saxena. "Influence of Wire Rolling on Zircalloy-2: Tensile Behaviour and Microstructural Investigation." Journal of Materials Research and Technology 25:2001–13. doi: 10.1016/j.jmrt.2023.06.052. (2023)
96. O. O.Ajide, O. C. Adedokun, N. Idusuyi, Nikhil Kumar, O. A. Aogo, O. J. Ajao, A. S. Adebayo, K. K. Sexena, Ankita Joshi, and Chander Prakash. "Examining the Mechanical Response and Microstructural Evolution of Heat-Treated Al-5Si-3Cu Alloy for Automotive Applications." Advances in Materials and Processing Technologies. doi: 10.1080/2374068X.2023.2184602. (2023)
97. Soumy Prateek, Rajnish Garg, Kuldeep Kumar Saxena, V. K. Srivastav, Hitesh Vasudev, and Nikhil Kumar. "Data-Driven Materials Science: Application of ML for Predicting Band Gap." Advances in Materials and Processing Technologies. doi: 10.1080/2374068X.2023.2171666. (2023)

98. Ravi Kumar Singh, S. S. S. Guraja, O. O. Ajide, G. M. Owolabi, and Nikhil Kumar. "Investigation of Initial Metallurgical Factors on the Dynamic Impact Response and Adiabatic Shear Bands Formation of the 6061 Al Alloy." Materials Science and Engineering: A 865. doi: 10.1016/j.msea.2023.144636. (2023)

99. Effect of thermomechanical processing on mechanical properties and microstructural evolution of Al-Mg-Zn alloy,Nidhi Chaubey , Nikhil Kumar *

100. Nikunj Goyal, Ravi Panwar, Synergizing meander line and heterogeneous composite for miniaturized hybrid microwave absorber, Microwave and Optical Technology Letters, 66, 1-9, 2024.

101. Deepanshu Sahu, Ekta Panwar, Ravi Panwar, Graphene and copper constituted hybrid metasurface enhanced terahertz sensing for biomedical applications, IEEE Sensors Letters, 7, 1-4, 2023.

102. Nikunj Goyal, Ravi Panwar, Dielectric characterization of heterogeneous composite fused lightweight perforated microwave absorber, IEEE Transactions on Dielectrics and Electrical Insulation, 31, 817-823, 2023.

103. Ravi Yadav, Ravi Panwar, AI-based estimator for computational discovery and synthesis of customized microwave absorbing materials, Journal of Applied Physics (AIP), 134, 2023.

104. Varun Chaudhary, Ravi Panwar, Machine learning derived TiO_2 embedded frequency selective surface for EMI shielding applications, IEEE Transactions on Dielectrics and Electrical Insulation, 30, 2205-2212, 2023.

105. Nikunj Goyal, Ravi Panwar, Minkowski inspired circular fractal metamaterial microwave absorber for multiband applications, Applied Physics A, 129, 293, 2023.

106. Satyendra Kumar Satyarthi, Vishwa Pratap Singh, Chandra Bhal Singh, Akhilesh Kumar Singh,Enhanced dielectrics, ferroelectric and optical properties of lithium niobate for high temperature applications using potassium oxide (K2O) additive,Ceramics International ,50,20376-20390,2024.

107. Chandra Bhal Singh, Akhilesh Kumar Singh, Narendra Kumar Verma,Development of low band gap layered Bi6FeNiTi3O18 aurivillius phase ceramics for ferroelectric memory and cathode for lithium-oxygen batteries applications,Journal of Materials Science: Materials in Electronics,433,35,2024.

108. Sadhana Yadav, Dinesh Kumar, Akhilesh Kumar Singh,Effect of synthesis temperature on crystal structure, optical and magnetic properties of SmCuO3-κ ceramic phosphor,Materials Today Communications,38,107767(2024).

109. Krishna Prajapati, Monika Singh, Akhilesh Kumar Singh,Piezoelectric, ferroelectric and dielectric characterizations of a new ceramic solid solution (1-x)Ba(Cu1/3Nb2/3)O3-xPbTiO3 with morphotropic phase boundary,Solid State Sciences,146,107344,2023.

110. Improved ferroelectric and piezoelectric properties and structural correlations in a new ceramic 0.38Ba(Cu1/3Nb2/3) O3–0.62PbTiO3 by MnO2 additive Krishna Prajapati and Akhilesh Kumar Singh Journal of Materials Research, 1-18 (2023).

111. Impact of Sr2+ doping on the structural, dielectric, ferroelectric and optical properties of YFeO3 perovskite phosphor D Kumar, S Yadav, CB Singh, RS Yadav, SB Rai and Akhilesh Kumar Singh Journal of Alloys and Compounds, 945, 169286 (2023).

112. Crystal structure, microstructure, and ultra-high energy storage properties of lead-free (x)Bi(Mg0.5Ti0.5)O3-(1-x) [0.50Ba(Zr0.2Ti0.8)O3-0.50(Ba0.7Ca0.3)TiO3] ternary ceramics Vijayeta Pal, Dinesh Kumar and Akhilesh Kumar Singh Materials Science and Engineering: B, 288, 116194 (2023).

113. Effect of Cr3+ doping on structural and optical properties of Eu3+ doped LaVO4 phosphor, E Rai, RS Yadav, D Kumar, AK Singh, VJ Fulari, SB Rai and Akhilesh Kumar Singh RSC Advances 13 (7), 4182-4194 (2023).

114. Structural and magnetic properties of Ti-substituted La0. 6Ba0. 4Mn1-xTixO3-κ (0.02≤ x≤ 0.08) perovskite manganites: Appearance of the Griffiths phase D Kumar and Akhilesh Kumar Singh Journal of Physics and Chemistry of Solids,176, 111253 (2023).

115. Recent progress on optical properties of double perovskite phosphors S Yadav, D Kumar, RS Yadav, AK Singh Progress in Solid State Chemistry, 69, 100391 (2023).

116. Srishti Paliwal, Prosun Mondal, Akhilesh Kumar Singh,Quenching-driven advancements in functional properties of high-temperature lead-free Sc, Ga modified 0.67BiFeO3-0.33BaTiO3 relaxor ceramics,Materials Chemistry and Physics,312,128613,2024.

117. Ankit Dwivedi, Vishwa Pratap Singh, Akansha Dwivedi, Akhilesh Kumar Singh,Synthesis and electrical characterization of cold sintered Ba0.7Sr0.3TiO3–PVDF ceramic nanocomposites for capacitive energy storage applications,journal of Materials Science: Materials in Electronics,34,1939,2023.

118. Dinesh Kumar, Chandra Bhal Singh, Akhilesh Kumar Singh,Structural and magnetic properties of nanoparticles of La3Ni2NbO9 double perovskite,Journal of Magnetism and Magnetic Materials ,586,171168,2023.

119. Jyoti Patel, Kshitij RB Singh, Akhilesh Kumar Singh, Jay Singh, Ajaya K Singh,Multifunctional Cu:ZnS quantum dots for degradation of Amoxicillin and Dye Sulphon Fast Black-F and efficient determination of urea for assessing environmental aspects,Environmental Research ,235,116674,2023.

120. Divya Pratap Singh, Sanjukta Mukherjee, Sweta Bhagat, Nandita Singh, Monika Singh, Akhilesh Kumar Singh, Ashish Kumar Singh, Uday Pratap Azad, Suryabhan Singh, Ved Prakash Singh,Lanthanum-based double perovskite oxides as cobalt-free catalyst for bifunctional application in electrocatalytic oxygen reactions,International Journal of Hydrogen Energy,51,587-600,2023.

121. Nila Pal, Rajarshi Chakraborty, Anand Sharma, Utkarsh Pandey, Vishwas Acharya, Krishna Prajapati, Akanksha Gupta, Swati Suman, Parasuraman Swaminathan, Akhilesh Kumar Singh, Pradip Kumar Roy, Bhola Nath Pal,Solution processed Li-Al2O3/LiNbO3/Li-Al2O3 stacked gate dielectric for a non-volatile ferroelectric thin film transistor,Journal of Alloys and Compounds,960,170691,2023.

122. Krishna Prajapati, Akhilesh Kumar Singh,Unusual crystal structure evolution, multiple phase boundaries and phase coexistence in (1 – x)Ba(Cu1/3Nb2/3)O3-(x)PbTiO3 perovskite solid solution,Dalton Transactions,52,12918,2023.

Proceedings of International Conferences

1. R. Sharma, S.K. Mishra, The micromagnetic study of stabilizing parameters for the interfacial skyrmions, Materials Today: Proceedings 80, 1205-1208 (2023).

2. Band-gap tuning in Mn-doped Er2Ti2O7: insight from the experimental and theoretical approach, R. Upadhyay, M. Shukla, R. K. Pandey, Chandan Upadhyay, Journal of Alloys and Compounds (in press). (2024)

3. r-GO coated magnetic high entropy alloy/oxide nanocomposites as highly efficient Fenton and photo-Fenton catalysts D Kumar, NS Anuraag, C Mohapatra, U Kumar, Debashish Sarkar, M Vasundhara, I Sinha, Chandan Upadhyay, NK Prasad Ceramics International, 50, 12146 (2024)

4. Mechanochemical synthesis of MnBi/Fe3C@C exchange coupled hard magnetic nanocomposites, NS Anuraag, SK Shaw, Chandan Upadhyay, NK Prasad, Journal of Solid State Chemistry 329, 124403 (2024)

5. Emergence of field-induced memory effect in spin ices, P K Yadav, R Upadhyay, R Kumar, P Nukala, Chandan Upadhyay Journal of Physics: Condensed Matter 35, 495601,(2023)

6. Effect of Mn doping on the electronic and optical properties of Dy2Ti2O7: a combined spectroscopic and theoretical study, R. Upadhyay, M. Shukla, R. K Pandey, Chandan Upadhyay Journal of Physics: Condensed Matter 35, 335502 (2023)

7. Antiferromagnetic ordering to cluster-glass-like transition behavior in DyVO4 R Upadhyay, M Shukla, Chandan Upadhyay Journal of Physics and Chemistry of Solids 173, 111108 (2023)

8. AK Yadav and C Rath (2024) Exploring the Impact of Silica and Modifier Ions on Bioactivity and Antimicrobial Characteristics of Quaternary 81S and Ternary 85S Bio-Glass accepted in Bulletin of Materials Science.

9. S Rajput and C Rath (2024) Investigation of Local Structure by XAFS and Magnetic Properties of CoMn2O4 Nanoparticles accepted in Bulletin of Materials Science.

10. Unveiling the Structural and Optical Properties of Samarium Titanates Pyrochlore, Sm2Ti2O7 R Sain, C Upadhyay - IOP Conference Series: Materials Science and ..., 2024

11. Anjali Agrawal, Anil Kumar, Ravi Panwar, Design and investigation of frequency selective surface loaded thermoplastic polyurethane polymer-based 5G absorber, IEEE International Conference on Electrical, Electronics, Communication, and Computers (IEEE- ELEXCOM), IIT Roorkee, August 26-27, 2023, available online at IEEE Xplore.

12. Ranjeet Pratap Singh Bhadoriya, Varun Bajaj, Ravi Panwar, Design of differential evolution optimization fused transmission line modelling derived multilayer mmWave absorber, IEEE International Conference on Electrical, Electronics, Communication, and Computers (IEEE- ELEXCOM), IIT Roorkee, August 26-27, 2023, available online at IEEE Xplore.

13. Srishti Paliwal, Prosun Mondal, Vishwa Pratap Singh, Akhilesh Kumar Singh,Site engineering: A Tool to enhance functional properties in high-temperature lead-free relaxors prepared via air quenching, IEEE International Symposium on Applications of Ferroelectrics (ISAF),2023.
14. Deep Mala, Chandra Bhal Singh, Akhilesh Kumar Singh,Band gap Engineering of BaTi1−x(Ni1/3Nb2/3)xO3 Ceramics for Ferro-Photovoltaic Applications, IEEE International Symposium on Applications of Ferroelectrics (ISAF),2023.

Proceedings of National Conferences

1. Krishna Prajapati, Satnam Singh Khanuja, Akhilesh Kumar Singh,Challenging Fabrication and Characterization of a New Ferroelectric Solid-Solution Composition 0.30Bi(Cu1/2Ti1/2)O3 – 0.70PbTiO3,Ferroelectrics,616,42-52,2023.
2. Srishti Paliwal, Krishna Prajapati, Akhilesh Kumar Singh,Enhanced high-temperature dielectric and ferroelectric properties of Sb2O5 modified Bi4Ti3O12,AIP Conference Proceedings,2995,020110,2024.
3. Narendra Kumar Verma, Chandra Bhal Singh, Dinesh Kumar, Uday Singh Patel, Akhilesh Kumar Singh,Structural and dielectric properties of Y3+ doped SrTiO3: a novel anode materials for solid oxide fuel cell,Ferroelectrics,617,93-100,2023.

Other activities

International collaboration/achievements by the School:

- NIMS, (Japan)

Foreign Faculty Visits in the School

- Prof. Yogendra Kumar Mishra, Southern University of Denmark (SDU), Denmark,

Talk on “Tetrapods based Smart Materials for Advanced Technologies”, 6th December 2023 (Wednesday).

21. Department of Chemistry

Full Name of Department: Department of Chemistry

Year of Establishment: 1985

Head of the Department: Prof. Yogesh Chandra Sharma (w.e.f. 09.08.2021)

Brief Introduction of the Department

The Department of Chemistry, IIT-BHU, previously known as Department of Applied Chemistry (Institute of Technology), was established in the year of 1985. Earlier this Department was functioning as a Section in the School of Basic Sciences in Banaras Hindu University-Varanasi. This Department currently constitutes 15 faculty members including 04 Professors, 03 Associate Professors and 08 Assistant Professors. The prime responsibility of the department is to organize the teaching of chemistry courses in various B. Tech and M**.** Tech integrated Dual Degree programmes. In addition, this department is also providing an excellent research platform to the students in various thrust areas of chemistry.

The Department of Chemistry offers a five-year Dual Degree M. Tech program in Industrial Chemistry and Ph. D. programs in Organic, Inorganic, Physical and Analytical chemistry. More than 125 Ph. D's have been awarded from this department and about 51 students are currently pursuing their research. Research programs in the department have been supported by DST, CSIR, BRNS, UGC and AICTE etc. The department has received 85 lakhs from DST-FIST for the establishment of research and teaching facilities. The Central Facilities Instrumentation Lab. of the department are presently equipped with sophisticated instruments including Atomic Absorption Spectrometry, AFM, LC MS & GC MS, UV-Vis spectrophotometers, FTIR, and powder-XRD, AFM, Table Top NMR and DLS (Particle size analyser), Vertical Autoclave, Thermo Gravimetric Analyzer System (TGA 4000), Bomb Calorimeter/Digital Bomb Calorimeter (SHI-218) etc.

Major areas of Research

Green chemistry, Electrocatalysis; Nanoparticles for adsorption and catalytic applications; Composite materials Organic synthesis, Carbohydrate chemistry; Photocatalytic digradatation Corrosion Inhibitors, Polymer Nano Composites; Supramolecular Chemistry; Ant wear/Extreme Pressure Lubricant Additives, Sensors, Energy materials, Nanopore biophysics, Single-Molecules.

Area of the Department(in square meters): 503 square meter (Total Plinth Area)

Infrastructure

S. No.	Particulars	Number
1	No. of Classrooms	02
2	No. of Lecture Halls	01
3	No. of Laboratory	03
4	No. of Computers available for students in the Department	10

Students on Roll

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & Above
1.	Dual Degree	13	20	19	17	12
2.	M.Sc.	24	24	NA	NA	NA
3.	Ph. D (Under Institute Fellowship)	T.A. Fellowships: 32				
4.	Ph. D (Under Project Fellowship)	PMRF: 06, DST-Inspire: 04, CSIR: 07, UGC: 18, Total=35				

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

S. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Rajesh Kushwaha	21051001	Conference (6th Symposium on Advanced Biological Inorganic Chemistry (SABIC-2024) 2024, International)	07/01/2024-11/01/2024, IACS, Kolkata	PMRF
			Conference (31st National Symposium & CRSI-ACS Symposium Series in Chemistry (CRSI NSC-31) 2023, National)	06/07/2023-08/07/2023, NIT Rourkela,Odisha	PMRF
2	Ashish Kumar Yadav	21051007	Conference (MODERN TRENDS IN INORGANIC CHEMISTRY-XX 2023, International)	14/12/2023-17/12/2023	PMRF
			Conference (31st National Symposium & CRSI-ACS Symposium Series in Chemistry (CRSI NSC-31) 2023, National)	06/07/2023-08/07/2023, NIT Rourkela,Odisha	PMRF
3	Arif Ali Mandal	22051001	Conference (MODERN TRENDS IN INORGANIC CHEMISTRY-XX 2023, International)	14/12/2023-17/12/2023	PMRF
			Conference (31st National Symposium & CRSI-ACS Symposium Series in Chemistry (CRSI NSC-31) 2023, National)	06/07/2023-08/07/2023, NIT Rourkela,Odisha	PMRF
4	Apurba Mandal	22051502	Conference (6th Symposium on Advanced Biological Inorganic Chemistry (SABIC-2024) 2024, International)	07/01/2024-11/01/2024, IACS, Kolkata	PMRF
			Conference (31st National Symposium & CRSI-ACS Symposium Series in Chemistry (CRSI NSC-31) 2023, National)	06/07/2023-08/07/2023, NIT Rourkela,Odisha	PMRF
5	Anshuman Tyagi	23051003	Conference (34th AGM of MRSI and 5th Indian Materials Conclave)	12-15 December, 2023 IIT (BHU) Varanasi	TA fellowship
			Conference (TransMat 2K24) (International)	01st to 04th February 2024, IIT (BHU), Varanasi	TA fellowship
6	Rishabh Mishra	23051011	NSRS- 2024 Organized by Material science and engineering (MSE), IIT Kanpur, Oral Talk on energy material category.	2024	NSRS- 2024 Organized by Material science and engineering (MSE), IIT Kanpur, Oral Talk on energy material category.
7	Kulveer Singh	19051001	SPSI-MACRO 2023, International Conference ICECEES, International Conference	December 10-13, 2023, IIT Guwahati February 15-17, 2024 IIT Roorkee	STGS
8	Kuldeep Kumar Maurya	19051010	SPSI-MACRO 2023, International Conference	December 10-13, 2023, IIT Guwahati	STGS
9	Anshu Shrivastava	19051014	17th DAE-BRNS Biennial Trombay Symposium on Radiation & Photochemistry(TSRP-2024)	07/01/2024-11/01/2024, BARC, Mumbai	STGS
			Indo-French conference "Fostering Catalysis for Societal Benefit (FCSB-2024)"	15/01/2024-17/01/2024, University of Hyderabad	STGS
10	Uttam Kumar	20051504	One week hands-on training workshop on "Uses of Advanced Instruments for Energy and Coating Application" (DST STUTI 2023)	15/07/2023-21/07/2023, IIT Patna	DST
			Three weeks visit during "Sakura Science Exchange Program"	06/11/2023/ 26/11/2023, Niigata University, Japan	Japan Science and Technology

S. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/ Workshop	Date & Venue	Financial Assistance From
11	Nivedita Singh	19051501	One week hands-on training workshop on "Training Program on contemporary techniques in chemical engineering characterization" (DST STUTI 2023)	24/07/2023-30/07/2023, IIT (ISM) Dhanbad	DST
			17th DAE-BRNS Biennial Trombay Symposium on Radiation & Photochemistry (TSRP-2024)	07/01/2024-11/01/2024, BARC, Mumbai	STGS
12	Maheswari Yadav	22051004	One week hands-on training workshop on "Training Program on contemporary techniques in chemical engineering characterization" (DST STUTI 2023)	24/07/2023-30/07/2023, IIT (ISM) Dhanbad	DST
13	Gulnaz Parveen	22051504	One week hands-on training workshop on "Training Program on contemporary techniques in chemical engineering characterization" (DST STUTI 2023)	24/07/2023-30/07/2023, IIT (ISM) Dhanbad	DST

Names of students/scholars who got prizes and awards outside the Institute

S. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1	Rishabh Mishra	23051011	Best Paper Award in WRET 2024, International Conference, (Oral presentation), Electrochemical water splitting of Ni/Co sustained hydrogel nanostructures in alkaline water.	2024	Best Paper Award in WRET 2024,International Conference,

Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
PROFESSORS			
1	Prof. P. C. Pandey, (Retired) M. Sc., Ph.D., Empl. ID. 12106	1986	Sensors Technology, bio electrochemistry, Organically modified silicate based Nanomaterial and opt electrochemistry
2	Prof. S. H. Hasan, M. Sc., Ph.D, Empl. ID. 13674	1989	Nanomaterials, Nuclear Materials, Water Remediation
3	Prof. V. Srivastava, (Retired) M. Sc., Ph.D., Empl. ID. 17040	1985	Synthetic Organic and Green Chemistry
4	Prof. Y. C. Sharma, M. Sc., Ph.D. and D.Sc, Empl. ID. 17326	1984-1991	Water Pollution Control; Adsorption and Diffusion; Catalysis; Renewable Energy; Biodiesel Production and Characterization
5	Prof. Dhanesh Tiwary, M. Sc., Ph.D., Empl. ID. 17328	1992	Bioremediation, composites for photoderadation, Development of surface functionalized iron oxide and mesoporous silica
6	Prof. K. D. Mandal, M.Sc., Ph.D., Empl. ID 17327	1989	Electro-Ceramics, Nano-materials, Materials Chemistry, Solid State Chemistry
ASSOCIATE PROFESSORS			
1	Dr. Sundaram Singh, M. Sc., Ph.D., Empl. ID. 18364	1994-1999	Synthetic Organic Chemistry, Microwave Assisted Organic Synthesis
2	Dr. Indrajit Sinha, M. Sc., Ph.D. and Postdoc, Empl. ID. 17329	2000	Broad Area: Physical Chemistry Research Area(s): Photocatalysis and adsorption: Experimental and computational approaches.
3	Dr. Jeyakumar Kandasamy, (On Lien) M. Sc., Ph.D. and Postdoc, Empl. ID. 19849	31 July 2008	Organic Synthesis, Carbohydrate Chemistry
4	Dr. Manisha Malviya, M. Sc., Ph.D, Empl. ID. 18365	2008	Synthesis of Metal oxide nanoparticles, renewable energy, photo electrochemistry, bio electrochemistry, alkaline fuel cell
ASSISTANT PROFESSORS			
1	Dr. Asha Gupta, M. Sc., Ph.D. and Postdoc, Empl. ID. 50169	03.12.2010	Electrochemistry, Physical Chemistry, Catalysis

S. No.	Name, Qualifications, Employee No.	Date of award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
2	Dr. Arindam Indra, M. Sc., Ph.D. and Postdoc, Empl. ID. 50172	2011	Inorganic Chemistry
3	Dr. V. Ramanathan, M. Sc., Ph.D., Empl. ID. 50208	May 2009	Laser Spectroscopy, Raman Spectroscopy and Imaging, Computational chemistry
4	Dr. Pandeeswar Makam, M. Sc., Ph.D. and Postdoc, Empl. ID. 50259	22 March. 2016	Biomaterials Chemistry, Bio-Nanozymes, Supramolecular Chemistry, Bionanotechnology
5	Dr. Samya Banerjee, M. Sc., Ph.D. and Postdoc, Empl. ID. 50262	20 June 2015	Bioinorganic Chemistry, Coordination Chemistry, Bio-organometallics
6	Dr. Rosy, M. Sc., Ph.D. and Postdoc, Empl. ID. 50266	14th Feb. 2017	Electrochemistry, Electroanalytical Chemistry, Volta metric Sensors, Electrochemical Energy Storage, Atomic Layer Deposition, Nano materials
7	Dr. Saravanakumar Elangovan, M. Sc., Ph. D and Postdoc, Empl. ID.50312	19th Jan. 2017	Organometallic Chemistry, Homogeneous Catalysis, Biomass Conversions, Green Chemistry
8	Dr. Prabhat Tripathi, M. Sc., Ph. D and Postdoc, Empl. ID.50319	01st Sept. 2018	Nanopore Biophysics, Single-Molecules
9	Dr B. Bhuvaneshwari B. MSc, MPhil, PhD Empl. ID.50324	10.12.2013	Electroorganic chemistry, Fuel Cell, Biomaterials, Polymer Nanocomposites
10	Dr.Rakesh Kumar Saunthwal, (Resigned) M. Sc., Ph. D and Postdoc, Empl. ID.50330	26th Feb. 2017	Synthetic Organic Chemistry: Asymmetric Synthesis, Catalysis and Reaction Methodology

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Mr. Param Hans Ram, B.Sc.(Hons) & LLB	Sr. Technical Superintendent	15.12.2008
2	Mr. Prakash Narayan Pandey, Post Graduate	Technical Superintendent	22.12.1990
3	Mr. Sundip Kumar, Intermediate (Science)	Technical Superintendent	26.02.2007
4	Mr. Rajesh Kumar, Intermediate (Science)	Jr.Technical Superintendent	06.08.2008
5	Mr. Jagdish Kumar, B.Sc.(Hons)	Jr.Technical Superintendent	06.08.2008
6	Mr. Pooran Singh Rana, Intermediate (Science)	Jr.Technical Superintendent	25.07.2014
7	Mr. Chhote Lal, High School	Jr.Technical Superintendent	25.07.2014
8	Mr. Jibrail Ali, M.Sc. (Maths-BHU), Ph.D. (Maths- IIT Guwahati) on going	Sr. Technician	03.09.2012
9	Mr. Nar Singh Rao, B. Tech. (Civil Eng.)	Jr. Technician	14.11.2023
10	Mr. Rambish Gond, M.A. (Sociology), MBA	Sr. Assistant	07.06.2017
11	Mr. Abhishek Shukla, M. Lib.& NET	Sr. Assistant	15.05.2023
12	Mr. Amit Anand Singh, B. Lib.I. Sc. & M. Lib. I. Sc.	Care Taker Cum-Clerk	02.08.2017
13	Mr. Niraj Kumar, Intermediate (Science) & ITI (Fitter & Eletronics)	MTS	19.01.2017
14	Mr. Dilip Kr. Yadav, Intermediate (Science)	Un-skilled MTS (Daily Wager)	09.10.2023

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

S. No.	Coordinator	Title	Period
1	Dr. Pandeeswar Makam	SERB Sponsored One-Day Scientific Social Responsibility (SSR) Activity	19-12-2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes

S. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Indrajit Sinha	Invited talk on "Integrated experimental and computational research photocatalysis research"	Webinar on Advances in Science and Technology for Sustainable Development Goals, An International Conference (IC-ASTSDG-2024) 11-12 March 2024, Venue: AKS University Satna
2	Dr. Samya Banerjee	Development of Metal-based Photocatalytic Anticancer Agents	(Conference (6th Symposium on Advanced Biological Inorganic Chemistry (SABIC-2024) 2024, International))07/01/2024 to 11/01/2024, IACS, Kolkata
3	Dr. Arindam Indra	IIT Bombay-Thyme Conference	26th-29th October 2023, Bombay
4	Dr. Rosy	International Meeting on Energy Storage Devices (IMESD)-2023	IIT Roorkee, 07.12.2023 to 10.12.2023
		15th National Conference on Solid State Ionics (NCSSI-15)	BHU, 02.12.2023 to 04.12.2023
		Soft Matter Young Investigators Meet 2023	Ramnagar, Uttarakhand 14.06.2023 to 17.06.2023
5	Dr. Pandeeswar Makam	Invited talk on "A single amino acid bionanozyme: a simple model for mimicking enzyme function"	Modern Medicinal Chemistry Advancements in Drug Discovery, Indian Institute of Technology (B.H.U.). 15.12.2023
		Invited talk at Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)	Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bengaluru, 02.09.2023

Special lectures delivered by faculty members in other institutions

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	Dr. Arindam Indra	Hybrid water electrolysis	The Burdwan University	06.07.2023
2	Dr. V. Ramanathan	Indian Knowledge system for Chemistry	Amrita University, Kollam Kerala	11th and 12th May 2023
3	Dr. V. Ramanathan	Chairing a session in the annual TexShila Conclave	IIT Hyderabad	15/05/2023
4	Dr. V. Ramanathan	Indian Knowledge Systems: Research Focus Areas	Central University of Karnataka, Kalaburagi	21/07/2023
5	Dr. V. Ramanathan	SERS using novel Bismuth substrates	Dept. of Chemistry, CU Karnataka, Kalaburagi	22/07/2023
6	Dr. V. Ramanathan	Implementing IKS in current education	Gujarat University, Ahmedabad	07/08/2023
7	Dr. V. Ramanathan	Did Chemists in Ancience India know about mineral acids?	IIT Gandhinagar	14/09/2023
8	Dr. V. Ramanathan	Surface Enhanced Raman Spectroscopy using novel non-metal substrates	IIT Gandhigar	15/09/2023
9	Dr. V. Ramanathan	Integrating Bhartiya Knowledge System (BKS) with Higher Education System	East Zone Vice Chancellors' Meet 2023-24; The Assam Royal Global University, Guwahati, Assam	21-22 Nov 2023
10	Dr. V. Ramanathan	Bharatiya Vigyan	Bharatiya Vigyan Sammelan, Ahmedabad	23/12/2023
11	Dr. V. Ramanathan	Indian Knowledge Systems	IISF 2024, Delhi	17/01/2024
12	Dr. V. Ramanathan	IKS with focus on Chemistry	Central University of Gujarat, Amhedabad	03/02/2024
13	Dr. V. Ramanathan	Contributions of ancient India in Chemistry and material science	Auroville, Pondicherry	08/02/2024
14	Dr. V. Ramanathan	Scientific Temper in the Indian Tradition	Amrita University, Kollam Kerala	22/02/2024

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
15	Dr. V. Ramanathan	Contributions of Ancient Indians in Science	National Sanskrit University, Bhopal Campus	26/02/2024
16	Dr. V. Ramanathan	Science and Scientific temper in Ancient India	Atal Bihari Vajpayee Hindi University, Bhopal	01/03/2024
17	Dr. V. Ramanathan	Chemistry and material science in Ancient India	National Sanskrit University, Tirupati Campus	19/03/2024
18	Dr. V. Ramanathan	IKS with focus on chemistry	MKPG College, Balrampur	29/03/2024
19	Dr. Bhuvaneshwari B	"Emerging Materials for Energy Environment and Bio-Medical Applications" "Computational Application in Designing Fuel Cell Electrodes"	Niigata University, Japan as part of SAKURA Program	07.11.2023 & 24.11.2023
20	Dr. Prabhat Tripathi	Invited talk in soft matter young investigators meet	Jim Corbette hosted by IIT Kanpur.	15.06.2023
		Invited talk in 61st Annual Meeting	Biophysical Society of Japan (Online mode)	14.11.2023 (Online mode)

Honours and awards

S. No.	Name of Faculty Member	Details of Award
1	Dr. V. Ramanathan	Chairman of position paper on Knowledge of India for the state of Karnataka under the aegis of NEP2020
2	Dr. V. Ramanathan	Member of National Curricular Area Group (CAG) for Science and IKS under the aegis of NCF2023
3	Dr. V. Ramanathan	Member of History of Science National Council and Research Council; INSA
4	Dr. V. Ramanathan	Chairman of UGC NET paper on IKS
5	Dr. V. Ramanathan	Member of UGC NET Syllabus Committee for IKS
6	Dr. V. Ramanathan	Member of UGC Committee on framing guidelines to introduce IKS in higher education
7	Dr. V. Ramanathan	Member of Academic and Research Council of Mahayogi Gorakhnath Medical University, Gorakhpur
8	Dr. V. Ramanathan	Co-Convener CRSI Varanasi Chapter
9	Dr Bhuvaneshwari B	Indian National Science Academy (INSA) Visiting Scientist Awardee for the year 2024.
10	Dr. Rosy	Listed as an inspirational success story in the compendium on "WOMEN IN STEM" published by CII

Fellowships of academic and professional societies

S. No.	Name of Faculty Member	Details of Fellowship
1	Dr. Bhuvaneshwari B	"SAKURA Program: Visiting Faculty" organized by Japanese govt and Indian Govt.

Books, monographs authored/co-authored

S. No.	Name of Author/ Co- Author	Title	Publisher
1	Dr. V. Ramanathan and Gautam Desiraju	Zinc Metallurgical Heritage in India.	CRC Press
2	Bhuvaneshwari B. and Iyer. N.R.	Fiber-reinforced polymer nanocomposites for structural retrofitting applications	Elsevier
3	Dr. Manisha Malviya, Amisha Soni, Sarvatej Kumar Maurya	Ch.3: Graphene derived materials as catalysts for the oxygen reduction reaction in book titled as graphene based nanomaterials as catalyst, 978-981-5040-50-0, 2022.	Bentham Science Publishers Ltd.
4	Prof. Dhanesh Tiwary Amisha Soni, Manisha Malviya	Chapter 10 Carbon quantum dots as corrosion inhibitors, Smart Anticorrosive Materials Trends and Opportunities, 187-203, 2023. ISBN: 978-0-323-95158-6.	Elsevier publication.

Patents filed

S. No.	Name of Faculty Member	Title of Patent
1	Prof. Yogesh Chandra Sharma	REMOVAL OF CHROMIUM AND ORANGE G FROM AQUEOUS SOLUTIONS USING NANO CRYSTALLINE ZIRCONIA AS AN ADSORBENT; TEMPE1/12426/2021-DEL
		A PROCESS OF MAKING A NEW GREEN NANOADSORBENT FOR THE REMOVAL OF A HAZARDOUS CATIONIC DYE (METHYLENE BLUE) FROM AQUEOUS SOLUTIONS; TEMPE-1/12201/2021-DEL
2	Dr. Manisha Malviya	A novel composite matrix and its electrochemical activity thereof. Status: Filed, 21 Feb, 2024.
		"A POLYMER-BASED COMPOSITE AND A METHOD OF PREPARATION THEREOF". Reference: P.2971. IN, Status: Filed, Application No. 202411012363, Date of Filing: February 21, 2024
3	Dr. Pandeeswar Makam	Method and system for spin-dependent conduction, 2023, US (International) US20230301200A1

Research and Consultancy

Sponsored research projects *(Ongoing only)*

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
1	Design, Function, and Utilization of Multifunctional Surface Coatings for Next-Generation Lithium-ion Batteries	Dec. 2021 to Dec. 2023	SERB-SRG	33.06	Dr. Rosy
2	Tailoring Na-Anodes for Stable and Efficient Na-Metal Batteries: Na-S as the Test Case	2024-2027	MOE-IISc STARS	100	Dr. Rosy
3	Modulating the Cathode and Catholyte for Improved Room-Temperature Na-S Batteries	2024-2026	CSIR-ASPIRE	16	Dr. Rosy
4	Bioactivation of Cyclopentadienyl Rings in Organometallic Complexes	2021-2023	The Royal Society, UK	12.63	Dr. Samya Banerjee
5	Development of Photoactivated Transfer Hydrogenation Catalysis for Next Generation Cancer Therapy	2021-2026	DST Inspire Government of India	35	Dr. Samya Banerjee
6	Development of Stable and Tethered Os II based Catalysts for Reductive Stress Mediated Photocatalytic Anticancer Activity	2022-2024	SERB-SRG	29.23	Dr. Samya Banerjee
7	Proof of concept of developing in cell reductive stress by Ir III transfer hydrogenation catalysts	2023-2026	BRNS	23.3	Dr. Samya Banerjee
8	Proof of concept for developing Mn(I) tricarbonyls for simultaneous ultrasound-triggered CO release and ROS generation for next-generation cancer treatment	2024-2025	Royal Society of Chemistry	5.22	Dr. Samya Banerjee
9	Development of bioinspired catalysts for hydrofunctionalization reactions	2023-2025	SERB-SRG	30.63	Dr. S. Elangovan
10	Development of Metal-Organic Framework Derived Single-Atom Catalysts for Industrial Scale Water Electrolysis and Selective Synthesis of Value-Added Products	2023-2025	DST-DAAD	12.2	Dr. Arindam Indra
11	Modulation of Metal-Metal Interaction and Coordination Sites of Dual-Atom Catalysts for the Electrochemical Oxidation of Benzylic Substrates to Value-Added Products	2024-2027	DST-SERB-CRG	57.56	Dr. Arindam Indra
12	Development of Transition Metal-Based Nanocatalysts for Bio-inspired Water Oxidation	2019-2023	CSIR	17.6	Dr. Arindam Indra
13	Exploring mineral acids from ancient Indian texts	July 2022 - Sept 2024	MoE IKS Division	10	Dr. V. Ramanathan
14	IKSCenter@IITBHU Varanasi	July 2022 - Dec 2024	MoE IKS Division	40	Dr. V. Ramanathan

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
15	Developing course for higher education in chemistry in ancient India	Nov 2023-Oct 2024	MoE IKS Division	18	Dr. V. Ramanathan
16	Chemical screening of Rock art in Kaimur Range using Raman spectroscopy	Feb 2024-Jan 2027	DST	73	Dr. V. Ramanathan
17	TexShila: Science Heritage Center	2022-2027	DST	420	Dr. V. Ramanathan
18	IKS Center at Samvith Research Foundation	July 2022 - Dec 2024	MoE IKS Division	40	Dr. V. Ramanathan
19	Development of magnetically recyclable photocatalysts for H2O2 production	2019-2023	BRNS	34.05	Dr. Indrajit Sinha
20	Single-molecule signature of knot formation in proteins	2023-2025	SERB (DST)	23.37500	Dr. Prabhat Tripathi
21	Towards alkaline aqueous battery and fuel cell applications: Synthesis, kinetics and Operando spectroelectrochemical studies of mixed metal selenide andpolypyrrole composites as potential oxygen electrocatalysts". 2022-2025.	2022-2025	SERB	32.6	Dr.Manisha Malviya
22	"New "metabolite-amyloids" hypothesis for the origin of life	2021-2023	DST-SERB	29. 61	Dr. Pandeeswar Makam
23	Photo Triggered Catalyst Free Approach for C-Arylation and N-Arylation with diazonium salt via Electron-Donar-Acceptor Complex (EDA)	2024-2027	SERB-CRG	48	Dr. Sundaram Singh
24	Utilization of low-grade coal for production of high-quality graphene and carbon nano-particles for energy storage	2022-2025	NCL (S&T)	86.61	Prof. Y. C. Sharma
25	Studies on development of low global warming potential (GWP) compounds and their blends as alternatives for common refrigerants and examination of their ozone depletion potential	2023-2026	Min Non Ren Energy & Climate Change (R&D)	50 Lakh	Prof. Y. C. Sharma
26	Exploring the electrocatalytic performance of two- dimensional molybdenumdisulphide loaded electrospun carbon nano fiber composites for energy and biomedical applications	March 2023 to March 2024	Startup grant, IIT (BHU) Varanasi	10	Dr. Bhuvaneshwari B

Research Publications

1	Total Number of Papers Published in Refereed International Journals	154
2	Total Number of Papers Presented in International Conferences	5

Refereed International Journals

1. Sunita Maurya, Yogesh Chandra Sharma, Synthesis of oxygenated additive fuels from bio-renewable glycerol using sulfated Zr-Al based heterogeneous acid catalyst FUEL 2024, 7.4, https://doi.org/10.1016/j.fuel.2023.129352
2. Abhijit Debnath, Prabhat Kumar Singh, Yogesh Candra Sharma, Spatial distribution of heavy metals in the sediments of River Ganges, India: Occurrence contamination source identification seasonal variations, mapping, and ecological risk evaluation. Marine Pollution Bulletin 2024, 5.8, 198 (2024) 115910.
3. Vartika Verma, Yogesh Chandra Sharma, Facile preparation, characterization and application of novel sugarcane bagasse–derived nanoceriabiochar for defluoridation of drinking water: kinetics, thermodynamics, reusability and mechanism Environmental Science and Pollution Research 2024, 5.4, 31:494–508.
4. Pandey A., Kalamdhad A.S., Sharma Y.C., Sustainable upcycling of sugarcane bagasse into nanofibrillated cellulose utilizing novel green solvents and high intensity ultrasonication Sustainable Chemistry and Pharmacy 2024, 6, 37, 101373.
5. Neeraj Kumar, Archana Pandey, Rosy, Yogesh Chandra Sharma, A review on sustainable mesoporous activated carbon as adsorbent for efficient removal of hazardous dye from industrial wastewater J Water Process Engg. 2024, 7, 54, 2023, Article No. 104054.

6. Archana Pandey, Ajay Kalamdhad, Yogesh Chandra Sharma, Recent advances of nanocellulose as biobased adsorbent for heavy metal ions removal: A sustainable approach integrating with waste management, Environmental Nanotechnology, Monitoring & Management 2023, 5.95, 20 (2023) 100791.
7. Siddhi Jaiswal, Yogesh C Sharma, Ni modified distillation waste derived heterogeneous catalyst utilized for the production of glycerol carbonate from a biodiesel by-product glycerol: optimization and green matric studies Waste Management 2023, 8.816, 156, 148-158 (2023).
8. Meena Yadav, Yogesh Chandra Sharma, Approach to microalgal biodiesel production: Insight review on recent advancements and future outlook Biofuels, Bioprod. Bioref. 17:242–260 (2023) 5.239, 17:242–260 (2023)
9. Anup Kumar; Vinod Kumar; Atendra Kumar; Dhanesh Tiwary; K.D. Mandal Studies on Electrical & Dielectric properties of rare earth based complex perovskite Oxide Bi5Yb3O12 ceramic material synthesized via Chemical Route J Mater Sci: Mater Electron 2024, 2.8, https://doi.org/10.1007/s10854-024-12423-9
10. Anup Kumar, Vinod Kumar, Manish Kumar Verma, Vishnu Shankar Rai, D. Tiwary, K.D. Mandal Dielectric and Electrical Properties of Cobalt Vanadium doped and undoped CCTO Ceramics synthesized via Semi wet route Transactions on Electrical and Electronic Materials 2024, 2.9, DOI https://doi.org/10.1007/s42341-024-00538-z
11. Vinod Kumar, Anup Kumar, Shruti Singh, Krishna Kumar, Manish Kumar Verma, Vishnu Shankar Rai, Gurudeo Nirala, Shail Upadhyay, Navneet Yadav, N. B. Singh, Dhanesh Tiwary & K. D. Mandal The emergence of Griffiths phase in CaCu3Ti(4–x)MnxO12 (CCTMO, x = 1, 2 and 3) geometrically frustrated antiferromagnetic complexes perovskite J Mater Sci: Mater Electron 2024, 2.8, https://doi.org/10.1007/s10854-024-11930-z.
12. A. Soni, M. Malviya, B Lal, D Tiwary, Evaluating Zn ferrite (Zn x Fe 3-x O 4 ; 0 ≤ x ≤ 1) for alkaline water oxidation: electrochemical and operando spectro- electrochemical study Research Square 2024, NA, doi.org/10.21203/rs.3.rs-3970277/v1
13. S. Kumari, Rajesh K Yadav, Satyam Singh, Rehana Shahin, Suresh Kumar Pandey, Kamini Singh, Atul Partap Singh, Navneet Kumar Gupta, Dhanesh Tiwary, DK Dwivedi Effortless One-Pot Two-Step Creation of NiS-NiO/S-g-C3N4: The Next Generation Photocatalyst for Green C(sp3)-F Bond Activation and Coenzyme Regeneration Preprints 2023.
14. A. Kumar, V. Kumar, M. K. Verma, V. S. Rai, D. Prajapati, B. Jena, D. K. Verma, P. Kumari, D Tiwary, KD Mandal *Dielectric and electrical properties measurement of BCTO and Co & V-doped BCTO synthesized via semi-wet route method, Journal of Materials Science: Materials in Electronics*J Mater Sci: Mater Electron 2023,2.8, DOI 10.1007/s10854-023-11138-7.
15. Nivedita Shukla, A K Singh, Kavita, D K Verma, B Kumar, J L Maurya, D Tiwary, R B Rastogi ACS Applied Engineering Materials, 2023, NA, *1(5), 1322-1334.*
16. V Gupta, R K Yadav, A Umar, A A Ibrahim, S Singh, R Shahin, R K Shukla, D Tiwary, D K Dwivedi, A K Singh, A K Singh, S Baskoutas Highly Efficient Self-Assembled Activated Carbon Cloth-Templated Photocatalyst for NADH Regeneration and Photocatalytic Reduction of 4-Nitro Benzyl Alcohol Catalysis 2023, 7.3, 3(4), 666.
17. P. Singh, S. Chaubey, C. Singh, Satyam Singh, R. K Yadav, A.P. Singh, PD Subhash, D. Tiwary, N. K Gupta, Tae Wu Kim Polystyrene-based Eosin-Y as a photocatalyst for solar light-mediated NADH/NADPH regeneration and organic transformations Reaction Chemistry & Engineering 2023, 3.9, 8(5)1872-1882.
18. R. K. Singh, R. K Yadav, P P Pandey, S. Singh, Pooja Singh, S. K. Gupta, Shivani Gupta, Prateek Khare, S. K. Tripathi, D. Tiwary Sun Light Responsive 2D Covalent-Organic Frameworks Platform as a Catalysts Boost C–H Bond Arylation and Dopamine Regeneration Photochemistry & Photobiology 2023,3.3 99(6)1384-1392.
19. Amisha Soni, Manisha Malviya, Dhanesh Tiwary, Carbon quantum dots as corrosion inhibitors Smart Anticorrosive Materials, Trends &Opportunities 2023, 10, 87-209.
20. Suresh K. Pandey & D. Tiwary, Z-scheme: A photocatalysis for the remediation of environmental pollutantsAdvances in Dye Degradation 2023, Chpter-6, pp 143-155.
21. Kushwaha, Vishal; Mandal, K.D; Singh, Preetam; Gupta, Asha Ni0.5Co0.5S Nano-Chains: A High-performing Intercalating Pseudocapacitive Electrode in Asymmetric Supercapacitors (ASC) mode for the development of Large-scale Energy Storage Devices Dalton Transactions 2024, 4.6, https://doi.org/10.1039/D3DT04184K
22. Dinesh Prajapati, Vishnu Shankar Rai, Atendra Kumar, Harish Verma, Shail Upadhyay, N. B. Singh and K. D. Mandal, Phase evolution, dielectric and electric behaviour of Sm-doped BCTO ceramic fabricated by semi wet method Cryst. Res. Technol.2024, 1.5, DOI: 10.1002/crat.202300270.

23. Anuj Kumar Gond, Atendra Kumar, Anees A. Ansari, Sunil Kumar, Sumit Kumar, Ajit N. Gupta, Akhilesh Kumar, Youngil Lee, Kamdeo Mandal, Himanshu Shekher, Laxman Singh, Microstructure, dielectric and ferroelectric properties of CaCu3-xZnxTi4-xCexO12 ceramics prepared via semi-wet route Processing and Application of Ceramics 2024, 1.8, https://doi.org/10.2298/PAC2401117K

24. Aria Tauraso, Krishna S. Machuga, Joel McAdams, Ching Hua Su, Brian Cullum, Tagide deCarvalho, Narasimha S. Prasad, Bradley Arnold, Fow-Sen Choa, K. D. Mandal, and Narsingh Bahadur Singh Effect of high-energy radiation on the electrical and optical characteristics of bioactive glasses Optical Engineering 2024, 1.3, https://doi.org/10.1117/1.OE.63.3.037105

25. Vishnu Shankar Rai, Dinesh Prajapati, Vinod Kumar, Manish Kumar Verma,Harish Verma,Shail Upadhayay,Anup Kumar ,N.B.Singh and K.D. Mandal Studies on Impedance and dielectric properties of Bi2/3Cu3Ti4-xSixO12 (x= 0.05, and 0.1) ceramics synthesized by the semi-wet method Journal of Materials Engineering and Performance 2023, 2.3, https://doi.org/10.1007/s11665-023-08800-w

26. Anup Kumar, Vinod Kumar, Manish Kumar Verma, Vishnu Shankar Rai, Dinesh Prajapati, Biswajit Jena, Dipendra Kumar Verma, Poonam Kumari, D. Tiwary, K.D. Mandal Dielectric and Electrical Properties measurement of BCTO and Co & V doped BCTO synthesized via Semi wet route method J Mater Sci: Mater Electron 2023, 2.8, DOI 10.1007/s10854-023-11138-7

27. Manish Kumar Verma, Vinod Kumar, Vishnu Shankar Rai, Dinesh Prajapati, Upakar Patel, Tapas Das, Kedar Sahoo, Arup Kumar De, Aaditya Kumar Prajapati, N. B. Singh, K. D. Mandal Highly Efficient Photocatalytic Studies on Bi36Fe2O57 Ceramic Synthesized by Chemical Route Transactions on Electrical and Electronic Materials 2023, 1.9, https://doi.org/10.1007/s42341-023-00470-8

28. N. B. Singh, Ching Hua Su, Fow-Sen Choa, Bradley Arnold, Brian Cullum & K. D. Mandal Morphological evolution and transition at nanoscale in BSTO ceramic materials Ferroelectrics 2023, 0.8, https://doi.org/10.1080/00150193.2023.2201789

29. Vishnu Shankar Rai, N. B. Singh, K. D. Mandal, Dielectric and electric properties of Zn doped and undoped Bi2/3Cu3Ti4O12 ceramic prepared by chemical route Ferroelectrics 2023, 0.8, https://doi.org/10.1080/00150193.2023.2201767

30. Vishnu Shankar Rai, Srikrishna Dutta Verma, Anup Kumar, K. D. Mandal, Meghan Brandt, N. B. Singh Dielectric and Electrical sensing behavior of undoped and doped complex perovskite oxide Proc. SPIE 2023, NA, doi: 10.1117/12.2663119.

31. Dinesh Prajapati, Vishnu Shankar Rai, Vinod Kumar, Manish Kumar Verma, Atendra Kumar, N. B. Singh, and K. D. Mandal, Investigation on the effect of Dy doping on the microstructure, dielectric, electrical, and magnetic properties of Bi2/3Cu3Ti4O12 ceramic J Mater Sci: Mater Electron 2023, 2.8, https://doi.org/10.1007/s10854-023-10046-0

32. Vishnu Shankar Rai, Dinesh Prajapati, Manish Kumar Verma, Vinod Kumar, Atendra Kumar, Tapas Das, Kedar sahoo, N.B. Singh, and K. D. Mandal, Emergence of dielectric properties by doping of semi-transition metal in semi-conductor complex perovskite oxide Crystal Research and Technology 2023, 1.5, https://doi.org/10.1002/crat.202200236

33. Dinesh Prajapati, Vishnu Shankar Rai, Vinod Kumar, Manish Kumar Verma, Atendra Kumar, N. B. Singh & K. D. Mandal. The Effect of Rare Earth Metal Doping in Bi2/3Cu3Ti4O12 Ceramic on Microstructure, Dielectric and Electrical Properties *Trans. Electr. Electron. Mater.* 2023, 2.9,https://doi.org/10.1007/s42341-023-00435-x

34. Vishal Kushwaha a, Asha Gupta *a, Ram Bilash Choudhary b, K. D. Mandal, Rakesh Mondal c and Preetam Singh Nanocrystalline **β**-NiS: a redox-mediated electrode in aqueous electrolyte for pseudocapacitor/supercapacitor applications Phys. Chem. Chem. Phys. 2023, 3.7, DOI: 10.1039/D2CP03847A.

35. Ambuj Kumar Kushwaha, Arsala Kamal, Pooja Kumari, Sundaram Singh*, Metal-Free Photoredox Catalyzed Sulfonylation of Phenylhydrazines with Thiols Organic Letters 2024, 5.2, 26, 18, 3796–3800.

36. Khushbu Rajput, Vishal Singh, Priya Mahur, Sundaram Singh and Vandana Srivastava Visible-Light-Induced C-S Bond Formation in the Synthesis of 2,4-DisubstitutedThiazoles through Cascade Difunctionalization of Acetophenone: A Greener Approach Org. Biomol. Chem. 2024, 3.2, 22, 2774-2779.

37. Ambuj Kumar Kushwaha, Suresh Kumar Maury, Arsala Kamal, Himanshu Kumar Singh,Tushar Mondal, Sundaram Singh Photoinduced, Metal-Free Hydroacylation of Aromatic Alkynes for Synthesis of **α**,**β**-Unsaturated Ketones via C(sp3)-H Functionalization Organic letters 2024, 5.2, 26, 7, 1416–1420.

38. Shikha Pandey, Arsala Kamal, Ambuj Kumar Kushwaha, Himanshu Kumar Singh, Suresh Kumar Maury and Sundaram Singh Photo-triggered C-arylation of active-methylene compounds with diazonium salts via an electron donor–acceptor (EDA) complex Chem. Comm 2024, 4.9, 60, 1136 – 1139.

39. Vishal Singh, Khushbu Rajput, Ankush Mishra, Sundaram Singh and Vandana Srivastava Vishal Singh, Khushbu Rajput, Ankush Mishra, Sundaram Singh and Vandana Srivastava Chem. Comm 2023, 4.9, 59, 14009.

40. Aswathi C. Narayanan, Rapelly Venkatesh, Shweta Singh, Gourav Singh, Gyan Modi, Sundaram Singh, Jeyakumar Kandasamy Synthesis of phenylethanoid glycosides from acrylic esters of glucose and aryldiazonium salts via palladium-catalyzed cross-coupling reactions and evaluation of their anti-Alzheimer activity Carbohydrate research 2023, 3.1, 532, 108920.

41. Nitin Kumar, Rapelly Venkatesh, Sundaram Singh, and Jeyakumar Kandasamy Potassium Persulfate-Glucose Mediated Synthesis of (3) - *S* -Arylthioindoles from Indole and Thiophenols in Water European journal of organic chemistry 2023, 2.8, 26, e202300679 (1 of 5).

42. Himanshu Kumar Singh, Arsala Kamal, Suresh Kumar Maury, Ambuj Kumar Kushwaha, Vandana Srivastava and Sundaram Singh A green synthesis of pyrimido[4,5-b] quinolines and pyrido[2,3-d] pyrimidines via a mechanochemical approach Org. Biomol. Chem. 2023,3.2, 21, 4854-4862.

43. Vishal Singh. Khushbu Rajput, Pratibha Verma, Sundaram Singh, Vandana Srivastava A green approach for the synthesis of 2oxo1,2,3,4tetrahydropyrimidines through oxidative functionalization of methyl arenes/benzyl derivatives via in situ generated urea Research on Chemical Intermediates 2023,3.3, 49,2969–2987.

44. Neetu Verma, Vinay Kumar Mishra, Sundaram Singh, Manisha Malviya and Ram Sagar Electro-organic green synthesis of dicyano-2-(2-oxoindolin-3-ylidene) malononitriles using molecular iodine as catalyst RSC advances 2023,3.9, 13, 15024.

45. Kavita, Alok K. Singh, Nivedita Shukla, Bharat Kumar, Dinesh K. Verma, Jiya Lal Maurya, Sundaram Singh, Rashmi B. Rastogi Improvement of tribo-active behavior of g-C3N4 nanosheets using m-LaVO4 Nanoparticles Colloids and Surfaces A: Physicochemical and Engineering Aspects 2023, 5.2, 663, 131031.

46. Khushbu Rajput, Vishal Singh, Arsala Kamal, Himanshu Kumar Singh, Sundaram Singh and Vandana Srivastava A Novel Approach Towards Synthesis of Benzothiazole and Benzimidazole: Eosin Y Catalyzed Photo-Triggered C-S and C-N Bond Formation New J. Chem. 2023, 3.3, 47, 22276-22280.

47. Arsala Kamal, Vandana Srivastava, Sundaram Singh Visible-Light-Induced Arylation via Electron-Donor-Acceptor Complex: A Catalyst Free Approach for the Synthesis of N-(Hetero) Aryl Sulfonamides New J. Chem 2023, 3.3, 47, 14605-14609.

48. Ambuj Kumar Kushwaha, Suresh Kumar Maury, Arsala Kamal, Himanshu Kumar Singh, Shikha Pandey, Sundaram Singh Visible-Light-Absorbing, Photocatalysed C-N cross-coupling for Synthesis of Hydrazones involving C(sp2)-H/C(sp3)-H functionalization ChemComm 2023, 4.9, 59, 4075-4078.

49. P. Gautam, A.K. De, I. Sinha, C.K. Behera, K.K. Singh, Facile recovery of CuO nanostructures from discarded Printed Circuit Boards: Evaluation of photocatalytic activity, Proceedings of the International Conference on Solid Waste 2023: Waste Management in Circular Economy and Climate Resilience (ICSWHK2023, 588, Hong Kong, 31.05.2023 to 03.06.2023.

50. P. Gautam, A. K. De, Indrajit Sinha, C. K. Behera, K. K. Singh, Genesis of copper oxide nanoparticles from waste printed circuit boards and evaluation of their photocatalytic activity, *Environmental Research,* 229, 115951, 15 July 2023.

51. S Kumar, J Kuntail, D K Sahu, V S Yadav and Indrajit Sinha*, Green synthesis of curcumin functionalized Au nanoparticles by visible light photo-reduction, *Indian Journal of Physics,* 97(9), 2727-2733, August 2023.

52. Shaili Pal, Ajay Kumar, Uttam Kumar, Rajiv Prakash, Indrajit Sinha, Visible light photo-Fenton catalytic properties of starch functionalized **α**-FeOOH/**β**-FeOOH/Cu2O p-n-p heterojunction nanostructures, *Materials Science in Semiconductor Processing,* 167, 107766, August 2023 DOI: 10.1016/j.mssp.2023.107766.

53. P. Gautam, A. K. De, M. D. Rao, Indrajit Sinha, C. K. Behera, K. K. Singh, Waste remediation: Lowtemperature synthesis of hybrid $Cu(OH)_2$/CuO and CuO nanostructures from spent printed circuit boards and their dye degradation studies, Environmental Science and Pollution Research, Published online, August 2023 DOI:10.1007/s11356-023-29005-7.

54. Anshu Shrivastava, J. Kuntail, U. Kumar, Indrajit Sinha*, Co-adsorption mechanism of organic pollutants on $NiFe_2O_4$ /GO nanostructures: Experimental and molecular dynamics studies, Journal of Molecular Liquids, 389, 122932, 1st November 2023.

55. S. Pradhan, N. S. Anuraag, N. Jatav, Indrajit Sinha, and N. K. Prasad, Magnetic Ni@C nanoadsorbents for methyl orange removal from water Enivronmental Science and Pollution Research, 30, 118634-118646, December 2023.

56. Uttam Kumar and Indrajit Sinha*, Visible light Photo-Fenton degradation of p-nitrophenol on $Ag/Fe_3O_4/WO_3$ nanocomposites: Experimental and molecular dynamics investigations Journal of Environmental Chemical Engineering, 11[6], 111280, December 2023.

57. A. Khandelwal, D. Khan, J. Kuntail, Indrajit Sinha*, Ag-based bimetallic clusters as catalysts for p-nitrophenol reduction by glycerol: A DFT investigation International Journal of Quantum Chemistry, 124[1], e27237, January 2024.

58. S. Singh, A. Shrivastava, D. K. Singh, M. Yadav, V. Singh, V. Rathour, A. Tiwari, Indrajit Sinha*, V. Ganesan*, $ZnMn_2O_4$ spinel nanocrystals-decorated multi-walled carbon nanotubes for oxygen reduction: Experimental and theoretical studies on the strong coupling facilitated four-electron selectivity International Journal of Hydrogen Energy, 56, 188, February 2024.

59. Rishabh Mishra, Manisha Malviya, Cobalt di selenide embedded melamine paraformaldehyde resin: A robust and efficient electrocatalyst for OER and Operando investigations *(*International Journal Of Hydrogen Energy*)*, I.F: 7.2, https://doi.org/10.1016/j.ijhydene.2023.10.240.

60. Maurya, K. K., Singh, K., & Malviya, M. (2023). Effect of palladium and its nanogeometry on the redox electrochemistry of tetracyanoquinodimethane modified electrode; application in electrochemical sensing of ascorbic acid. *Journal of Applied Electrochemistry, 1-12. I.F: 2.9* doi: 10.1007/s10800-023-01878-z.

61. Singh, K., Maurya, K., & Malviya, M. (2023). Influence of Pd Nanostructures on The Redox Electrochemistry of Ferrocene Monocarboxylic Acid and Ferrocene for Ascorbic Acid Sensing. *Analytical and Bioanalytical Electrochemistry*, *15*(7), 516-530. I.F: 1.2 doi: 10.22034/abec.2023.706502.

62. Singh, K., Singh, C., Maurya, K. K., & Malviya, M. (2023). Redox electrochemistry of electrodes tuned with dimethyl ferrocene based on Co–NC–Pd nanogeometry: an impedimetric sensor for NADH sensing. I.F: 2.8 *Journal of Materials Science: Materials in Electronics*, 34(27), 1898. doi:10.1007/s10854-023-11257-1.

63. Verma, N., Mishra, V. K., Singh, S., Malviya, M., & Sagar, R. (2023). Electro-organic green synthesis of dicyano-2-(2-oxoindolin-3-ylidene) malononitriles using molecular iodine as catalyst. *RSC advances,* 13(22), 15024-15030. I.F: 4.036 doi.org/10.1039/D3RA02152A.

64. Verma, N., Tyagi, R., Khanna, A., Malviya, M., & Sagar, R. (2023). Electro-organic synthesis of isatins and hydrazones through C–N cross-coupling and C (sp 2)–H/C (sp 3)–H functionalization. Organic & Biomolecular Chemistry, 21(33), 6707-6714. I.F: 3.2 doi.org/10.1039/D3OB01128C.

65. Adesh Kumar Singh, Rapelly Venkatesh, Jeyakumar Kandasamy Palladium-Catalyzed Stereocontrolled Synthesis of Aryl-C-Glycosides from Arylboronic Acids and Glycal Enones Through 1, 4-Conjugate Addition Reactions Synthesis 2024, 2.6, 56(07): 1167-1174.

66. Nitin Kumar, Rapelly Venkatesh, Sundaram Singh, Jeyakumar Kandasamy Potassium Persulfate-Glucose Mediated Synthesis of (3) -S-Arylthioindoles from Indole and Thiophenols in Water European Journal of Organic Chemistry 2023, 2.8, 26, e202300679.

67. Aswathi C Narayanan, Rapelly Venkatesh, Shweta Singh, Gourav Singh, Gyan Modi, Sundaram Singh, Jeyakumar Kandasamy Synthesis of phenylethanoid glycosides from acrylic esters of glucose and aryldiazonium salts via palladium-catalyzed cross-coupling reactions and evaluation of their anti-Alzheimer activity Carbohydrate Research 2023, 3.1, 532, 108920.

68. Shweta Singh, Jeyakumar Kandasamy Synthesis of Acyl Hydrazides from Carboxamides and Hydrazine Hydrate Under Metal-Free Conditions at Room Temperature Asian Journal of Organic Chemistry 2023, 2.7, 12, e202300115.

69. Vimlesh Kumar Kanaujiya, Varsha Tiwari, Siddharth Baranwal, Vandana Srivastava, Jeyakumar Kandasamy Denitrosation of Aryl-N-nitrosamines by a Transnitrosation Strategy Using Ethanethiol and p-Toluenesulfonic Acid under Mild Reaction Conditions Synlett 2023,2, 34(08): 970-974.

70. Shraddha Jaiswal, Rakesh Mondal, Vishal Kushwaha, Asha Gupta*, and Preetam Singh*, ACS Applied Energy Materials, "*Tuning of Redox Energy of Transition-Metal Ions through the Utilization of Interlayer Potentials in Layered Perovskites: Development of a Titanium-Based Superior HER Catalyst in an Acidic Medium*", 2023, *Impact Factor*: 6.959.

71. R Mondal, KG Nigam, NK Mishra, Asha Gupta, P Singh, *Journal of Energy Storage,* 60, 106549, 2023, *Intercalative pseudocapacitive anhydrous NiC2O4 quantum dot electrode for the fabrication of supercapacitor using aqueous KOH and neutral Na2SO4 electrolyte*, *Impact Factor*: 8.907.

72. S Ansari, RB Choudhary, Asha Gupta, *Journal of Energy Storage*, 59, 106446, *Nanoflower copper sulphide intercalated reduced graphene oxide integrated polypyrrole nano matrix as robust symmetric supercapacitor electrode material,* 2023 Impact *Factor*: 8.907.

73. V Soni, R Mondal, AN Singh, P Singh, Asha Gupta, *ACS Applied Energy Materials*, *Dumbbell Defect Containing Chromium-Rich Lithium-Vacant Layered LiyCr1−xFexO2 (y ≤ 1, 0 ≤ x ≤ 0.2): An Unexplored and Highly Efficient Electrocatalyst for the Oxygen Evolution Reaction,* 2023 Impact *Factor*: 6.959.

74. A.N. Singh, KG Nigam, R Mondal, V Kushwaha, Asha Gupta, C Rath, P Singh, Physical Chemistry Chemical Physics 25 (1), 326-340, *Effect of strontium doping on the electrochemical pseudocapacitance of Y 1− x Sr x MnO 3− δ perovskites,* 2023 Impact *Factor*: 3.676.

75. V Kushwaha, Asha Gupta, RB Choudhary, KD Mandal, R Mondal, P Singh, Physical Chemistry Chemical Physics 25 (1), 555-569, *Nanocrystalline β-NiS: a redox-mediated electrode in aqueous electrolyte for pseudocapacitor/supercapacitor applications,* 2023 Impact *Factor*: 3.676.

76. S Singh, A Kumar, SK Pandey, DK Singh, V Kumar, MK Verma, Asha Gupta, Materials Technology 37 (9), 880-896, *Facile synthesis of efficient heterogeneous photocatalytic and highly dielectric Bi4BaTi4O15 ceramic with remarkable applicability in the degradation of rhodamine B dye,* 2023.

77. R Mondal, H Ratnawat, S Mukherjee, Asha Gupta,P Singh, Energy & Fuels 36 (6), 3219-3228, *Investigation of the Role of Sr and Development of Superior Sr-Doped Hexagonal BaCoO3−δ Perovskite Bifunctional OER/ORR Catalysts in Alkaline Media,* 2023 *Impact Factor*: 4.654.

78. R Mondal, NK Mishra, M Singh, Asha Gupta,P Singh, Physical Chemistry Chemical Physics 24 (46), 28584-28598, *Perovskite La 1− x K x CoO 3− δ (0≤ x≤ 0.5): a novel bifunctional OER/ORR electrocatalyst and supercapacitive charge storage electrode in a neutral Na 2 SO 4 electrolyte,* 2023 *Impact Factor*: 3.676.

79. V Soni, AN Singh, P Singh, Asha Gupta, RSC advances 12 (29), 18794-18805, *Photocatalytic dye-degradation activity of nano-crystalline Ti 1− x M x O 2− δ (M= Ag, Pd, Fe, Ni and x= 0, 0.01) for water pollution abatement,* 2023 Impact *Factor*: 4.036.

80. Asha Gupta, Vishal Kushwaha, Rakesh Mondal, Abhay Narayan Singh, Rajiv Prakash, KD Mandal, Preetam Singh, Physical Chemistry Chemical Physics 24 (18), 11066-11078, *Photocatalytic dye-degradation activity of nano-crystalline Ti 1− x M x O 2− δ (M= Ag, Pd, Fe, Ni and x= 0, 0.01) for water pollution abatement,* 2023 Impact *Factor*: 3.676.

81. Asha Gupta, Vishal Kushwaha, Rakesh Mondal, Abhay Narayan Singh, Rajiv Prakash, KD Mandal, Preetam Singh, Physical Chemistry Chemical Physics 24 (18), 11066-11078, *SrFeO 3− δ: a novel Fe 4+↔ Fe 2+ redox mediated pseudocapacitive electrode in aqueous electrolyte,* 2023 Impact *Factor*: 3.676.

82. A. Jaryal, A. K. Singh,H. Bhatt, H. N. Ghosh, A. Indra*, K. Kailasam (2024) Understanding the Charge Transfer Dynamics in 3D-1D Nanocomposites over Solar-Driven Synergistic Selective Valorization of Lignocellulosic Biomass: A New Sustainable Approach. Energy Environ. Sci. Catal. https://doi.org/10.1039/D4EY00077C (*Just Accepted*)

83. U. Dasgupta, M. Ghosh, Chakraborty, EY. Park, A. Indra, A.D. Chowdhury (2024) Dual-Mode Virus Detection: Combining Electrochemical and Fluorescence Modalities for Enhanced Sensitivity and Reliability. ACS Applied Bio Materials (*Just Accepted*) doi.org/10.1021/acsabm.4c00240.

84. V. Vyas, A. Indra* (2024) Activation of Molecular Oxygen and Peroxodisulfate for Removal of Water-Soluble Antibiotics Using Metal-Organic Framework-Derived CoN_x@NC Catalyst European Journal of Inorganic Chemistry (*Just Accepted*) doi/abs/10.1002/ejic.202300526.

85. Y. Arya, T. Ansari, S. K. Bera, S. Panda, A. Indra,* G. K. Lahiri* (2024) Superior electrocatalytic hydrogen evolution activity of a triply bridged diruthenium (II) complex on carbon cloth support Chemical Communications (*Just Accepted*) doi.org/10.1039/D4CC01173B.

86. V. Vyas, V. Kumar, A. Indra* (2024) The low loading of metal in metal-organic framework-derived NiN x@ NC promotes amide formation through C–N coupling Chemical Communications 60 (18): 2544-2547.

87. L. Seikh, S. Dhara, A.K. Singh, A. Singh, S. Dey, A. Indra*, G.K. Lahiri. (2024) The isomer-sensitive electrochemical HER of ruthenium (ii)–hydrido complexes involving redox-active azoheteroaromatics Dalton Transactions. 53 (4): 1746-1756.

88. T. Pain, A.K. Singh, A.Tarai, S. Mondal, A. Indra*, S. Kar (2023) C–H Bond Activation by an Antimony (V) Oxo Intermediate Accessed through Electrochemical Oxidation of Antimony (III) Tetrakis (thiocyano) corrole Inorganic Chemistry 62 (46): 18779-18788.

89. P. Saha, R.Kumar, S. Das, T. Ansari, A. Indra, D. K. Sharma (2023) Visible light induced regioselective C-3 thiocyanation of imidazoheterocycles through naphthalimide dye based photoredox catalysis Organic & Biomolecular Chemistry 21 (42): 8471-8476.

90. A. K. Singh, L. Gu, A. D. Chowdhury, A. Indra* (2023) Exploring Ligand-Controlled C2 Product Selectivity in Carbon Dioxide Reduction with Copper Metal–Organic Framework Nanosheets Inorganic Chemistry 62 (23): 8803-8811.

91. A. K. Singh, K. Bijalwan, N. Kaushal, A. Kumari, A. Saha, A. Indra* (2023) Oxidase-like Nanozyme Activity of Manganese Metal–Organic Framework Nanosheets for Colorimetric and Fluorescence Sensing of l-Cysteine. ACS Applied Nano Materials. 6 (9): 8036-8045.

92. A. K. Singh, D. Kumar, B. Singh, A. Indra* (2023) Replacing Anodic Oxygen Evolution Reaction with Organic Oxidation: The Importance of Metal (Oxy) Hydroxide Formation as the Active Oxidation Catalyst Synlett 34 (06): 552-560.

93. M. Suthar, A.K. De, A. Indra, I. Sinha, P.K. Roy (2023) Synthesis and characterization of titanium-substituted nanocrystalline Co2-Y hexaferrite: magnetically retrievable photocatalyst for treatment of methyl orange Environmental Science and Pollution Research 30 (15): 44457-44479.

94. A. Singh, B. Singh, S. Dey, A. Indra*, G.K. Lahiri (2023) Ruthenium Azobis (benzothiazole): Electronic Structure and Impact of Substituents on the Electrocatalytic Single-Site Water Oxidation Process Inorganic Chemistry 62 (6): 2769-2783.

95. V. Vyas, P. Maurya, A. Indra* (2023) Metal-organic framework-derived CoN x nanoparticles on N-doped carbon for selective N-alkylation of aniline. Chemical Science 14 (43): 12339-12344.

96. P. Maurya, T. Ansari, A. Indra* (2023) 4f–2p–3d orbital overlap in a metal-organic framework-derived CeO 2/CeCo-LDH heterostructure promotes water oxidation Chemical Communications 59 (89), 13359-13362.

97. A. K.Singh, A. Jaryal, S. K. Patel, D. Kumar, E.S.S. Iyer, K .Kailasam, A. Indra* (2023) Deciphering ligand-controlled charge transfer from a metal–organic framework to cadmium sulfide for enhanced photocatalytic hydrogen evolution reaction Journal of Materials Chemistry A 11 (31): 16724-16733.

98. B. Singh, Y.C. Huang, A. Priyadarsini, P. Mannu, S.Dey, G.K. Lahiri, B.S. Mallik, A. Indra* (2023) Structural evolution of a water oxidation catalyst by incorporation of high-valent vanadium from the electrolyte solution Journal of Materials Chemistry A 11 (29): 15906-15914.

99. P. Maurya, V. Vyas, A.N. Singh, A. Indra* (2023) Iron (iii) ion-assisted transformation of ZIF-67 to a self-supported Fe_xCo-layered double hydroxide for improved water oxidation Chemical Communications 59 (47), 7200-7203.

100. B. Singh, A.K. Singh, A. Priyadarsini, Y.C. Huang, S. Dey, T. Ansari, S. Shen, A. Indra* (2023) Nitrogen substitution induced lattice contraction in nickel nanoparticles for electrochemical hydrogen evolution from simulated seawater Chemical Communications 59 (40), 6084-6087.

101. J.K. Yadav, B. Singh, S.K. Pal, N. Singh, P. Lama, A. Indra*, K. Kumar (2023) Chlorocobaloxime containing N-(4-pyridylmethyl)-1, 8-naphthalamide peripheral ligands: synthesis, characterization and enhanced electrochemical hydrogen evolution in alkaline Dalton Transactions 52 (4): 936-946.

102. C. Walter, A. K. Singh, A. Indra,* P.W. Menezes (2024) Insights into the Single Atom and Support Interaction in Electrocatalytic Oxygen Evolution Reaction. ChemElectroChem, just accepted, celc.202400159.

103. Poonam Bhadoria, Aastha Tiwari, Alok Jain, Venkatnarayan Ramanathan Comprehensive computational insights on the conformations, electronic properties and binding mechanism of mescaline: A hallucinogenic molecule Journal of Molecular Liquids 2024, 6, 400, 124562.

104. Arti Saroj, Venkatnarayan Ramanathan CTAB-assisted AgBr-bismuth oxybromide based novel SERS substrate for label-free, non-invasive quantitative detection of detrimental synthetic food colorants Preprints 2024, https://doi.org/10.21203/rs.3.rs-4022807/v1

105. Poonam Bhadoria, Brijesh Kumar Mishra, Venkatnarayan Ramanathana Testing Contemporary Functionals and Basis Sets for their Accuracy in Predicting Vibrational Modes of Newly Discovered Alkaline Earth Metals-Carbonyl Complexes Indian Journal of Pure & Applied Physics 2024, 0.2, 62, 144-154.

106. Poonam Bhadoria, Venkatnarayan Ramanathan Cystine adsorption on Cu9 cluster: A DFT study Preprints 2024, https://doi.org/10.22541/au.170669850.06506397/v1

107. Poonam Bhadoria, Venkatnarayan Ramanathan Combined FTIR/Raman spectroscopic studies and ab initio electronic structure calculations of Dithiothreitol Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 2024, 4.4, 304, 123399.

108. Ankush Kumar Singh, Pritesh Keshari, Arti Saroj, Venkatnarayan Ramanathan, Rosy Electrodeposition of Graphitic Carbon Nitride and it's in situ Decoration with MnO2 Nanostructures: A Tailored Interface for Dopamine Sensing Surfaces and Interfaces 2023, 6.2, 42, 103316.

109. Poonam Bhadoria, Venkatnarayan Ramanathan Sulfur Centered Hydrogen Bonding in Thioglycolic Acid and Its Clusters: A Computational Exploration the Journal of Physical Chemistry A 2023, 2.9, 39, 8095-8109.

110. Poonam Bhadoria, Venkatnarayan Ramanathan Computational underpinnings for the dimerization of para-aminothiophenol to dimercaptoazobenzene on copper surface Chemical Physics 2023, 2.3, 571, 111910.

111. Manish Kumar Tripathi, Venkatnarayan Ramanathan Nature and Strength of Sulfur-Centered Hydrogen Bond in Methanethiol Aqueous Solutions the Journal of Physical Chemistry A 2023, 2.9,127, 2265-2273.

112. Poonam Bhadoria, Venkatnarayan Ramanathan Conformational Landscape and Hydrogen Bonding Pattern of Psilocin: Computational Insights Chemistry Select 2023, 2.1, e202203994.

113. Poonam Bhadoria, Arti Saroj, Venkatnarayan Ramanathan to dimerize or not: para-aminothiophenol on a bismuth heterostructure Physical Chemistry Chemical Physics 2023, 3.3, 25, 9569-9575.

114. Poonam Bhadoria, Manish Kumar Tripathi, Ramanathan Venkatnarayan to cleave or not—disulfde bond of cystine on nanocopper: a computational approach Journal of Nanoparticle Research 2023,2.5, 25, 1-9.

115. Arti Saroj, Venkatnarayan Ramanathan Bismuth oxybromide based novel substrate for surface enhanced Raman spectroscopy Vibrational Spectroscopy 2023, 2.5, 124, 103463.

116. Venkatnarayan Ramanathan, Gautam R Desiraju Zinc Metallurgical Heritage in India. Zinc, 2024, 14-27.

117. Tapan Kumar Das, Amit Kumar Mondal, Om Shanker Tiwari, Pandeeswar Makam, Gregory Leitus, Ehud Gazit, Fontanesi Claudio, Ron Naaman. (2023) Spin-induced electron transmission through metal–organic chiral crystals. *Physical Chemistry Chemical Physics. 25,* 22124-22129

118. Suthar M., Khare D., Gangwar A., Banerjee S., Prasad N. K., Dubey A. K., and Roy P. K. (2023) Structural, magnetic, and biocompatibility evaluations of chromium substituted barium hexaferrite (Co2–Y) for hyperthermia application. Materials Chemistry and Physics. 296: 127348.

119. Liang G., Sadhukhan T., Banerjee S., Tang D., Zhang H., Cui M., Montesdeoca N., Karges J., and Xiao H. (2023) Reduction of Platinum (IV) Prodrug Hemoglobin Nanoparticles with Deeply-Penetrating Ultrasound Radiation for Tumor-Targeted Therapeutically Enhanced Anticancer Therapy. Angewandte Chemie International Edition. 62: e202301074.

120. Mandal A., Kushwaha R., Mandal A. A., Bajpai S., Yadav A. K., Banerjee, S. (2023) Transition Metal Complexes as Antimalarial Agents: A Review. ChemMedChem. 18: e202300326.

121. Fan Z., Xie J., Kushwaha R., Liang S., Li W., Mandal A. A., Wei L., Banerjee S., and Huang H. (2023) Anticancer Screening of Ru (II) Photoredox Catalysts at Single Cell Level. Chemistry–An Asian Journal. 18: e202300047.

122. Yadav A. K., Singh V., Kushwaha R., Dolui D., Rai R., Dhar P., Dutta A., Koch B., and Banerjee S. (2023) Polypyridyl Co (II)-Curcumin Complexes as Photo-activated Anticancer and Antibacterial Agents. ChemBioChem 24: e202300033.

123. Mandal A., Rai R., Saha S., Kushwaha R., Li W., Gogoi H., Mandal A. A., Yadav A. K., Huang H., Dutta A., Dhar P., and Banerjee S. (2023) Polypyridyl-based Co(III) complexes of vitamin B6 Schiff base for photoactivated antibacterial therapy. Dalton Transactions. 52(46): 17562-17572.

124. Kushwaha R., Singh V., Peters S., Yadav A. K., Dolui D., Saha S., Sarkar S., Dutta A., Koch B., Sadhukhan T., and Banerjee S. (2023) Density Functional Theory-Guided Photo-Triggered Anticancer Activity of Curcumin-Based Zinc(II) Complexes. The Journal of Physical Chemistry B. 127(48): 10266-10278.

125. Kushwaha R., Rai R., Gawande V., Singh V., Yadav A. K., Koch B., Dhar P., and Banerjee S. (2024) Antibacterial Photodynamic Therapy by Zn(II)-Curcumin Complex: Synthesis, Characterization, DFT Calculation, Antibacterial Activity, and Molecular Docking. 25: e202300652.

126. Deka B., Sarkar T., Bhattacharyya A., Butcher R. J., Banerjee S., Deka S., Saikia K. K., and Hussain A. (2024) Synthesis, characterization, and cancer cell-selective cytotoxicity of mixed-ligand cobalt(III) complexes of 8-hydroxyquinolines and phenanthroline bases. Dalton Transactions. 53: 4952-4961.

127. Banerjee S., Wolny J. A., Danaie M., Barry N. P. E., Han Y., Amari H., Beanland R., Schünemann V., Sadler P. J. (2024) Nanoscale Advances. 6: 1837-1846.

128. Mandal A. A., Singh V., Saha S., Peters S., Sadhukhan T., Kushwaha R., Yadav A. K., Mandal A., Upadhyay A., Bera A., Dutta A., Koch B., Banerjee S. (2024) Green Light-Triggered Photocatalytic Anticancer Activity of Terpyridine-Based Ru (II) Photocatalysts. 63(16): 7493-7503.

129. Kushwaha R., Singh V., Peters S., Yadav A. K., Sadhukhan T., Koch B., Banerjee S. (2024) Comparative Study of Sonodynamic and Photoactivated Cancer Therapies with Re(I)-Tricarbonyl Complexes Comprising Phenanthroline Ligands. Journal of Medicinal Chemistry. 67(8): 6537-6548.

130. Mandal A. A., Upadhyay A., Mandal A., Nayak M., K. M. Sabeel, Mukherjee S., Banerjee S. (2024) Visible-Light-Responsive Novel Ru(II)-Metallo-Antibiotics with Potential Antibiofilm and Antibacterial Activity. ACS Appl. Mater. Interfaces. 16(22): 28118-28133.

131. Kushwaha R., Upadhyay A., Peters S., Yadav A. K., Mishra A., Bera A., Sadhukhan T., Banerjee S. (2024) Visible and Red Light Triggered Anticancer Profile of a Ferrocene-Re(I)-Tricarbonyl Conjugate: Experimental and Theoretical Studies. Langmuir. 40(23): 12226-12238.

132. Shubham Garg#, Ankush Kumar Singh#, Avanish Singh Parmar, Rosy*, Hexagonal Boron Nitride Decorated Polypropylene Separator for Dendritic Free Sodium Deposition and Stripping, J. Electrochem. Soc, 170, 120513, https://doi.org/10.1149/1945-7111/ad0c6c (Impact Factor: 3.9; ISSN: 1945-7111).

133. Ankush Kumar Singh, Pritesh Keshari, Arti Saroj, V. Ramanathan, Rosy*, Electrodeposition of Graphitic Carbon Nitride and its In-Situ Decoration with MnO_2 Nanostructures: A Tailored Interface for Dopamine Sensing, Surfaces and Interfaces, 42, 2023, 103316, (Impact Factor 6.2, 2468-0230) https://doi.org/10.1016/j.surfin.2023.103316

134. Shubham Garg, Abhay Singh, Avanish Singh Parmar, and Rosy*, Boron Carbon Nitride-Assisted Electro-Functionalization of Screen-Printed Electrode for Tryptophan Sensing, ACS Applied Nano Materials,2023, 6, 16, 14849–14860, https://doi.org/10.1021/acsanm.3c02396. (Impact Factor: 5.9; ISSN: 2574-0970).

135. Akanksha Joshi, Sankalpita Chakraborty, Sri Harsha Akella, Arka Saha, Ayan Mukherjee, Bruria Schmerling, Michal Ejgenberg, Rosy, Malachi Noked, High-Entropy Co-Free O3-type Layered Oxyfluoride: A Promising Air-Stable Cathode for Sodium-Ion Batteries, Advanced Materials, 2023, 35, 2304440, doi.org/10.1002/adma.202304440 (Impact Factor 29.4, 1521-4095).

136. Sri H.Akellaa, Muniyandi Bagavathia, Rosy, Daniel Sharon, Capraz Ozgur and Malachi Noked, Exploring the impact of lithium halide-based redox mediators in suppressing CO_2 evolution in Li–O_2 cells, J. Mater. Chem. A, 2023, 11, 20480-20487, DOI: 10.1039/D3TA03002D (Impact Factor: 11.9; ISSN: 2050-7496).

137. Shubham Garg, Sarah Taragin, Arka Saha, Olga Brontvein, Kevin Leung, Malachi Noked, Rosy*, Zn-enriched cathode layer interface via atomic surface reduction of LiNi0.5Mn1.5O4: Computational and experimental insights, Journal of Power Sources, 569, 15 June 2023, 233017, (Impact Factor: 9.2; ISSN: 1873-2755).

138. Bioactive Molecules from Lignin via Homogeneous and Heterogeneous Catalytic Pathways: M. Liua, Z. Sun*, S. Elangovan*, *Trends in Chemistry*, 2023, 5, 713-716.

139. Transition-Metal-Catalysed Transfer Hydrogenation Reactions with Glycerol and Carbohydrates as Hydrogen Donors: M. F. Ansari, Anshika, J-B Sortais,* S. Elangovan,* *Eur. J. Org. Chem*. 2024, https://doi.org/10.1002/ejoc.202301278

140. Recyclable bio–based epoxy resin thermoset polymer from wood for circular economy: B. Zhang, S. Elangovan, Z. Sun*: 2024, Submitted.

141. Tripathi, P, Mehrafrooz, B., Aksimentiev, A., Jackson, S.E., Gruebele, M., Wanunu, M. (2023) A Marcs-Type Inverted Region in the Translocation Kinetics of a Knotted Protein. The Journal of Physical Chemistry Letters. 14(47), 10719-10726.

142. Saraf M. Prateek. Ranjan R. Bhuvaneshwari B., Thakur V.K. and Gupta R.K. (2024) Polydopamine Enabled Biomimetic Surface Engineering of Materials: New Insights and Promising Applications. Advanced Materials Interfaces, 11: 01-28.

143. Pillai B.P. Bhuvaneshwari B., Gupta R.K. Tyagi A. (2024) Bio-based materials for antimicrobial films in food applications: beyond the COVID-19 pandemic era. Oxford Open Materials Science. 3 (1): 01-08.

144. Visible-light-induced C-S bond formation in the synthesis of 2,4-disubstituted thiazoles through cascade difunctionalization of acetophenone: a greener approachRajput, K., Singh, V., Mahaur, P., Singh, S., Srivastava, V.2024. Organic and Biomolecular Chemistry 22(14), pp. 2774-2779.

145. Ultrasound-Mediated Green Synthesis of Imidazo[1,2- a]pyridines and Imidazo[2,1- b]thiazoles through C(sp^3)-H FunctionalizationChauhan, S., Verma, P., Srivastava, V.2024. Synlett, Article in Press.

146. A novel approach towards synthesis of benzothiazoles and benzimidazoles: Eosin Y-catalyzed photo-triggered C-S and C-N bond formationRajput, K., Singh, V., Kamal, A., (...), Singh, S., Srivastava, V.2023. New Journal of Chemistry47(48), pp. 22276-22280.

147. Microwave-assisted chemoselective transamidation of secondary amides by selective N–C(O) bond cleavage under catalyst, additive and solvent-free conditions Singh, V., Rajput, K., Mishra, A., Singh, S., Srivastava, V.2023.Chemical Communications 59(94), pp. 14009-14012.

148. Visible-light-induced arylation via an electron-donor-acceptor complex: a catalyst-free approach for the synthesis of N-(hetero)aryl sulfonamidesKamal, A., Srivastava, V., Singh, S.2023. New Journal of Chemistry 47(31), pp. 14605-14609.

149. A green approach for the synthesis of 2-oxo-1,2,3,4-tetrahydropyrimidines through oxidative functionalization of methyl arenes/benzyl derivatives via in situ generated ureaSingh, V., Rajput, K., Verma, P., Singh, S., Srivastava, V. 2023. Research on Chemical Intermediates49(7), pp. 2969-2987.

150. Anti-coronavirus and antiviral activity of medicinal plants (Book Chapter) Yadav, S., Chauhan, D.S., Srivastava, V.2023. *Phytochemicals in Medicinal Plants: Biodiversity, Bioactivity and Drug Discovery,* pp. 269-289.

151. A green synthesis of pyrimido[4,5-b]quinolines and pyrido[2,3-d]pyrimidines via a mechanochemical approachSingh, H.K., Kamal, A., Maury, S.K., (...), Srivastava, V., Singh, S.2023. Organic and Biomolecular Chemistry21(23), pp. 4854-4862.

152. Molecular Weights of Polyethyleneimine-Dependent Physicochemical Tuning of Gold Nanoparticles and FRET-Based Turn-On Sensing of Polymyxin BTiwari, A.K., Gupta, M.K., Meena, R., Pandey, P.C., Narayan, R.J. 2024, Sensors.

153. Aggregation-Resistant, Turn-On-Off Fluorometric Sensing of Glutathione and Nickel (II) Using Vancomycin-Conjugated Gold NanoparticlesTiwari, A.K., Gupta, M.K., Yadav, H.P., Narayan, R.J., Pandey, P.C. 2024, Biosensors.

154. Organotrialkoxysilanes Mediate the Syntheses of Fluorescent Gold Nanoparticles and TiO2-Supported Ag–Ni Nanocatalysts for Selective Hydrazine Sensing and DecompositionMitra, M.D., Singh, H., Singh, R., Pandey, P.C. 2023, Chemistry Select.

155. Synthesis and Properties of Organotrialkoxysilane Functionalized Palladium–Cobalt Heterogeneous Catalysts for Oxygen Evolution ReactionChitra Singh, Singh, K., Pandey, P.C. 2023, Russian Journal of Electrochemistry.

156. Synthesis and in vitro antibacterial behavior of curcumin-conjugated gold nanoparticles 2023, Pandey, M., Singh, A.K., Pandey, P.C. 2023, Journal of Materials Chemistry B.

157. Synthesis of vancomycin functionalized fluorescent gold nanoparticles and selective sensing of mercury (II) Tiwari, A.K., Yadav, H.P., Gupta, M.K., Narayan, R.J., Pandey, P.C. 2023, Frontiers in Chemistry, 11,1238631.

Proceedings of International Conferences

1. P. Gautam, A.K. De, Indrajit Sinha, C. K. Behera, K. K. Singh, Waste to wastewater treatment: Synthesis of CuO nanoparticles from discarded printed circuit boards for the removal of Methylene Blue under visible light, *Materials Today Proceedings,* Published online 6th August 2023.
2. Uttam Kumar, Indrajit Sinha, Trilochan Mishra, Synthesis and photocatalytic evaluation of 2D MoS2/TiO2 heterostructure photocatalyst for organic pollutants degradation, *Materials Today Proceedings,* Published online, 12th August 2023.
3. Rajesh Kushwaha, Conference (6th Symposium on Advanced Biological Inorganic Chemistry (SABIC-2024) 2024, International), 07/01/2024-11/01/2024, IACS, Kolkata.
4. Apurba Mandal, Conference (6th Symposium on Advanced Biological Inorganic Chemistry (SABIC-2024) 2024, International), 07/01/2024-11/01/2024, IACS, Kolkata.
5. Tyagi A., Bhuvaneshwari B., (2024) Defect Optimized Two Dimensional MoS2 in Electrospun Polymer Matrix, TransMat 2K24, Held from 01st to 04th February 2024, IIT (BHU), Varanasi.

Other Activity Details

Dr. Yogesh Chandra Sharma

a) Member BoG, BRSI (2021-24)

b) Member, Board of Studies, Department of Chemistry, Mizoram University (2024-2026)

c) Member, Academic Council, Mizoram University (2024-2026)

Dr. V. Ramanathan

a) Member of National Curricular Area Group (CAG) for Science and IKS under the aegis of NCF2023.

b) Member of History of Science National Council and Research Council; INSA.

c) Chairman of UGC NET paper on IKS.

d) Member of UGC NET Syllabus Committee for IKS.

e) Member of UGC Committee on framing guidelines to introduce IKS in higher education.

f) Member of Academic and Research Council of Mahayogi Gorakhnath Medical University, Gorakhpur.

g) Co-Convener CRSI Varanasi Chapter.

22. Department of Mathematical Sciences

Complete Name of Department: Department of Mathematical Sciences

Year of Establishment: 1985

Head of the Department: Prof. Sanjay Kumar Pandey w.e.f. 01.01.2022

Brief Introduction of the Department:

Department of Mathematical Sciences began its journey in the year 1968 as a section to assist engineering departments of the institute, which in the true sense, pioneered engineering education in the nation. It soon acquired the status of a full-fledged department in 1985. The department caters to the needs of the undergraduate as well as post-graduate students of the Institute. It runs a five years Integrated Dual Degree program in Mathematics & Computing since 2005. This is one of the most sought courses offered by theinstitute. The top jobs in terms of the annual package by reputed MNCs are offered to the students for this course which indicates the popularity and usefulness of the course for the industrial growth in general and software industry, in particular, under present circumstances. The department aims to emphasize research in analysis, algebra, topology, mathematical modelling, functional analysis, numerical optimization**,** harmonicanalysis, fracture mechanics, solid mechanics, fluid dynamics, heat and mass transfer, biomathematics, digital image processing, graph theory, parallel computing, queuing theory and many more fields of applied nature. The department's contribution is enormous in terms of numerous research papers published in reputed international and national journals over the past few decades. Computing is the glamour of the department. It annexes several dimensions in terms of new and growing areas of research and further facilitates the simulation of mathematical models constructed for interdisciplinary areas.

Major areas of Research:

Fluid Dynamics: (incompressible fluids), Fluid Dynamics: Gas Dynamics, Topology, Functional Analysis, Solid Mechanics, Harmonic Analysis, Algebra (ring and modules), Heat & Mass Transfer, Numerical Analysis, Operations research, Optimization, Graph Theory and Network Sciences, Number Theory, Differential Geometry, Differential Equation, Algebraic Geometry, Complex Geometry, Applied Probability

Area of the Department (in square meters):

New Building = 1080 Sq-meter; Old Building = 585 Sq-meter

Students on Roll

Sl. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1	B. Tech/B.Arch	57	57	58	58	48
2	Ph. D (Under Institute Fellowship)	08	01	01	02	17
3	Ph. D (Under Sponsored Category)	19	09	10	10	23

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
ABROAD					
1	JesminaPervin	18121018	9th biennial Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM 2023)	June 5 - 8, 2023, Winnipeg Manitoba, Canada	SERB and IIT(BHU)
2	Promod Sharma	18121004	Finite and residually finite groups	19 – 22 June, 2023, Bilbao, Spain	SERB
3	Anupam Kumar Pandey	18121520	10th International Congress on Industrial and Applied Mathematics	20 – 25 August, 2023, Waseda University, Tokyo, Japan	NBHM

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1	Abhishek Senapati	19121501	International Conference on Nonlinear Applied Analysis & Optimization (ICNAAO 2023)	08-10 Dec 2023. NIT Durgapur, (W.B.), India	IIT (BHU), Varanasi.
2	Abhishek Senapati	19121501	Conference on Functional Analysis and Fractals (CFAF 2024)	16-18 Feb 2024. IIIT Allahabad, Prayagraj, India.	Nil
3	Jayanta Sarkar	20121514	International Conference on Nonlinear Applied Analysis & Optimization (ICNAAO 2023)	08-10 Dec 2023. NIT Durgapur, (W.B.), India	IIT (BHU), Varanasi.
4	Jayanta Sarkar	20121514	Conference on Functional Analysis and Fractals (CFAF 2024)	16-18 Feb 2024. IIIT Allahabad, Prayagraj, India.	Nil
5	Mohd Kashif	18121505	International Conference on Differential Equations and Control Problems (ICDECP23)	Jun15-17, 2023 IIT Mandi, H. P. India	Institute
6	MeghaPandey	19121020	International Conference on Nonlinear Applied Analysis & Optimization (ICNAAO 2023)	08-10 Dec 2023. NIT Durgapur, (W.B.), India	IIT (BHU), Varanasi.
7	MeghaPandey	19121020	Conference on Functional Analysis and Fractals (CFAF 2024)	16-18 Feb 2024. IIIT Allahabad, Prayagraj, India.	Nil
8	GatlaSushmitha	19124011	International Conference on Computations and Data Sciences (CoDS-2024)	8-10th March 2024. IIT Roorkee	IIT (BHU), Varanasi.
9	Harshdeep Singh Kohli	19124015	International Conference on Computations and Data Sciences (CoDS-2024)	8-10th March 2024. IIT Roorkee	IIT (BHU), Varanasi.
10	MasettyGayathri	19124024	International Conference on Computations and Data Sciences (CoDS-2024)	8-10th March 2024. IIT Roorkee	IIT (BHU), Varanasi.
11	YasharthSingh	19124044	International Conference on Computations and Data Sciences (CoDS-2024)	8-10th March 2024. IIT Roorkee	IIT (BHU), Varanasi.
12	Pradeep	18121508	Latest Advances in Computational and Applied Mathematics - 2024	21-24 Feb. 2024, IISER Thiruvanantpuram	IIT(BHU)
13	Poleen Kumar	23121010	AIS – Stochastic Processes and Applications (2024)	13.05.2024 – 25.05.2024 IIT Guwahati	--------
14	Savita Chaturvedi	23121003	AIS – Stochastic Processes and Applications (2024)	13.05.2024 – 25.05.2024 IIT Guwahati	--------
15	Priti Lata	20121508	International Conference on Advances in Applied Probability and Stochastic Processes	18th to 20th January, 2024, St. Aloysius College, Elthuruth, Thrissur, India	Institute
16	Priti Lata	20121508	2nd International Conference on Mathematical Analysis and Application in Modeling	9th to 11th October, 2023, Jadavpur University, Kolkata, India.	Institute
17	Arshi Vaishnavi	23121011	Elliptic and Parabolic PDEs	04-23 Dec. 2023, IISc Bangalore	IISc Banglore and UGC-JRF
18	Nitin Kumar Maurya	23121009	Elliptic and Parabolic PDEs	04-23 Dec. 2023, IISc Bangalore	IISc Banglore and UGC-JRF
19	JesminaPervin	18121018	Global Initiative for Academic Networks (GIAN) Course on "Network Sciences and Multi-Agent Systems"	June 19-30, 2023, Department of Mathematical Sciences, IIT(BHU), Varanasi, India	None
20	JesminaPervin	18121018	38th Annual Conference of the Ramanujan Mathematical Society (RMS 2023)	December 22-24, 2023, Department of Mathematics, IIT Guwahati, India	None
21	Smrati Pandey	20121510	International conference on "Discrete Mathematics & Graph Theory Day" (ADMA-2023)	8-10 June, 2023, Vidyavardhaka college of engineering, Mysuru, Karnataka	UGC Contingency and STSG

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
22	Smrati Pandey	20121510	Global Initiative for Academic Networks (GIAN) Course on "Network Sciences and Multi-Agent Systems"	June 19-30, 2023, Department of Mathematical Sciences, IIT(BHU), Varanasi, India	None
23	Smrati Pandey	2012510	38th Annual Conference of the Ramanujan Mathematical Society (RMS 2023)	December 22-24, 2023, Department of Mathematics, IIT Guwahati, India	STSG
24	Shivaprakasha	21121509	Global Initiative for Academic Networks (GIAN) Course on "Network Sciences and Multi-Agent Systems"	June 19-30, 2023, Department of Mathematical Sciences, IIT(BHU), Varanasi, India	None
25	Shivaprakasha	21121509	38th Annual Conference of the Ramanujan Mathematical Society (RMS 2023)	December 22-24, 2023, Department of Mathematics, IIT Guwahati, India	None
26	Shivaprakasha	21121509	International Conference on Theoretical and Computational Graph Theory (ICTCGT-2024)	January 10-12, 2024 Vellalar College For Women,Erode, Tamilnadu	None
27	Animesh Sarkar	20121504	NCMW - Elliptic Curves (2023)	3 Apr - 15 Apr 2023, IISER, Thiruvananthapuram	UGC Contingency and Self
28	Animesh Sarkar	20121504	AIS - An Introduction to p-adic Methods in Arithmetic (2023)	26 Jun - 15 Jul 2023, SRM University AP, Mangalagiri,	Self
29	Animesh Sarkar	20121504	International Seminar on Topology, Algebra and Applications	12 - 14 March 2024, University of North Bengal	Self
30	Mohd Shahvez Alam	20121502	NCMW - Elliptic Curves (2023)	April 3 - 15 2023, IISER, Thiruvananthapuram	Self
31	Mohd Shahvez Alam	20121502	AIS - An Introduction to p-adic Methods in Arithmetic (2023)	26 June - 15 July 2023, SRM University AP, Mangalagiri	Self
32	Mohd Shahvez Alam	20121502	International Seminar on Topology, Algebra and Applications	March 12 - 14 2024, University of North Bengal,	Self
33	Babita	19121006	Lecture series on Number Theory (2023)	August 10 to 13 2023, Sant Longwal Institute of Engg. &Tech. , Punjab	Online (No funding needed)
34	Babita	19121006	International Conference on Nonlinear Applied Analysis and Optimization	NIT Durgapur, 8 December to 10 December 2023	RSGF (contingency) (online)
35	Babita	19121006	International Conference on Mathematics and Applications	January 10 to 12 2024, Mata Sundri College for Women, University of Delhi	STGS
36	Ankita Sharma	19121004	38th annual conference of Ramanujan Mathematical Society	22 – 24 December, 2023, IIT Guwahati	IIT (BHU)
37	Mansi Mishra	19121002	Indian Women and Mathematics, Annual Conference	13 –15 July 2023, IISER Bhopal	IIT (BHU)
38	Mansi Mishra	19121002	18th Discussion Meeting in Harmonic Analysis	18 – 21 December 2023, IIT Guwahati	IIT Guwahati
39	Mansi Mishra	19121002	38th annual conference of Ramanujan Mathematical Society	22 – 24 December, 2023, IIT Guwahati	IIT (BHU)
40	Mansi Mishra	19121002	Harmonic Analysis: Fourier Multipliers and Related Topics	19 February - 01 March, 2024, HRI, Prayagraj	HRI, Prayagraj
41	Pooja Rani	19121013	Advanced Instructional School on Lie Groups and Lie Algebras	June 2023, IISc Bangalore	IISc, Bangalore
42	Pooja Rani	19121013	ICMAAM 2023	09 – 11 October, 2023, Jadavpur University, Kolkata	IIT (BHU)
43	Pooja Rani	19121013	38th annual conference of Ramanujan Mathematical Society	22 – 24 December, 2023, IIT Guwahati	IIT (BHU)

Sl. No.	Name of Student	Roll No.	Conference/Seminar/ Symposia/Workshop	Date & Venue	Financial Assistance From
44	Manish Chaurasia	18121008	Geometry, Analysis, and Mathematical Physics 2023	24 July – 02 August, 2023, NISER, Bhubaneswar	NISER, Bhubaneswar
45	Manish Chaurasia	18121008	ATM School on Representation Theory and Harmonic Analysis	11 – 16 December, 2023, IIT Guwahati	IIT, Guwahati
46	Manish Chaurasia	18121008	18th Discussion Meeting in Harmonic Analysis	18 – 21 December 2023, IIT Guwahati	IIT, Guwahati
47	Manish Chaurasia	18121008	Harmonic Analysis: Fourier Multipliers and Related Topics	19 February - 01 March, 2024, HRI, Prayagraj	HRI, Prayagraj
48	Shruti	21121002	International Conference on New Emerging Dimension in Science, technology and Management	12-13 March,2024 RG Govt PG College Ambikapur, Chhatisgarh	NA
49	Prem Singh	18121503	International Conference on Applied Mathematics and Mechanics	18-20 October,2023 IIT Indore	STGS
50	Ankit Prajapati	18121509	International Conference on Applied Mathematics and Mechanics	18-20 October,2023 IIT Indore	STGS
51	Anupam Kumar Pandey	18121520	International Conference on Mathematical Modelling, Applied Analysis and Computation	03 – 05 August, 2023, JECRC University, Jaipur	STGS
52	Anupam Kumar Pandey	18121520	International Conference on Applied Mathematics and Mechanics	18-20 October,2023 IIT Indore, Indore	STGS
53	Anupam Kumar Pandey	18121520	Latest Advances in Computational and Applied Mathematics	21 – 24 February, 2024, IISER Thiruvananthapuram, Kerala	NA
54	Pradeep Rai	19121005	National Instructional Workshop on Cryptology: Code-based Cryptography (NIWC-2023)	05-07 July, 2023, IIT(BHU), Varanasi	Self
55	Pradeep Rai	19121005	International Symposium on Quantum Computing and Innovations	14-15 July, 2023, Swantantrata Bhavan,BHU, Varanasi	NA
56	Pradeep Rai	19121005	One week high-end Workshop on “Quantum Computing and Information”	22-28 July, 2023, ABV-IIITM -Gwalior (MP)	Organizer (DST-SERB)
57	Pradeep Rai	19121005	International Conference on Cryptology & Network Security with Machine Learning (ICCNSML-2023)	27 – 29 October, 2023 PSIT Kanpur (Online Mode)	Self
58	Pradeep Rai	19121005	Workshop on “Algebraic Codes And Magma Computation”	10-11 November, 2023 IIT Patna (Online mode)	Self
59	Pradeep Rai	19121005	CIMPA SCHOOL on “Finite Geometry and Coding Theory”	20 November-01 December, 2023 IIT Hyderabad, Sangareddy, India	Organizer (CIMPA/NCM)
60	Pradeep Rai	19121005	Indocrypt 2023	10-13 December, 2023 KK Birla BITS Pilani Goa Campus	Institute (RSGF)
61	Pradeep Rai	19121005	38th Annual Conference of the Ramanujan Mathematical Society	22-24 December 2023 IIT Guwahati	Institute (DORD)
62	Mukul Kumar Verma	22121005	National Instructional Workshop on Cryptology: Code-based Cryptography (NIWC-2023)	05-07 July 2023, IIT(BHU), Varanasi	Self
63	Mukul Kumar Verma	22121005	Workshop on “Algebraic Codes And Magma Computation”	10-11 November, 2023 IIT Patna (Online mode)	Self

Names of students/scholars who got prizes and awards outsidethe Institute

Sl. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1.	Pooja Rani	19121013	Best paper	11 October, 2023, Jadavpur University, Kolkata	Jadavpur University

Faculty & their Activity

Faculty and their areas of specialization

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
PROFESSORS			
1	Tanmoy Som, Ph. D Emp. No. 18386	1986	Functional Analysis, Fuzzy Set Theory, Mathematical Modeling, Image Processing, Soft Computing
2	Lal Pratap Singh, Ph.D Emp. No.17162	1987	Nonlinear Waves in Gasdynamics, Computational Fluid Dynamics
3	Sanjay Kumar Pandey, Ph.D Emp. No. 17315	1998	Biomechanics, Fluid Dynamics, Graph Theory, Digital Image Processing
4	Santwana Mukhopadhyay, Ph.D, Emp. No. 17180	1998	Modelling, Heat Transfer and Non-Linear Dynamics
5	Subir Das, Ph.D Emp. No.18373	1999	Fracture Mechanics, Mathematical Modelling, Nonlinear Dynamics
6	Santosh Kumar Upadhyay Ph.D, D.Sc., Emp. No 18409	1999	Wavelet Analysis, Functional Analysis, Pseudo-Differential Operator
7	Murali Krishna Vemuri, Ph.D. Emp. No.50167	1999	Harmonic Analysis, Differential Geometry
ASSOCIATE PROFESSORS			
1	Ashok Ji Gupta, Ph.D Emp. No17179	2003	Theory of Rings and Modules
2	Rajeev, Ph.D Emp. No. 17745	2009	Moving boundary problem (Stefan problems), Computational schemes for the parabolic PDE.
3	Vineet Kumar Singh, Ph.D Emp. No.19772	2009	Computational Approach for Integral Equations and Differential Equations, Numerical Wavelets Analysis, Operational Matrix Methods, Computational Approach for Fractional Mathematical Models.
4	Rajesh Kumar Pandey, Ph.D Emp. No.19846	2009	Numerical Methods for Fractional Integro-Differential Equations, Image Processing
5	Sunil Kumar, Ph.D Emp. No. 50069	2012	Numerical analysis, Image Processing, Artificial Intelligence
ASSISTANT PROFESSORS			
1	Anuradha Banerjee, Ph.D Emp. No. 19773	2012	Stochastic Modelling in Queuing Theory
2	Debdas Ghosh, Ph.D Emp. No. 50068	2014	Multiobjective Optimization, Interval Optimization, Fuzzy Geometry
3	Lavanya Selvaganesh, Ph.D Emp. No. 50070	2008	Graph Theory, Network Sciences, Analysis of Complex Networks
4	Abhash Kumar Jha, Ph.D Emp. No. 50242	2017	Number Theory, Siegel Modular forms and Jacobi Forms
5	Sheela Verma, Ph.D Emp No. 50280	2019	Spectral Geometry, Analysis on Manifolds, Riemannian Geometry
6	Divya Goel, Ph.D Emp No. 50281	2020	Analysis of partial Differential equations
7	Anoop Singh, Ph.D Emp No. 50309	2021	Algebraic Geometry, Complex Geometry
8	Rakesh Arora, Ph.D Emp No. 50314	2020	Analysis of Partial differential equations.

Sl. No.	Name, Qualifications, Employee No.	Year of PhD degree	Major Areas of Specialization
9	Amit Kumar, Ph.D Emp No. 50318	2018	Applied Probability
10.	Manish Kumar Khandelwal Ph.D, Emp No. 50331	2014	Computational Fluid Dynamics, Hydrodynamic Stability Analysis

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Shri. Som Deo Keshari (M.Lib I.Sc)	Junior Superintendent 19879	24.05.2017
2	Smt. Neha Gautam Mass Communication	Senior Assistant 50120	10.10.2023
3	Shri. Anil Kumar Mishra (B.A)	Technical Superintendent 18068	19.02.2007
4	Shri. Ram Pyare (M.Sc)	Senior Technician 19603	11.09.2023
5	Shri.Niraj Kumar (B.Tech)	Junior Technician 50409	19.01.2024
6	Shri. Amod Kumar Patel (B.Tech)	Skilled Office Assistant (Daily Wager)	30.05.2014
7	Smt. Nagma Praveen (M.A)	MTS-Skilled	26.05.2022
8	Shri. Pintu Kumar Mahto (B.Sc), B.Lib	MTS	13.04.2018
9	Shri. Ved Prakash Yadav (M.A)	MTS	26.09.2023

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

Sl. No.	Coordinator	Title	Period
1	Dr. Lavanya Selvaganesh	GIAN Course on "Network Science and Multi-Agent Systems"	June 19-30, 2023
2	Dr. Ashok Ji Gupta	National Instructional Workshop on Cryptology: Code based Cryptography (NIWC-2023)	July 05-07, 2023.
3	Prof. T Som	Workshop on Mathematical Analysis, Applied Probability and Astrophysics (WMAAPA-2023) at CMS, Kolkata	Sept 7-14, 2023
4	Prof. T Som (Program Chair)	International Conference on Nonlinear Applied Analysis & Optimization (ICNAAO 2023)	Dec 8-10, 2023

Short-term courses/workshops/seminars/symposia/conferences/training programmes attended

Sl. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1	Prof. T Som	National Conference on Mathematical Modeling, Analysis and Computation (NCMMAC-2023)	Jun 6-7, 2023 RGNIYD, Sriperumbudur, India
2	Prof. T Som	International Symposium on Mathematical Analysis of Fractals and Dynamical Systems – 2023 (ISMAFDS–2023)	Aug 24-25, 2023 VIT Vellore, India
3	Prof. T Som	International Conference on Nonlinear Applied Analysis & Optimization (ICNAAO 2023)	Dec 8-10, 2023 NIT Durgapur, (W.B.), India
4	Prof. T Som	International Conference on Advancement of Mathematical Sciences and Computer Vision (ICAMSCV-2023)	Dec 9-11, 2023 CMS, Kolkata
5	Prof. T Som	Conference on Functional Analysis and Fractals (ICMC 2024)	Jan 4-8, 2024 IIIT Allahabad, Prayagraj, India.

Sl. No.	Name of Faculty Member	Title	Period and Venue
6	Prof. T Som	Conference on Functional Analysis and Fractals (CFAF 2024)	Feb 16-18, 2024 IIIT Allahabad, Prayagraj, India.
7	Prof. T Som	7th International Conference on Recent Advances in Mathematical Sciences and its Applications (RAMSA - 2024)	Feb 29-Mar 2, 2024 Jaypee Institute of Information Tech., Noida
8	Prof. T Som	International Conference on Computations and Data Sciences (CoDS-2024)	March 8-10, 2024 IIT Roorkee
9	Dr. Anoop Singh	Workshop and school on complex Lagrangian, Integrable systems and Quantization	5.06.2023 to 9.06.2023, Mathematical Institute, University of Oxford, UK
10	Dr. Anoop Singh	Discussion meeting on Algebra and geometry	16 – 18 August 2023, IISER, Bhopal
11	Dr. Anoop Singh	Harish-Chandra Centenary celebration	2 -7 October 2023, HRI, Prayagraj
12	Dr. Anoop Singh	Discussion meeting on Grothendieck-Teichmuller theory	26 February to 01 March 2024, ICTS, Bangalore
13	Dr. Anoop Singh	Discussion meeting on Bundles 2024	25-29 March, 2024, TIFR, Mumbai
14	Dr. Anuradha Banerjee	International Conference on Advances in Applied Probability and Stochastic Processes	18 - 20January, 2024, St. Aloysius College, Elthuruth, Thrissur, India
15	Dr. Rakesh Arora	Elliptic Partial Differential Equations, Geometry, and Calculus of Variations	January 08-19, 2023. Melbourne, Australia.
16	Dr. Rakesh Arora	2023 UNC Greensboro PDE conference	June 09-11, 2023, North Carolina, USA.
17	Dr. Rakesh Arora	A Symposium on Luis Caffarelli's works	June 05-09, 2023. TIFR Bangalore, India.
18	Dr. Lavanya Selvaganesh	International Conference on Graph Theory and Applications (ICGTA 2023)	Amrita University, Coimbatore, India, December 18-20, 2023.
19	Dr. Lavanya Selvaganesh	38th Annual Conference of Ramanujan Mathematical Society	IIT Guwahati, Assam, December 22-24, 2023.
20	Dr. Lavanya Selvaganesh	International Conference of Theoretical and Computational Graph Theory (ICTCGT 2024)	Vellar College for Women, Erode, Tamilnadu, January 10-12, 2024.
21	Dr Rajeev	A non-classical Stefan problem with a variable thermal conductivity	12 - 14 July 2023, Manipal Institute of Technology Bengaluru in association with NIT Uttarakhand
22	Dr Rajeev	A mathematical model of a moving boundary problem related to phase change problem	June 20-22, 2023 at BITS Pilani Dubai Campus, UAE
23	Dr Rajeev	A Finite Difference Scheme for a Non-classical Moving Boundary Problem	Pandit Deendayal Energy University, Gandhinagar, Gujarat, India, December 15-17, 2023

Special lectures delivered by faculty members in other institutions

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1	T Som	An Intuitionistic Fuzzy Rough Set Model for Feature Selection	Rajiv Gandhi National Institute of Youth Development, Sriperumbudur, TN	Jun 6, 2023
2	T Som	Some Fixed Point Results for various Contractions with a Glimpse to Fractals and Some Applications	Vellore Institute of Technology, Vellore, TN	Aug 24, 2023
3	T Som	Some Advancements of Ciric-Type Operators for Common Fixed Points and an Application	National Institute of Technology, Durgapur (WB)	Dec10, 2023
4	T Som	Some Advancements of Ciric-Type Operators for Common Fixed Points and an Application	Calcutta Mathematical Society, Kolkata	Feb 16-18, 2024
5	T Som	Data Clustering Algorithms: A Comparative Study	Kalasalingam Academy of Research and Education, TN	Jan 6, 2024

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
6	T Som	Some Extensions of the Banach Contraction Principle and Few Applications	Indian Institute of Information Technology, Prayagraj	Feb 18, 2024
7	T Som	Some Recent Fixed Point Results with Applications	Jaypee Institute of Information Tech., Noida	Mar 1, 2024
8	T Som	Fuzzy Rough Missing Value Imputed Feature Selection	Indian Institute of Technology, Roorkee	Mar 10, 2024
9	Lal Pratap Singh	Asymptotic Analysis and Perturbation Theory	VIT Bhopal	8th July 2023
10	Lal Pratap Singh	Finite Difference Method	Guru Ghasidas Vishwavidyalaya, Bilaspur	13, 14 December 2023
11	Lal Pratap Singh	Hyperbolic System of Conservation Laws and Weak Solutions	University of Allahabad	15 February 2024
12	Lal Pratap Singh	Basics of Numerical Methods – Hyperbolic PDE's	KS Saket PG College, Ayodhya, UP	21st March 2024
13	Amit Kumar	Distribution of order k	Calcutta Mathematical Society	9-15 September, 2023
14	Anoop Singh	On the moduli space of logarithmic connections over a compact Riemann surface	IIT, Goa	29-01-2024
15	Anoop Singh	Moduli space of Lie algebroid connections	TIFR, Mumbai	26-04-2024
16	Debdas Ghosh	A nonmonote quasi-Newton method for solving set optimization problems International Conference on Variational Analysis and Optimization with Applications	Aligarh Muslim University	24-Sep-2023
17	Rakesh Arora	A large class of nonlocal elliptic equations with singular nonlinearities.	IIT Jodhpur, India	October 25, 2023.
18	Rakesh Arora	Nonlocal equations with singular nonlinearities.	HRI Prayagraj, India.	August 11, 2023.
19	Lavanya Selvaganesh	Structural Characterization of Connected Bipartite Q-integral Graphs	International Conference on Graph Theory and Applications (ICGTA 2023) held at Amrita University, Coimbatore, India	December 18-20, 2023
20	Lavanya Selvaganesh	Eccentricity Matrix and Corona Product of Graphs - An Overview	38th Annual Conference of Ramanujan Mathematical Society, IIT Guwahati, Assam	December 22-24, 2023.
21	Lavanya Selvaganesh	Eccentricity Matrix and Product of Graphs - An Overview	International Conference of Theoretical and Computational Graph Theory (ICTCGT 2024), Vellar College for Women, Erode, Tamilnadu,	January 10-12, 2024
22	Rajesh Kumar Pandey	Numerical scheme for a two-dimensional time fractional reaction–diffusion equation on a bounded domain	IIT Kanpur	January 20-21, 2024
23	Rajesh Kumar Pandey	Non-uniform Time-stepping Approximation Methods to Solve the Two-dimensional Time-fractional Diffusion-wave Equation	IMACS World Congress, Rome, Italy	September 11-15, 2023
24	Rajesh Kumar Pandey	Fractional Calculus Based Approach for Retinal Blood Vessel Segmentation	ICIAM 2023 Tokyo, Japan	August 20-25, 2023
25	Sanjay Kumar Pandey	The beauty of the queen that loved unyielding principles	UGC-HRDC, University of Allahabad Prayagraj - 211002	06.12.2023
26	Sanjay Kumar Pandey	The beauty of the queen that loved unyielding principles	UGC-HRDC, University of Allahabad Prayagraj - 211002	30.10.2023

Sl. No.	Name of faculty Member	Topic of Lecture	Institution	Date
27	Sanjay Kumar Pandey	Exploration of dynamics of atmospheric whirlwinds: Transition from one-cell to two-cell tornadoes	NIT Warangal, Telengana	08.12.2023
28	Sanjay Kumar Pandey	Mathematical expedition to explore dynamics of atmospheric whirlwinds	Shivalik College of Engineering, Dehradun	21.07.2023
29	Sanjay Kumar Pandey	The beauty of the queen that loved unyielding principles	Govt College, Kharasia, Chhattisgarh	12.08.2023
30	Sanjay Kumar Pandey	Exploration of dynamics of tornadoes: Transition from one-cell to two cells	Kurukshetra University, Kurukshetra, Harayana	30.12.2023
31	Sanjay Kumar Pandey	Exploration of flow dynamics of atmospheric whirlwinds	Mahatma Gandhi Central University, Motihari (East Champaran) Bihar	19.03. 2023
32	Sanjay Kumar Pandey	Modelling whirlwinds: Exploration of genesis of dust devils	Nalanda Open University, Nalanda,	04.11.2023
33	Sanjay Kumar Pandey	Modelling of Dynamics of Atmospheric Whirlwinds	RG Govt PG College, Ambikapur, Chhattisgarh	12.03.2024
34	Sanjay Kumar Pandey	The beauty of the queen that loved unyielding principles	Holy Cross Women's College, Ambikapur, Chhattisgarh	12.03. 2024
35	Santwana Mukhopadhyay	Keynote Lecture : Mathematics for Coupled Thermoelasticity	Department of Mathematics, Mahatma Gandhi Central University, Motihari (East Champaran)	March, 19-20, 2024.
36	Santwana Mukhopadhyay	Invited talk: On Moore-Gibson-Thompson thermoelasticity	Department of Mathematics, IIT Indore.	October, 18-20, 2023.

Honors and awards

Sl. No.	Name of Faculty Member	Details of Award
1	T Som	Vice President of Calcutta Mathematical Society, Kolkata
2	Lal Pratap Singh	President, Mathematical Society-BHU
3	Rakesh Arora	NBHM Travel Award.
4	Rakesh Arora	International Travel Award (SERB-ITS).
5	Sanjay Kumar Pandey	Professor T Pati Memorial Lecture Award at CONIAPS-XXIX at Shivalik College of Engineering, Dehradun on 21.07.2023

Books, monographs authored/co-authored

Sl. No.	Name of Author/Co- Authors	Title	Publisher
1	Tanmoy Som, Oscar Castillo, Anoop Kumar Tiwari, Shivam Sreevastava	Fuzzy, Rough and Intuitionistic Fuzzy Set Approaches for Data Handling: Theory and Applications : Forum for Interdisciplinary Mathematics (Edited Book)	Springer Singapore
2	Rakesh Kumar Pandey, Anoop Kumar Tiwari, Shivam Shreevastava, Tanmoy Som	Enhancing the Prediction of Anti-cancer Peptides by Suitable Feature Extraction and FRFS with ACO Search Followed by Resampling in_Fuzzy, Rough and Intuitionistic Fuzzy Set Approaches for Data Handling: Theory and Applications (Edited Book)	Springer Singapore
3	Anoop Kumar Tiwari, Shivam Shreevastava, Neelam Kumari, Arti Malik, Tanmoy Som	Application of Feature Extraction and Feature Selection Followed by SMOTE to Improve the Prediction of DNA-Binding Proteins, Fuzzy, Rough and Intuitionistic Fuzzy Set Approaches for Data Handling: Theory and Applications (Edited Book)	Springer Singapore
4	H Singh, H M Srivastava, R K Pandey	Special Functions in Fractional Calculus and Engineering	CRC Press Taylor & Francis Group
5	TN Dinh, Shyam Kamal, R K Pandey	Fractional-Order System Control Theory and Applications	Fractal and Fractional, MDPI

Editorial boards of journals

Sl. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1	Prof. T Som	Guest Editor	i) International Journal of Fuzzy Computation and Modelling ii) The Journal of Analysis
2	Prof. T Som	Member, Editorial Board	ii) Indian Academy of Mathematics
3	Prof. T Som	Reviewer	i) Mathematical Reviews, USA ii)Transactions on Fuzzy Systems iii) Journal of Intelligent & Fuzzy Systems, iv) The Journal of Analysis and few other reputed journals
4	Dr. Debdas Ghosh	Editorial Board Member	Annals of Mathematical Sciences andApplications, International Press of Boston
5	Dr. Debdas Ghosh	Editorial Board Member	Journal of Mathematics, Hindawi
6	Dr. Rajesh Kumar Pandey	Guest Editor	International Journal for Numerical Methods in Heat & Fluid Flow
7	Dr. Rajesh Kumar Pandey	Guest Editor	Critical reviews in Biomedical Engineering
8	Dr. Rajesh Kumar Pandey	Guest Editor	International Journal of Applied Nonlinear Science
9	Prof. S. K. Pandey	Executive Editor (Mathematics)	Journal of International Academy of Physical Sciences, Allahabad
10	Prof. S. K. Pandey	Member, Editorial Board	IIST Journal of Mathematics and Computing Systems (JMCS)
11	Prof. Santwana Mukhopadhyay	Associate Editor	Mathematics and Mechanics of Solids
12	Prof. Santwana Mukhopadhyay	Editor	International Journal of Thermoelasticity
13	Prof. Santwana Mukhopadhyay	Editor	Computational Methods in Science and Technology
14	Prof. Santwana Mukhopadhyay	Associate Editor	Journal of Thermal Stresses

Patents filed

Sl. No.	Name of Faculty Member	Title of Patent
1.	Prof. S. Das	"A system and method for determination of Crack progression" **(**Patent number: 527489**)**

Research and Consultancy

Sponsored research projects *(Ongoing only)*

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
1	Study of runs in multi-state trials	Dec 2023 to Dec 2025	SRG - SERB, Government of India	14,71,000	Amit Kumar
2	Approximation of runs in multi-state trials with appropriate distributions	Feb 2024 to Feb 2027	MATRICS - SERB, Government of India	6,60,000	Amit Kumar
3	Motives and algebro-geometric invariants of certain moduli spaces of connections	Two years (2023-2025)	SERB (SRG)	14,71,844/-	Anoop Singh
4	Instability mechanism of magneto-hydrodynamic non-isothermal annular Poiseuille flow: A numerical study	April 2023 to April 2026	SERB-DST	660000/-	Manish K Khandelwal
5	Nonlocal Elliptic equation with critical growth nonlinearities	09/01/23-08/01/25	SERB	14,71,294	Divya Goel
6	Mixed local-nonlocal double-phase elliptic and parabolic equations.	2023-25	SERB	14,71,844	Rakesh Arora
7	Mixed local-nonlocal elliptic and parabolic equations with singular nonlinearities.	2023-25	IIT-BHU	10,00,000	Rakesh Arora
8	L-functions associated to modular forms and non-vanishing of Poincare series	2022-2024.	SERB SRG	14,71,734/-	Abhash Kumar Jha

Sl. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Coordinator
9	Certain space of cusp forms spanned by eta quotient and applications	2022-2025	SERB MATRICS	6,60,000/-	Abhash Kumar Jha
10	A Numerical Study of Some Non-classical Diffusion/Heat Equations with Free Boundaries	09-Jan-23 to 08-Jan-2026	SERB	6,60,000	Rajeev
11	Approximation Methods for Generalized Sturm-Liouville Problems	2023-2026	SERB	660000/-	Rajesh Kumar Pandey
12	Investigation of size effects on vibration and thermoelastic damping in nano-electro-mechanical systems (NEMS) of piezoelectric materials	Jan 2023-Jan 2026	SERB (Under MATRICS Project)	6,60,000	Santwana Mukhopadhyay
13	Existence and Stability analysis of periodic solutions of variable time impulsive neural networks	2021-2024	SERB, MATRICS	6,60,000	Subir Das
14	Study of Two Dimensional Fractional Order Nonlinear Transport Phenomena Problems in Porous Media	2022-2025	BRNS, BARC	14,84,000	Subir Das
15	Applications of Wavelet transforms and Pseudo-differential operators in partial differential equations and machine learning	2022-2025	SERB, MATRICS	6,60,000	S.K. Upadhyay
16	Wavelets Adaptive Schemes for Tumor Growth Models	2023-2026	UP-CST	11,44,000	Vineet K. Singh and Subir Das
17	Wavelets Adaptive Schemes for Singular Integral Equations	2022-2025	SERB, MATRICS	6,60,000	Vineet K Singh
18	Adaptive Computational Approach for Riesz Fractional Advection Dispersion Wave Equations	2023-2026	SERB-CRG	21,67,264	Vineet K Singh
19	Nonsmooth Optimization and Duality Theory Under Variable Dominance and Interval Uncertainty	2022-2025	SERB-CRG	27,47,492	Debdas Ghosh
20	On Developing Polynomial-time Interior-Point Methods for Robust Multiobjective Convex Optimization Problems	2022-2025	SERB, MATRICS	6,60,000	Debdas Ghosh
21	Isoperimetiric bounds and obstacle placement problems for mixed Steklov-Dirichlet eigenvalues on Riemannian manifolds	2022-2024	SERB-SRG	14,71,624	Sheela Verma
22	Development of Cryptographically efficient lightweight MDS matrices and its extension to code based PQC	2022-2025	DRDO Bangalore	23,10,000	Ashok Ji Gupta
23	Efficient layer adapted methods for parabolic interface problems with boundary and interior layers	2024-2027	SERB-CRG	21,00,000	Sunil Kumar

Research Publications

1	Total Number of Papers Published in Refereed National Journals	1
2	Total Number of Papers Published in Refereed International Journals	120
3	Total Number of Papers Presented in National Conferences	1
4	Total Number of Papers Presented in International Conferences	2

Refereed International Journals

1. Abhishek Senapati, Ajay Kumar, Tanmoy Som (2023), Convergence analysis of modified Bernstein–Kantorovich type operators, Rendiconti del Circolo Matematico di Palermo Series 272(7): 3749-3764.
2. Vishal Agrawal, Tanmoy Som and Saurabh Verma (2023), A note on stability and fractal dimension of bivariate α-fractal functions, Numerical Algorithms 93(4): 1811-1833.
3. Abhishek Senapati, Ajay Kumar, Tanmoy Som (2023), On Stancu-type Integral Generalization of modified Jain Operators, Filomat 37(22): 7607-7622.

4. Vishal Agrawal, Megha Pandey, and Tanmoy Som (2023), Box dimension and fractional integrals of multivariate α- fractal interpolation functions, Mediterranean Journal of Mathematics, 20(3) (164).

5. Avinash Dixit, D R Sahu, Pankaj Gautam and Tanmoy Som (2023), Tikhonov Regularized Iterative Methods for Nonlinear Problems, Optimization: 1-32. doi.org/10.1080/02331934.2023.2231957.

6. Megha Pandey, Tanmoy Som & Saurabh Verma (2023), Set-Valued α-Fractal Functions, Constructive Approximation: 1-29.

7. Mohd Kashif, Kushal Dhar Dwivedi & Tanmoy Som (2023), Numerical solution of coupled type Fractional order Burgers' equation using Finite Difference and Fibonacci Collocation Method, Chinese Journal of Physics 77(9): 2314-2323.

8. Pankhuri Jain, Anoop Kumar Tiwari and Tanmoy Som (2023), Fuzzy Rough assisted Missing Value Imputation and Feature Selection, Neural Computing and Applications 35(3): 2773–2793.

9. Debdas Ghosh, Diksha Gupta and Tanmoy Som (2023), Analytical Fuzzy Space Geometry II, Fuzzy Sets and Systems (Elsevier), 459: 144-181.

10. Pankhuri Jain and Tanmoy Som (2023), *Multigranular rough set model based on robust intuitionistic fuzzy covering with application to feature selection,* International Journal of Approximate Reasoning 156: 16-37.

11. Shivam Shreevastava, Priti Maratha, Tanmoy Som (2023), Anoop Kumar Tiwari, A novel (alpha, beta)-indiscernibility-assisted intuitionistic fuzzy-rough set model and its application to dimensionality reduction, Optimization: 1-21.

12. Gourav Kumar and Tanmoy Som (2023), Interval variational inequalities and their relationship with interval optimization problems, The Journal of Analysis: 1-24.

13. Binayak S Choudhury, Nikhilesh Metiya, T Som, Sunirmal Kundu (2023), Existence and stability results for fixed points of multivalued F contractions and application to Volterra type non homogeneous integral equation of second kind, Annals of the University of Craiova-Mathematics and Computer Science Series 50(1): 1-15.

14. Megha Pandey, Tanmoy Som, and Saurav Verma (2023), Set-valued α-fractal functions, Constructive Approximation: 1–29.

15. Ajay Kumar, Abhishek Senapati, Tanmoy Som (2024), Approximation by Szasz–Kantorovich type operators associated with d-symmetric d-orthogonal polynomials of Brenke type, The Journal of Analysis, 32(1): 555-571.

16. Jayanta Sarkar, Tanmoy Som, Dhananjay Gopal (2024), Quasi-contraction operators with Common fixed point results and applications to stability, well-posedness Ostrowski property, Indian Jour Pure Appl. Math: 1-9. (SCIE/SCOPUS: IF 0 .7) (SJR:Q3-0.32)

17. Pradeep, Rahul Kumar Chaturvedi & L. P. Singh (2023), Solution of hyperbolic system with magnetic field, Waves in Random and Complex Media, Published online: 20 Sep. 2023. https://doi.org/10.1080/17455030.2023.2259494.

18. Gaurav, L. P. Singh, Pradeep (2023), The Application of Differential Constraint Methodfor the solution of Non homogeneous GeneralizedRiemann problem, Physica Scripta, 98(12): 125262:1-11.

19. Rahul Kumar Chaturvedi, Shobhit Kumar Srivastava, L P Singh, Nilam Venkata Koteswararao, Akshara Makrariya (2024), The growth and decay of nonlinear wave in polytropic reacting gas with small solid dust particles, Chinese Journal of Physics, 88: 827-838.

20. SK Srivastava, RK Chaturvedi, LP Singh (2024), The propagation of nonlinear wave in 2-D planar and axisymmetric non-ideal radiating gas flow under the influence of magnetic field, Journal of Astrophysics and Astronomy, 45(1):1-9.

21. Pradeep, Rahul Kumar Chaturvedi and L. P. Singh (2024), The concentration and cavitation in the Riemann solution for non-homogeneous logarithmic equation of state with magnetic field, *J. Math. Phys.* 65: 033101-18.

22. Pradeep, L. P. Singh (2024), The analytical solutions of the Riemann problem to 1-D non-ideal flow of dusty gas with external force, European Journal of Mechanics / B Fluids 104(March-April): 68–77.

23. Amit N. Kumar and Poleen Kumar (2024), A Negative Binomial Approximation to the Distribution of the Sum of Maxima of Indicator Random Variables, Statistics & Probability Letters, 208, 110040.

24. Amit N. Kumar (2024), Bounds on negative binomial approximation to call function, *REVSTAT* - Statistical Journal, 22(1), 25-43.

25. Amit N. Kumar and Palaniappan Vellaisamy (2023), Binomial approximation to locally dependent collateralized debt obligations, Methodology and Computing in Applied Probability, 25, Article: 81.

26. I. Biswas and Anoop Singh (2024), Line bundles on the moduli space of Lie algebroid connections over a curve, Bulletin des Sciences Mathématiques, Vol-193, 30 pages.
27. P. Keshari and Anoop Singh (2024), A remark on the moduli space of Lie algebroid λ-connections, Communications in Algebra, Vol-52 (6), 2282-2297.
28. Mainak Poddar and Anoop Singh (2023), Relative connections on principal bundles and relative equivariant structures, Differential Geometry and its Applications, Vol-90, 17 pages
29. Snehajit Misra and Anoop Singh (2023), On the relative logarithmic connections and relative residue formula, Communications in Algebra, Vol-51 (3), 1217-1228
30. Nidhi Singh and Manish K. Khandelwal (2023), Finite-amplitude instability of magnetohydrodynamic mixed convection flow of liquid metals in a vertical channel Physics of Fluids, 35: 054112-1-16.
31. Manish K. Khandelwal, A. Khan and P. Bera (2024), Modal stability analysis of the density-stratified plane Couette-Poiseuille flow, Physics of Fluids, (Accepted).
32. G K Tamrakar and A Banerjee (2023)On Steady State Analysis of an Infinite Capacity $M^x/G^{(a,\ y)}/1$ Queue with Optional Service and Queue Length Dependent Single (Multiple) Vacation, Queueing Models and Service Management, 6 (1), 27-61.
33. K. Verma, G. K. Tarmakar and A. Banerjee (2023), On joint distribution of fixed batch size bulk service Poisson queue with second optional service, International Journal of Mathematics in Operational Research (Accepted).
34. Debdas Ghosh, N. Kishor, X. Zhao(2024), A Newton Method for Uncertain Multiobjective Optimization Problems with Finite Uncertainty Set, Journal of Nonlinear and Variational Analysis, Accepted Manuscript.
35. Abhishek Singh, Krishan Kumar, Debdas Ghosh (2024), Improved Nonmonotone Adaptive Trust-region Method to Solve Generalized Nash Equilibrium Problems, Journal of Nonlinear and Convex Analysis, 25 (1), 11-29
36. RS Chauhan, Debdas Ghosh, QH Ansari (2024), Generalized Hukuhara Hadamard Derivative of Interval-valued Functions and Its Applications to Interval Optimization, Soft Computing, 28 4107–4123
37. S. Ghosh, D. Ghosh, A. Pretrusel, X. Zhao (2024), Generalized Hukuhara Weak Subdifferential and its Application on Identifying Optimality Conditions for Nonsmooth Interval-valued Functions, Journal of Nonlinear and Variational Analysis, 8(2),333-368
38. Jauny, Debdas Ghosh, Ashutosh Upadhyay (2024), A Newton-type globally convergent interior-point method to solve multi-objective optimization problems, Journal of Computational Mathematics, 42, 24-48
39. Jauny, Debdas Ghosh, Q. H. Ansari, Matthias Ehrgott, A. Upadhayay (2023), An Infeasible Interior-Point Technique to Generate the Nondominated Set for Multiobjective Optimization Problems, Computers and Operations Research, 155, 106236.
40. J-W Peng, W-B Wei, Debdas Ghosh, J-C Yao (2023), Characterization Of E-Benson Proper Efficient Solutions of Vector Optimization Problems With Variable Ordering Structures in Linear Spaces, Journal of Nonlinear and Variational Analysis, Accepted.
41. K. Kumar, Debdas Ghosh, A. Upadhayay, J.C. Yao, X. Zhao (2023), Quasi-Newton Methods for Multiobjective Optimization Problems: A Systematic Review, Applied Set-Valued Analysis and Optimization, 5(2) 291-321
42. Divya Goel, Sushmita Rawat and K Sreenadh (2024), Critical Growth Fractional Kirchhoff Elliptic equations, Advances in Differential equations, 2024, volume 29
43. Divya Goel, Sushmita Rawat and K Sreenadh (2024), High energy solutions for p-Kirchhoff elliptic problems with Hardy-Littlewood-Sobolev nonlinearity, Journal of Geometric Analysis, Volume 34
44. R. Arora and V. D. Radulescu (2023), Combined effects in mixed local-nonlocal stationary problems, Proceeding of Royal Society of Edinburgh Section A, 1-47.
45. R. Arora, A. Fiscella, T. Mukherjee, P. Winkert (2023), Existence of ground state solutions for a Choquard double phase problem, Nonlinear Anal. Real World Appl. 73, 103914, 22 pp.
46. R. Arora and S. Shmarev (2023), Existence and regularity results for a class of parabolic problems with double phase ux of variable growth, Rev. Real Acad. Cienc. Exactas Fis. Nat. Ser. A-Mat., 117:34.
47. R. Arora and S. Shmarev (2023), Existence and global second-order regularity for anisotropic parabolic equations with variable growth, J. Differential Equations, 349, 83-124.

48. Ajay Kumar, Lavanya Selvaganesh (2024), Peter Cameron and T Tamizh Chelvam (2024), Superpower Graphs of Finite Groups, Journal of Algebra and its Applications, 1-18.

49. Jesmina Pervin and Lavanya Selvaganesh (2024), On Connected Bipartite Q-Integral Graphs, Communications in Combinatorics and Optimization.

50. Ajay Kumar, Lavanya Selvaganesh, T Tamizh Chelvam (2023), Connectivity of Superpower Graphs of some non-Abelian finite groups, Discrete Mathematics, Algorithms and Applications (DMAA), 15(4), 2250108.

51. *Abhash Kumar Jha, S. Pandey and B. Sahu (2024), L-* function associated to Jacobi forms of half-integral weight and a converse theorem, J. Math. Anal. Appl., 534, no. 1, 128041.

52. Abhash Kumar Jha and S. Pandey (2024), Rankin-Cohen bracket of Jacobi forms and Jacobi Poincare series, *Acta* Arithmetica, 212, 115-132.

53. Abhash Kumar Jha, A. Goswami, B. Kim and R. Osburn (2023), Asymptotics and sign patterns for coefficients in expansions of Habiro elements, Mathematische Zeitschrift, 304, no. 4, paper no. 57.

54. HK Dwivedi, Rajeev (2024), A fast difference scheme for the multi-term time fractional advection–diffusion equation with a non-linear source term, Chinese Journal of Physics 89, 86-103.

55. Rashmi Sharma, Rajeev (2023), A numerical approach to solve 2D fractional RADE of variable-order with Vieta–Lucas polynomials, Chinese Journal of Physics, 86, 433-446.

56. Rashmi Sharma, Rajeev (2023), An operational matrix approach to solve a 2D variable-order reaction advection diffusion equation with Vieta-Fibonacci polynomials, Special Topics & Reviews in Porous Media: An International Journal, 14, 79-96.

57. A Kumar, S Das, S Singh, Rajeev (2023), Quasi-projective synchronization of inertial complex-valued recurrent neural networks with mixed time-varying delay and mismatched parameters, Chaos, Solitons and Fractals 166.

58. E. Goel, R. K. Pandey, S. Yadav, O. P. Agrawal (2023), A numerical approximation for generalized fractional Sturm–Liouville problem with application, Mathematics and Computers in Simulation, 207: 417-436.

59. S. Kumari, R. K. Pandey and R. P. Agarwal (2023), High-order approximation to generalized Caputo derivatives and generalized fractional Advection-diffusion equations, Mathematics, 11(5): 1200.

60. P K Pandey, R. K. Pandey, O. P. Agrawal (2023), Sturm's theorems for generalized derivative and generalized Sturm-Liouville problem, Mathematical Communications, 28:141-152.

61. D. Singh, R. K. Pandey, S Kumari (2023), A fourth order accurate numerical method for non-linear time fractional reaction–diffusion equation on a bounded domain, Physica D: Nonlinear Phenomena 449:133742.

62. D. Pandey, K. Kumar, R. K. Pandey (2024), Approximation schemes for a quadratic type generalized isoperimetric constraint fractional variational problems, The Journal of Analysis, 32: 191–218

63. S. Kumari, R. K. Pandey (2023), Single-term and multi-term nonuniform time-stepping approximation methods for two-dimensional time-fractional diffusion-wave equation, Computers and Mathematics with Applications, 151: 359-383.

64. D. Pandey, P. K. Pandey, R. K. Pandey (2024), Variational and Numerical Approximations for Higher-Order Fractional Sturm–Liouville Problems, Communications on Applied Mathematics and Computation.

65. S. Kumari, R. K. Pandey (2024), Alternating direction implicit approach for the two-dimensional time fractional nonlinear Klein-Gordon and Sine-Gordon problems, Communications in Nonlinear Science and Numerical Simulation, 130:107769.

66. S. Kumar, K. Kumar, R. K. Pandey, Y. Xu (2024), Legendre collocation method for new generalized fractional advection-diffusion equation, International Journal of Computer Mathematics, https://doi.org/10.1080/00207160.2024.2305640

67. Promod Sharma and M. K. Vemuri (2023), Inductive algebras for compact groups, Mathematische Nachrichten, 296(12):5469-5473.

68. Mansi Mishra and M. K. Vemuri (2023), The Weyl transform of a measure, Proceedings of the Indian Academy of Sciences, Mathematical Sciences, 133(2):Article 29.

69. Pooja Rani and M. K. Vemuri (2024), The Brylinski beta function of a double layer, Differential Geometry and its Applications 92: Paper No. 102078

70. Manish Chaurasia(2024), On pair correlation of Hermite coefficients of functions from the Hardy class, The Journal of Analysis 32:1637–1643.

71. Sanjay Kumar Pandey, Amirlal Singh, and Anuradha Meena(2024), A Mathematical Analysis to Design a Sugarcane Juice Extracting Machine, Mathematical Models and Computer Simulations, Vol. 16, No. 2, pp. 321–330.

72. S K Pandey, A Prajapati (2024), An analytical and comparative study of swallowing in a tumor-infected oesophagus: A mathematical mode, Mathematical Biology, 88, article no. 37.

73. Sanjay Kumar Pandey, Anupam Kumar Pandey (2024), Flow in a catheterised exponentially diverging tube with a peripheral layer of different viscosity by means of peristaltic waves of dilating amplitude, Journal of Biological Systems, 17, pp. 1-19.

74. Sanjay Kumar Pandey, Amirlal Singh, Anuradha Meena (2023), A mathematical analysis to design a sugarcane juice extraction machine, Mathematical Models and Computer Simulations (accepted October 25, 2023).

75. Sanjay Kumar Pandey, Subhash Chandra (2023), Transportation of particulate suspension in a Newtonian fluid by dilating peristaltic waves in a tube: Application to flows in normal oesophagus, Chinese Journal of Physics, 84, pp. 429-450.

76. Anant Pratap Singh, Rahul Kumar Maurya, Vineet Kumar Singh, Analysis of a robust implicit scheme for space-time fractional stochastic non-linear diffusion wave model, International Journal of Computer Mathematics 100(7), Pages: 1625–1645 IF- 1.8.

77. Poonam Yadav, Vineet Kumar Singh, Computational Techniques for the Advection-Dispersion Variable Order Model, International Journal of Computational Methods 20 (10) 2023 IF- 1.7.

78. Priyanka Rajput, Nikhil Srivastava, Vineet Kumar Singh, A high order numerical method for the variable order time-fractional reaction-subdiffusion equation, Chinese Journal of Physics 85 (2023) Pages: 431-444 IF- 5 .

79. Vinita Devi, Rahul Kumar Maurya, Vineet Kumar Singh, A stable operational matrix based computational approach for multi-term fractional wave model arise in a dielectric medium, Chinese Journal of Physics, 87 (2024) Pages: 556-577 IF- 5 .

80. Nikki Kedia, Anatoly Alikhanov, Vineet Kumar Singh, Robust finite difference scheme for the non-linear generalized time-fractional diffusion equation with non-smooth solution, Mathematics and Computers in Simulation 219 (2024) Pages: 337-354 IF- 4.6.

81. Aman Singh, Eugene B. Postnikov, Poonam Yadav, Vineet Kumar Singh, Weakly Singular Volterra Integral Equation with Combined Logarithmic-Power-Law Kernel: Analytical and Computational Consideration, Applied Numerical Mathematics, Volume 197, March 2024, Pages 164-85, IF- 2.8 https://doi.org/10.1016/j.apnum.2023.11.006.

82. Nikki Kedia, Anatoly Alikhanov, Vineet Kumar Singh, Higher order computational approach for generalized time-fractional diffusion equation, Communications on Applied Mathematics and Computation,.

83. Rahul Kumar Maurya, Dongxia Li, Anant Pratap Singh, Vineet Kumar Singh, Numerical algorithm for a general fractional diffusion equation, Mathematics and Computers in Simulation 223 (2024) Pages: 405-432 IF- 4.6.

84. Anjali Srivastava and Santwana Mukhopadhyay(2024), Damping analysis of a transversely isotropic piezothermoelastic nanobeam resonator based in the MGT thermoelasticity. European Journal of Mechanics/ A Solids, 106, 105327.

85. Arnab Mapui, Arzoo Jamal, Santwana Mukhopadhyay (2024), Predefined-time stability and its application using non-singular sliding mode control, Communications in Nonlinear Science and Numerical Simulation, 132, 107901.

86. Arzoo Jamal, Subir Das, and Santwana Mukhopadhyay (2024), Fixed-time synchronization of delayed intertial Cohen-Grossberg neural networks with desynchronizing impulses, Communications in Nonlinear Science and Numerical Simulation, 130, 107772 .

87. Bhagwan Singh, Komal Jangid, Santwana Mukhopadhyay (2024), Implementation of Legendre wavelet method for the size dependent bending analysis of nano beam resonator under nonlocal strain gradient theory, Computers and Mathematics with Applications, 153, 94–107.

88. Komal Jangid, Bhagwan Singh, Santwana Mukhopadhyay (2024), Legendre wavelet collocation method for investigating thermo-mechanical responses on biological tissue during laser irradiation, Mathematics and Computers in Simulation, 219, 404-423.

89. Arzoo Jamal, Arnab Mapui, Subir Das, and Santwana Mukhopadhyay (2023), Further results on fixed-time synchronization of the memristor neural networks with impulsive effects, Communications in Nonlinear Science and Numerical Simulation 118,107038.

90. Robin Vikram Singh and Santwana Mukhopadhyay (2023), Mathematical significance of strain rate and temperature rate on heat conduction in thermoelastic material due to line heat source, Journal of Thermal Stresses, 46, 1164-1179.

91. Komal Jangid and Santwana Mukhopadhyay (2023), Application of Legendre wavelet collocation method to the analysis of poro-thermoelastic coupling with variable thermal conductivity. Computers and Mathematics with Applications 146, 1-11.

92. Arzoo Jamal, Rakesh Kumar, Santwana Mukhopadhyay, and Oh-Min Kwon (2023), Fixed- time stability of Cohen-Grossberg BAM neural networks with impulsive perturbation. Neurocomputing 550, 126501.

93. Anjali Srivastava and Santwana Mukhopadhyay (2023), Study of thermoelastic interactions in thin and long radiating rods under Moore–Gibson–Thompson theory of thermoelasticity, Acta Mechanica 234, 4509-4522.

94. Bhagwan Singh, and Santwana Mukhopadhyay (2023), Thermoelastic vibration of Timoshenko beam under modified couple stress theory and Moore–Gibson–Thompson (MGT) heat conduction model, Mathematics and Mechanics of Solids 9(3):436-451.

95. Bhagwan Singh and Santwana Mukhopadhyay (2023), On fundamental solution of Moore–Gibson–Thompson (MGT) thermoelasticity theory, Z. Angew. Math. Phys. 74(3), 105.

96. Robin Vikram Singh and Santwana Mukhopadhyay (2023), Study the effects of temperature and strain rates on transient thermomechanical responses on multilayer skin tissue, European Journal of Mechanics-A/Solids., 100, 105028.

97. A. Tanwar, S. Das, E-M Craciun and H. Altenbach (2023), Interaction among interfacial offset cracks in composite materials under the anti-plane shear loading, ZAMM. Z. Angrew. Math. Mech., V.103, e202300081. (SCI/SCIE publication)

98. Ritika Singh and S. Das (2023), Analysis of multiple parallel cracks in a functionally graded magneto-electro-elastic plane using boundary collocation method, Archive of Applied Mechanics, V.93, 4497-4516. (SCI/SCIE publication)

99. Shiv Shankar Das, A. Tanwar, S. Das and E-M Craciun (2023), Wiener-Hopf method to solve the anti-plane problem of moving semi-infinite crack in orthotropic composite materials, Mathematics and Mechanics of Solids, Accepted.

100. Chetna Biswas, S. Das, Anup Singh and M. Chopra (2023), Solution of fractional order reaction-advection-diffusion equation arising in porous media, Journal of Porous Media, V. 26, 15-29.

101. Chetna Biswas, S. Das, Anup Singh and H. Altenbach (2023), Solution of variable-order partial integro-differential equation using Legendre wavelet approximation and operational matrices, ZAMM. Z. Angrew. Math. Mech., V.103, e202200222.

102. Chetna Biswas, Anup Singh, Manish Chopra and S. Das (2023), Study of fractional-order reaction-advection-diffusion equation using Neural Network Method Mathematics and Computers in Simulation, Mathematics and Computers in Simulation,V. 208, 15-27.

103. Chetna Biswas, Anup Singh, S. Das and T. Sadwoski (2023), Numerical solution of two-dimensional non-linear Riesz space-fractional reaction-advection-diffusion equation using fast compact implicit integration factor method, ZAMM. Z. Angrew. Math. Mech., V.103, e202200334

104. S. Tiwari, P. Ghosh, M. Chopra and S. Das (2024), Numerical Solution of Nonlinear Diffusion Advection Fisher Equation by Fourth-Order Cubic B-Spline Collocation Method, ZAMM - Journal of Applied Mathematics and Mechanics, Accepted.

105. Shiv S. Chouhan, Sunny Singh, S. Das and J. Cao (2023), Fixed time synchronization of octonion valued neural networks with time varying delays, Engineering Applications of Artificial Intelligence, V. 118, 105684.

106. Shiv S. Chouhan, Sunny Singh, S. Das and H. Shen (2023), Multiple mu-stability analysis of time-varying delayed quaternion-valued neural networks, Mathematical Methods in the Applied Sciences, V.46, 9852-9875.

107. Sunny Singh, A. Kumar, S. Das and J. Cao (2023), Projective quasi-synchronization of complex-valued recurrent neural networks with proportional delay and mismatched parameters via matrix measure approach,Engineering Applications of Artificial Intelligence, V.126, 106800.

108. Sunny Singh, S. Das, Shiv S. Chouhan and J. Cao (2023), Anti-synchronization of inertial neural networks with quaternion-valued and unbounded delays: Non-reduction and non-separation approach, Knowledge-Based Systems, V.278, 110903.

109. A. Kumar, S. Das and Y-H Joo (2023), Quasi-projective synchronization of memristor-based complex valued recurrent neural network with time-varying delay and mismatched parameters, Neurocomputing, V.559, 126774.

110. S. Balunia, V. K. Yadav, and S. Das (2024), Lagrange stability criteria for hypercomplex neural networks with time varying delays Communications in Nonlinear Science and Numerical Simulation, Communications in Nonlinear Science and Numerical Simulation, V.131, 107765.

111. S. Balunia, V. K. Yadav, S. Das and J. Cao (2024), Function projective Mittag-Leffler synchronization of non-identical fractional-order neural networks, Physica Scripta, V.99, 025251.

112. S. Balunia, V. K. Yadav and S. Das (2024), Exponential synchronization of a class of quaternion-valued neural network with time-varying delays: A Matrix Measure Approach, Chaos, Solitons and Fractals, V. 182, 114794.

113. Pradeep Rai, Bhupendra Singh and Ashok Ji Gupta (2024), On quantum and LCD codes from the cyclic codes over the ring , Journal of Applied Mathematics and Computing, 70(2): 1241–1262.

114. Sonal Gupta and Ashok Ji Gupta (2023), Finite direct projective modules, Asian European Journal of Mathematics, 16(12), 2350218

115. Kaushal Gupta, and Ashok Ji Gupta (2023), Pure C3 modules, Asian-European Journal of Mathematics, 16(12), 2350219.

116. Sonal Gupta and Ashok Ji Gupta (2023), Pure direct projective modules" Palestine Journal of Mathematics, Vol. 12(3), 408-415.

117. Satish Kumar, Harshdeep Singh, H., Indivar Gupta and Ashok Ji Gupta (2023), MDS codes based on orthogonality of quasigroups. Applicable Algebra in Engineering, Communication and Computing.

118. Shiv Kumar and A. J. Gupta (2023), "Principally Quasi dual-Baer Modules", Palestine Journal of Mathematics, Vol. 12 (Special Issue III), 1–7.

119. Varun Kumar, Ashok Ji Gupta and Manoj. K. Patel (2023), Some Generalizations of Q-Principally Injective Modules, Palestine Journal of Mathematics, Vol. 12 (Special Issue III), 24–30.

120. Shiv Kumar and A. J. Gupta (2023), "Purely Extending modules and their Generalizations" Kyungpook Mathematical Journal, vol. 63, 15-27.

Refereed National journal

1. Deepak Rout and T Som (2023), Some Results on Coupled Fixed Point by Darbo Extension Theorem, Jnanabha, 53(2): 24-31.

Proceedings of National Conferences

1. Tanmoy Som, Debdas Ghosh, Oscar Castillo, Adrian Petrusel, Dayaram Sahu (2023) Applied Analysis, Optimization and Soft Computing, International Conference on Nonlinear Applied Analysis & Optimization and National Mathematics Day, Springer Proceedings Mathematics & Statistics, India.

Proceedings of International conferences

1. A. J. Gupta and Sanjeev Kumar Maurya (2023), "On modules whose closed M-cyclic submodules are summand". Advances in Pure and Applied Algebra, Proceedings of the CONIAPS International Conference 2021) pp 65-70 De Gruyter.
2. Pradeep Rai, Bhupendra Singh and Ashok Ji Gupta (2024), Quantum-Safe Encryption Schemes Based on Hadamard Code, In: Chaturvedi, A., Hasan, S.U., Roy, B.K., Tsaban, B. (eds) Cryptology and Network Security with Machine Learning. ICCNSML 2023. Lecture Notes in Networks and Systems, vol 918. Springer, Singapore.

Distinguished Visitor

Sl. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1	Prof. Dr. Jacques Giacomoni, Director CIF-MDS, UPPA and Director (Ad.) CNRS-IFCAM.	October 17-20, 2023.	Research collaboration with Dr. Rakesh Arora
2	Prof. S. Lakshmivarahan, University of Oklahoma, Norman, USA	18 June -01 July 2023	To give lectures in the GIAN course organized by Dr. Lavanya Selvaganesh.

Any other Information

1. Prof. T Som, Elected Vice President of Calcutta Mathematical Society in 2021.
2. Prof. T Som, Life member of Indian Mathematical Society, Calcutta Mathematical Society, Bharat Ganita Parisad and Assam Academy of Mathematics.
3. Dr. Lavanya Selvaganesh, Executive Committee member, Academy of Discrete Mathematics and Application (ADMA), India, 2022-2024.

23. Department of Physics

Full Name of Department: Department of Physics, IIT (BHU), Varanasi

Year of Establishment: 1985(Formerly Department of Applied Physics, IT, BHU, Applied Physics Section 1968)

Head of the Department: Prof. Sandip Chatterjee w.e.f. 01.01.2021

Brief Introduction of the Department

Department of Physics (formerly Department of Applied Physics, IT, BHU / Applied Physics Section, 1968) established in 1985, is a center of excellence for quality research and teaching in Physics & Applied Physics. The evolution of Department of Physics in its present form took over nine decades. Since its inception, physics teaching was both integral and essential part of the technical education to enable young minds having good grinding in physical sciences. Therefore, initially all the three colleges (BENCO, TECHNO & MINMET) had their own faculty members in Physics to do the job. A turning point came in 1968 when BENCO, TECHNO & MINMET were merged under one umbrella of Institute of Technology, Banaras Hindu University (IT-BHU). This then made it meaningful to have all the physics teachers from these three colleges to join hands together to form an Applied Physics Section as a part of newly formed School of Applied Sciences. Finally, we became a Department of Applied Physics of IT-BHU in 1985. At long last, we became a Department of Physics in 2012 soon after the conversion of IT-BHU into IIT (BHU) on 29 June 2012. Faculties of the department have been pursuing cutting edge front line research in various areas and in collaboration with prestigious national and international institutes. The Department currently offers research programmes in the field of Solar Physics & Space Physics, Astrophysics, Cosmology, High Energy Physics, Nuclear & Particle Physics, Optics and Optical Instrumentation, Fibre Optics, Photonics & Optoelectronics, Condensed Matter Physics & Materials physics, Microwave Remote Sensing, Bio-physics and Composite Materials, Energy Studies & Solid State Ionics, Quantum statistical mechanics and dynamics, Quantum entanglement and quantum information theory etc.

Major areas of Research

The department has a rich heritage and history of scientific research in space physics including theoretical study of the planetary atmosphere and solar magnetic field. In the mid 1970s, the whistler wave at low latitude were recorded for the first time and published in the prestigious "Nature" by the group of our department. $(SP)^2RG$ has been making significant contributions to the theory and modeling of solar plasma in optical, ultraviolet, X-ray, gamma-ray, and in the atomic spectroscopy – especially in the field of diagnostics of electron and proton beams and of the plasmas they heat. This group has been making seminal contributions in the areas of 'MHD waves and transients in the solar atmosphere' and also in 'science communication'. Theoretical calculations related to pitch-angle, cross-sections, scattering are also being carried out. Another group is actively working on the origin of the solar magnetic field, its dynamics using magnetohydrodynamics and the mysterious solar cycle using a novel theoretical (dynamo) model. The SP^2RG has equipped with VLF-Antenna for upper Earth atmospheric measurements; Advanced Solar Computation and Analyses Laboratory (ASCAL) to analyse the large-scale solar observational data and model its magnetic atmosphere. SP2RG has global collaborations (e.g., UK, Poland, Russia, China, Austria, Spain, USA, Belgium, etc.) as well as participation in international (e.g., Royal Society; Polish National Science Foundation etc.), and national (e.g., 2m- National Large Solar Telescope; Aditya-I) projects. In year 2021, a MoU is signed between the IIT (BHU) and Bar Ilan University Israel and The Nigata University Japan with the help of an initiative from a colleague from the Department of Physics and this MoU includes collaborative work and student/research scholars exchange.

The department has now several strong theoretical physics groups (Astrophysics & Astronomy, High Energy Physics, Nuclear & Particle Physics etc.) who are actively working on stellar seismology, internal structure and evolution of stars, Galactic Archaeology, Structures and Dynamics of the Interstellar Medium, Large-scale gas fragmentation and star formation in galaxies, and Gravitational Lensing as an Astrophysical Probe, Cosmology / Cosmic Microwave background - Statistical Isotropy, Component separation, Low energy QCD at high precision, flavour physics, phenomenology of top, Higgs, vector-like fermions and singlet scalar fields, and model building, Nuclear Physics (Gamma Ray Spectroscopy, Nuclear structure model calculations - cranked Nilsson Strutinsky Model, Shell Model calculations).

The Department carries out a wide range of frontier research activities related to magnetism and superconductivity and semiconductors, nanostructures, thin films and nano-materials and is backed by many sophisticated equipment and measurement techniques. Though the main emphasis of these works is on fundamental aspects, many of the results have a potential for application in industries. In the materials science, we study the electronic, physical, mechanical, optical, and chemical properties of materials, most often in relation to their structure, and use this knowledge to understand and

optimize their properties and create new, improved materials and devices. Work in Soft Condensed Matter and Bio-physics is also a front-line research area of the department. "Soft" condensed matter research explores areas like adhesion, friction, wetting, the movement of fluids in porous media, Modelling self-assembly and phase separation kinetics in the complex soft materials, understanding recent single molecule force spectroscopy experiments on biopolymers, Polymers under shear flow, etc. Biophysics and nanotechnology group aim is to investigate the interaction between 2D, 1D, and 0D materials with proteins and DNA. The main focus of this group is to develop sustainable technologies using green synthesis method utilizing medicinal plants and biopolymers for biomedical, energy and environmental applications like biosensors, drug delivery, OLED, bioelectronics and other nanotechnology applications using various experimental techniques and computational methods. Another theoretical physics group is also involved in understanding non-equilibrium dynamics of quantum many body systems with long range interaction.

Optics, Photonics and Fiber optics is emerging new field of research in our country. We establish a research lab with essential facilities to pursue the theoretical, experimental and computations researches in the field of Photonics. We are engaged in the theoretical analysis of photonic crystals and quasi photonic crystals composed of graded, dispersive and negative index materials. These works would be useful in study of the photonic crystals having such type of materials for various applications. It will open new window to design several photonic crystal devices like sensors, reflectors, switches etc. Research works on the Optical Instrumentation, Non-Destructive Imaging testing and optical instrumentation for biology and medicine, Computational Optics and Imaging through random complex media have also been initiated in our department. Such works has variety of practical applications in underwater imaging, bio-medical optics, space applications etc.

Research on remote sensing is also one of the frontline research areas in the Department. In this field, the growth of agricultural crops are monitored, classification of crops and the recognition of shape/size of buried objects are done by scatterometer measurements and satellite image analysis. Such studies are useful in designing of sensors, urban planning, crop classification, crop-yield and soil moisture estimation for agricultural planning.

Moreover, one of the groups is actively engaged in different types of luminescent materials, particularly inorganic nanostructures/phosphors having potential applications in the area of energy harvesting, bio-imaging and for advance lighting applications, etc. Composite material studies are also pursued at the Department and the lab for such studies is in development.

Research in the field of Green Energy and Solid State Ionics is also carried out in this Department. The energy studies explore the various fuel cells, materials, etc. to optimize the renewable energy sources. In the Green Energy area, the work on anode, cathode and electrolyte materials of Solid Oxide Fuel Cells (SOFC) is in focus. Also, preliminary establishment of lab towards the fabrication and characterization for Solar cells has been done. In addition to it, some work on hydrogen energy has also been started. Towards Solid State Ionics, the ion dynamics of the structurally disordered and crystalline materials is being studied. This study is not only restricted to the amorphous materials but also has been extended to the various materials of SOFC. Also, the work has also been started in the field of materials for nano piezo- pyro energy harvesters.

Area of the Department (in square meters): 1844 Square Meters

Infrastructure

S. No.	Particulars	Number
1	No. of Classrooms	01
2	No. of Lecture Halls	01
3	No. of Laboratory	16
4	No. of Computers available for students in the Department	~60

Unique Achievement / Preposition of the Department

Department's vision is to promote new ideas and innovations in physical sciences. Our mission is to offer world class education, research guidance and also leadership in physical sciences. Our aim is to become a high ranking in Physics Department globally in terms of teaching quality, research contributions and academic leadership.

Under new curriculum process (which Institute has started in 2014) Department offers two physics courses at B. Tech-Part-I level as an institute science course and two physics courses to preparatory students. We also offer several electives and open electives under this new flexible project based curriculum. Our 5-year Integrated M. Tech. programme (IMD) in Engineering Physics which started in 2005 has been converted to Integrated Dual Degree (IDD) Programme from 2014 and is running successfully. Main objective of this course is to impart knowledge of various core technical disciplines without compromising

on the basic physics and mathematics courses. The course gives an insight to the disciplines of engineering as well as science, and practical working experience through industrial training / summer internship, project / dissertation work to enhance the working skills of the students. Department has started the M.Sc. Programme in Physics from 2019 and students are admitted through JAM.

Students of IMD/IDD (Engineering physics) are awarded with several fellowships to go abroad to pursue higher studies, involved in several project works in both science and technology, present their research works in different workshop/ conference/symposia. They also pursue summer internship in industries and reputed institutions/universities in India and abroad. Many of these students are also recruited by reputed national and multinational companies.

The Department offers research programmes in the field of Solar Physics & Space Physics, Fibre Optics, Photonics & Optoelectronics, Condensed Matter Physics & Materials physics, Microwave Remote Sensing, Bio-physics and Composite Materials, Energy Studies & Solid State Ionics. About 90 Ph.D. students have received their PhD degree so far from the department. Many of our alumni (Ph.D., IMD) are well placed in reputed Institutes / University in India and abroad.

Department has a strong component to deliver popular science lecture and publish articles in magazines like Scientific American and newspapers.

Faculty members in the Department working in the frontier areas of research have published in International journals of high impact factor (e.g. Science, Nature Comm., Nature Astronomy, JACS, Physical Review Letters, PRE, Astrophysical Journal, Solar Physics, Astronomy & Astrophysics, MNRAS, J. Mat. Chem., Nanotechnology Reviews, Chemosphere, PCCP, SSI, RSC Adv., Optica, Optics Letter, Phys Rev A Etc.), published book and authored book chapters.

Department successfully organized several National (RTCMP, NCTP), International workshop / Conferences (DYNAMIC SUN-I, THERMANS-2016, ABSMSNW-2017, ICFNM-2019, AMBT-2021), GIAN Course Work, and Ishan Vikas Programme of MHRD for school students from North East Students, student's convention 'JIGYASA' (2015, 2016, 2017, 2023, 2024), Institute Day, etc. in recent years.

Several Indian and Foreign distinguished faculty members visited the Department to deliver seminar, colloquium.

Dr. Anil Bharadwaj, an alumnus of the Department received Shanti Swarup Bhatnagar award in 2007 for outstanding contribution in the field of Earth, Atmosphere, Ocean, and Planetary Sciences. He also received Infosys Science Foundation award-2016 in Physical Sciences category.

Faculty Members & Alumni of the Department have received several fellowships, senior membership and lifetime memberships of various academic and professional societies like Royal Astronomical Society (FRAS), Astronomical Society of India (ASI), Optical Society of India (OSI), Optical Society of America (OSA) , International Academy of Physical Sciences (at Allahabad, India), Materials Research Society of India (MRSI), Indian Physics Association (IPA), Indian Thermal Analysis Society (ITAS), Indian society for Materials Chemistry (ISMC) (at BARC, Mumbai), International Astronomical Union (IAU), European Astronomical Society (EAS), International Academy of Astronautics (IAA) on Comparative Climatology – Studying Planetary Climate to Understand our Planet, Max-Planck Society fellowship, Japanese Society of Promotion of Science (JSPS) fellowship, National Science Foundation (NSF-China) young scientist award, NASA/NRC Associate, Commonwealth Academic Staff Fellow: Glasgow, Cambridge and Oxford universities (1990-91), Indian National Science Academy (INSA), New Delhi etc.

Faculty members have received several awards/honours like e.g. Indira Gandhi Prize for Popularization of Science-2011 (Science Communications) by Indian National Science Academy (INSA), NATIONAL AWARD of 1,00,000/- for Outstanding Efforts in Science and Technology Communication through Books and Magazines for 2005, 2004 Award for Popular Writing on Solar Physics (American Astronomical Society/Solar Physics Division), 'MPAE Gold Pin' Award (1999) by Max-Planck-Institut für Aeronomie (MPAE) Germany in recognition of the outstanding contributions to the SUMER/SoHO science, D.Sc. Honoris Causa, INSA Young Scientist Medal, Humboldt Research Fellowshipetc.

The department has enriched with many excellent faculties and faculty strength has increased to 24 and 01 Visiting Faculty. Currently, in the department major research activities are going in theoretical as well as in experimental physics. The Department has been granted DST-FIST support and many other projects funded by national and International agencies namely DST, Department of Bio Technology (DBT), BRNS, DRDO, CSIR etc. Faculty members have several National, International Research collaboration, MOU, VLF-Global-Network Project etc.

New Courses Introduced

S. No.	Course Code	Course name	Course credit
1	PYM518	Experimental Aspects of Quantum Information	9

Students on Roll

S. No.	Programme	I Year	II Year	III Year	IV Year	V Year & above
1.	Dual Degree	31	31	29	31	25
2.	M.Sc.	24	24	-	-	-
3.	Ph. D (Under Institute Fellowship)	23	18	3	2	18
4.	A. Ph. D (Under Project Fellowship) B. Ph.D. (Other Funding Agency)	-- 7	-- 7	-- 17	-- 8	-- 26
5.	A. Ph. D (Under Sponsored Category) B. Ph. D (Under Full Time External & Part Time Category)	-- 1	-- --	-- 3	-- 1	-- 1

Names of students/scholars who attended conferences/workshops/seminars and symposia abroad or in India

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
ÌNDIA					
1.	Shambhavi Dishit	18171005	Active matter and Beyond, ICTS	06-12 Nov. 2023, ICTS, Bengaluru,	ICTS
2.	Kuldeep Kumar Shrivastava	18171007	International Symposium on Quantum Computing And Innovation (ISQCI)	13-15 July 2023, BHU	Self
3.	Kuldeep Kumar Shrivastava	18171007	Meghnad Saha Memorial International Conference on Frontiers of Physics (MSMICFP-2023)	22-24 Nov. 2023. Dept. of Physics, University of Allahabad	Self
4.	Kuldeep Kumar Shrivastava	18171007	International Conference on Optics, Photonics & Quantum Information (OPTIQ 2023)	11-13 Dec. 2023, CUSAT, KochiI, Kerala	Self + TA by CUSAT
5.	Kuldeep Kumar Shrivastava	18171007	Introduction to Quantum Communication and Machine Learning	08-12 Jan. 2024 IIT (BHU), Varanasi	Self
6.	Kuldeep Kumar Shrivastava	18171007	International Conference on Quantum Technologies and Applications (ICQTA-2024)	12-14 Feb. 2024, MAHE, Manipal, Karnataka	SERB- SRG contingency
7.	Ashish Kumar Ranjan	18171501	Lab visit and training	01-23 April, 2023, IITRAM, Ahmedabad	Self
8.	Vipin V	18171503	Conference on emerging topics in Quantum technology	02-04 Nov. 2023, IIT-PKD	STGS- IIT(BHU)
9.	Vipin V	18171503	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS- IIT(BHU)
10.	Avinash Chauhan	18171504	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS- IIT(BHU)
11.	Nidhi Geol	18171505	67th DAE Symposium on nuclear physics	09-13 Dec. 2023, IIT Indore	STGS- IIT(BHU)
12.	Shivam Awasthi	18171510	Advanced Materials Research Grand Meeting MRM2023 IUMRS-ICA2023	11-16 Dec. 2023, Kyoto International Conference Center, Kyoto, Japan	SERB and STGS-IIT(BHU)
13.	Samiksha Shrivastav	19171001	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS- IIT(BHU)
14.	Sourav Chandra	19171004	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023) (Poster Presentation)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS- IIT(BHU)

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
15.	Neha Patel	19171005	MRSI AGM 2023 5th Indian Materials Conclave	12-15 Dec. 2023, IIT(BHU)	Self
16.	Anuvrat Tripathi	19171006	XXth School on Neutrons as Probes of Condensed Matter-2024 (NPCM-2024)	05-10 Feb. 2024, Training School Complex, Anushaktinagar, Mumbai	Funded by BARC
17.	Santosh Kachhap	19171008	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS- IIT(BHU)
18.	Santosh Kachhap	19171008	International Conference Advances in Spectroscopic Techniques and Materials (ASTM 2024)	18-20 Jan. 2024, IIT(ISM), Dhanbad Jharkhand	Self
19.	Santosh Kachhap	19171008	Fourth International Conference on Materials Science (ICMS2024)	31 Jan.– 02 Feb., 2024, Dept. of Physics, Tripura University	STGS- IIT(BHU)
20.	Neelam Singh	19171011	SERB sponsored Springer International Conference on Future Prospects in Neutrino and Astroparticle Physics (ICFPNAP-2024)	23-24 Jan. 2024, Assam Don Bosco University, Assam	Partially funded by SERB
21.	Sarita	19171012	International Conference on Advanced Materials for Better Tomorrow-II	10-13 Oct. 2023, BHU, Varanasi	Self
22.	Sarita	19171012	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS- IIT(BHU)
23.	Akanksha Gautam	19171013	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023) (Poster Presentation)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS-IIT(BHU)
24.	Manisha Sharma	19171015	Conference on catalysis for energy and sustainability (CEES-2023)	25-27 Sept. 2023, IIT MANDI	Self
25.	Vindya Vashishth	19171018	Workshop conductor for the "Computational Solar Physics Workshop" during the science festival Singularity	28 Jan., 2024 IISER Bhopal	IISER Bhopal
26.	Pawan Kumar Mishra	19171019	Active matter and Beyond, ICTS	06-12 Nov. 2023, ICTS, Bengaluru	ICTS
27.	Pawan Kumar Mishra	19171019	Quantitative system Biology, ICTS	04-15 Dec. 2023 ICTS, Bengaluru,	STGS- IIT(BHU)
28.	Swarnima Singh	19171020	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS- IIT (BHU)
29.	Shubham Garg	19171021	International conference on Advanced Materials for Better Tomorrow-II	10-13 Oct., 2023	Self
30.	Ashish Kumar Singh	19171023	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS- IIT(BHU)
31.	Ashish Kumar Singh	19171023	Workshop on Liquid-Liquid Phase Separation (LLPS) and Complex Fluids International Conference (Compflu-2023)	16-20 Dec. 2023, IIT Madras	STGS- IIT(BHU)
32.	Sachin Singh	19171026	International Conference on "Advances in Spectroscopic Techniques and Materials"	18-20 Jan. 2024, IIT (ISM) Dhanbad, Jharkhand	SELF
33.	Sachin Singh	19171026	Fourth International Conference on Materials Science (ICMS2024)	31 Jan. – 02 Feb., 2024, Department of Physics, Tripura University	STGS- IIT(BHU)
34.	Anshul Verma	19171502	Summer School on Gravitational-Wave Astronomy	24 July – 04 Aug., 2023, ICTS-TIFR , Bangalore	Self
35.	Vartika Singh	19171503	Sangam@HRI 2024 Instructional Workshop on Particle Physics	07-16 March, 2024, HRI, Prayagraj	Self

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
36.	Swayangsiddha Ghosh	19171504	MRSI AGM 2023 5th Indian Materials Conclave	12-15 Dec. 2023, IIT(BHU)	STGS- IIT(BHU)
37.	Swayangsiddha Ghosh	19171504	NCHEAM-2023	24-25 April, 2023, BHU Varanasi	Self
38.	Mamta Prajapati	19171505	67th DAE Symposium on nuclear physics	09-13 Dec. 2023, IIT Indore	STGS- IIT(BHU)
39.	Mamta Prajapati	19171505	IUAC School on Nuclear Models For Structure Studies-2023	17-20 Oct. 2023, IUAC, New Delhiia	Contingency
40.	Anu B Sreedevi	20171502	Winter school on concepts in solar physics	19-23 Dec., 2023 NIT Delhi	NIT Delhi
41.	Anu B Sreedevi	20171502	Served as SOC in Young Astronomer's meeting 2024	06-09 March, 2024, Christ University	Self
42.	Shruti	20171503	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	PMRF
43.	Shruti	20171503	International Conference on "Advanced Materials for Better Tomorrow-II"	10-13 Oct. 2023, BHU	Self
44.	Shruti	20171503	International Conference on "Advances in Spectroscopic Techniques and Materials"	18-20 Jan. 2024, IIT(ISM) Dhanbad, Jharkhand	PMRF
45.	Shruti	20171503	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	PMRF
46.	Amit Yadav	20171508	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	Self
47.	Saurabh Kr Srivastava	20171511	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	Self
48.	Saurabh Kr Srivastava	20171511	International conference on Advanced Materials for Better Tomorrow-II	10-13 Oct. 2023, BHU	Self
49.	Harish Verma	20171512	International Chemical Engineering Conference on Energy, Environment and Sustainability	15-17 Feb. 2023, Dept. of Chemical Engineering, IIT Roorkee	Self
50.	Harish Verma	20171512	4th International Conference on Condensed Matter & Applied Physics	09-10 Oct. 2023, Govt. Engineering College, Bikaner with Condensed Matter Research Society (CMRS)	Self
51.	Pratikshya Jena	20171515	Active Matter in Complex Environments, 2023, ICTS Bengaluru, India	24 Oct. – 05 Nov., 2023 ICTS	Self Fund
52.	Pratikshya Jena	20171515	Physics of Life: Active and Living Matter (POL24)	07-10 Feb. 2024 Puri, Odisha (IOP Bhubaneswarand IISER-Mohali)	Self
53.	Tanushree Karmakar	20171516	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	Self
54.	Jay Narayan Mishra	20171517	International Meeting on Energy Storage Devices 2023	08-10 Dec. 2023, IIT Roorkee	STGS – IIT(BHU)
55.	Jay Narayan Mishra	20171517	International Conference on Advancement in Functional Materials (ICAFM-2024)	08-10 Feb. 2024, VBSPU, Jaunpur	Self
56.	Bhimraj Singh	21171001	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS
57.	Bhimraj Singh	21171001	Young Scientists Conference (YSC)	17-20 Jan. 2024, NCR Biotech Cluster, Faridabad	Funded by YSC

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
58.	Prateek Agrawal	21171002	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS-IIT(BHU)
59.	Devendra Kumar Verma	21171003	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS-IIT(BHU)
60.	Devendra Kumar Verma	21171003	Workshop on Advanced Multiscale Simulations of Soft Matter Systems	17-22 July 2023, IIT Gandhinagar	STGS-IIT(BHU)
61.	Devendra Kumar Verma	21171003	Soft and Living Matter: From Fundamental Concept to New Material Design (The SLM School 2023)	07-23 Aug. 2023, ICTS, Bengaluru	ICTS Bengaluru
62.	Devendra Kumar Verma	21171003	Workshop on Liquid-Liquid Phase Separation (LLPS) and Complex Fluids International Conference (Compflu-2023)	16-20 Dec. 2023, IIT Madras	NA
63.	Sanket Kumar	21171008	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS- IIT(BHU)
64.	Satyam Chaturvedi	21171009	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May, 2023, NIT Srinagar	STGS-IIT (BHU)
65.	Satyam Chaturvedi	21171009	International Conference on Advances in Spectroscopic Techniques and Materials (ASTM – 2024)	18-20 Jan. 2024, IIT(ISM), Dhanbad	Self
66.	Pramod Kumar	21171010	2nd International Meeting on Energy Storge Device & Industry	07-10 Dec. 2023, Academia Conclave, IIT Roorkee,	Self
67.	Pramod Kumar	21171010	67th DAE-Solid State Physics Symposium	20-24 Dec. 2023, GITAM, Visakhapatnam, Andhra Pradesh	Self
68.	Sripan Mondal	21171012	USO Solar Physics Workshop (USPW-2023)	03-05 April, 2023, Udaipur Solar Observatory (USO), Udaipur	Travel: PMRF Accommodation and food: USO
69.	Sripan Mondal	21171012	42nd meeting of Astronomical Society of India (ASI)	31 Jan - 04 Feb 2024, IISc, ISRO and JNP, Bangalore	Travel: PMRF Accommodation and food: ASI
70.	Mohit Rathor	21171015	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS-IIT(BHU)
71.	Aayush Mittal	21171501	International Conference on Materials for Energy & Sustainable Development	27-29 Oct. 2023, MESD-2023 JNU, Delhi	Self
72.	Aayush Mittal	21171501	67th DAE-Solid State Physics Symposium	20-24 Dec. 2023, GITAM, Visakhapatnam, Andhra Pradesh	Self
73.	Shanas Fatima	21171504	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May, 2023, NIT Srinagar	PMRF
74.	Shanas Fatima	21171504	International Conference on Hybrid Halide Perovskite -2023	22-23 Dec. 2023, IACS Kolkata, West Bengal	PMRF
75.	Shanas Fatima	21171504	International Conference on "Advances in Spectroscopic Techniques and Materials"	18-20 Jan. 2024, IIT(ISM) Dhanbad, Jharkhand	PMRF
76.	Shanas Fatima	21171504	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	PMRF

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
77.	Ankita Chowdhury	21171505	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS-IIT(BHU)
78.	Shivam Kumar Chaubey	21171506	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	STGS-IIT(BHU)
79.	Rajni Baranwal	21171507	International Conference on Materials for Energy & Sustainable Development	27-29 Oct. 2023, MESD-2023 JNU, Delhi	Self
80.	Vishnu Sharma	21171508	International Conference on Sustainable Nanomaterials Integration and Organization for Energy and Environment	20-23 March 2024, Shiv Nadar Institution of Eminence (SNIoE), Noida	STGS
81.	Sneha Yadav	21171510	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May 2023, NIT Srinagar	STGS- IIT(BHU) + PMRF
82.	Sneha Yadav	21171510	International Conference on Sustainable Nanomaterials Integration and Organization for Energy and Environment	20-23 March 2024, Shiv Nadar Institution of Eminence (SNIoE)	PMRF
83.	Vikash Kumar Gupta	21171512	Young Scientists Conference (YSC)	17-20 Jan. 2024, NCR Biotech Cluster, Faridabad	Funded by YSC
84.	Vishal Sinigh	22171001	Lab Visit	September 2023, IIIT Jabalpur	RSGF
85.	Vishal Sinigh	22171001	Lab Visit	Oct 2023, IISC Banglore	Project Fund
86.	Madhusmita Jena	22171002	67th DAE Solid State Physics Symposium, December 20-24, 2023 (DAE SSPS 2023)	20-24 Dec., 2023, GITAM Visakhapatnam Andhra Pradesh	PMRF
87.	Madhusmita Jena	22171002	International Conference on Advancement in Functional Materials (ICAFM-2024)	08-10 Feb. 2024, VBSPU, Jaunpur	
88.	Madhusmita Jena	22171002	International Conference on Sustainable Nanomaterials Integration & Organization for Energy and Environment (Isnioe^{2}2024)	20-23 March, 2024, Shiv Nadar Institution of Eminence (SNIoE), University, Delhi NCR.	
89.	Saikat Gayen	22171003	Advanced 21- cm Cosmology , School and Workshop	11–21 Dec. 2023, NISER, Bhubaneswar	NISER + Contingency
90..	Abhishek Maurya	22171005	International Symposium on Quantum Computing And Innovation (ISQCI)	13-15 July, 2023, BHU	Self
91.	Abhishek Maurya	22171005	International Conference on Advanced Materials for Better Tomorrow-II	10-13 Oct., 2023, BHU, Varanasi.	Institute contingency
92.	Abhishek Maurya	22171005	Introduction to Quantum Communication and Machine Learning	08-12 Jan. 2024, ABLT, IIT(BHU)	Self
93.	Abhishek Maurya	22171005	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	Self
94.	Atul Kumar	22171006	67th DAE Solid State Physics Symposium, (DAE SSPS 2023)	20-24 Dec. 2023, GITAM Visakhapatnam, Andhra Pradesh	STGS-IIT(BHU)
95.	Anish Kumar	22171007	Workshop on Liquid-Liquid Phase Separation (LLPS) and Complex Fluids International Conference (Compflu-2023)	16-20 Dec. 2023, IIT Madras	PMRF
96.	Aalakh kumar	22171009	67th DAE Symposium on nuclear physics	09-13 Dec., 2023, IIT Indore	STGS
97.	Aalakh kumar	22171009	IUAC School on Nuclear Models For Structure Studies-2023	17-20 Oct. 2023, IUAC, New Delhi	Contingency
98.	Aalakh kumar	22171009	Meghnad saha memorial international conference on frontiers of physics (MSMICFP-2023)	22-24 Nov. 2023, University of Allahabad	Contingency

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
99.	Prashant kumar choudhary	22171015	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	Self
100.	Sachin Verma	22171509	International Conference on Thin Films & Nanotechnology: Knowledge, Leadership, & Commercialization	06-08 July, 2023, IIT Madras.	PMRF
101.	Sachin Verma	22171509	International Conference on Advanced Materials for Better Tomorrow-II	10-13 Oct. 2023, BHU, Varanasi.	PMRF
102.	Sachin Verma	22171509	International Conference on Magnetic Materials and Applications	04-06 Dec., 2023, Ramoji Film City, Hyderabad	PMRF
103.	Sachin Verma	22171509	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	PMRF
104.	Sachin Verma	22171509	INUP-i2i Hands-on Training Workshop on Fabrication and Characterization of Spintronic Devices	20-29 Feb. 2024, IIT Bombay.	IIT Bombay + Self
105.	Hemant Kumar	22171510	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May, 2023, NIT Srinagar	STGS (IIT BHU)
106.	Rakesh Kumar Nayak	22171511	International Symposium on Quantum Computing And Innovation	14-15 July, 2023, BHU	Self
107.	Rakesh Kumar Nayak	22171511	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	Self
108.	Neha Choudhary	22171515	XLVI- Optical Society of India Symposium & International Conference on Optics, Photonics and Quantum Information (OPTIQ-2023)	11-13 Dec. 2023, Cochin University of Science and Technology (CUSAT), Kerala	Self
109.	Vanshika Saini	22171516	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May, 2023, NIT Srinagar	PMRF Contingency
110.	Vanshika Saini	22171516	Workshop on Advanced Multiscale Simulations of Soft Matter Systems	17-22 July, 2023, IIT Gandhinagar	PMRF Contingency
111.	Deepak	23171009	Workshop on High-End Optoelectronics Devices: Fabrication, Characterization, and Functionalization	02-08 Jan. 2024, MNNIT Allahabad	SERB
112.	Manjushree Maity	23171011	International conference on Translational Materials for Sustainable Technologies (TransMat-2k24)	01-04 Feb. 2024, IIT(BHU)	SERB Project
113.	Manjushree Maity	23171011	Workshop on Neutron Scattering (Elastic and Inelastic) and Muon Spectroscopy	16-17 Feb. 2024, IIT – Guwahati	IIT Guwahati + Self
114.	Kamana K. Mishra	23171014	Lab Visit	25 April - 04 May, 2023, IIT- Patna	Self Fund
115.	Kamana K. Mishra	23171014	International Meeting on Energy Storage Devices (IMESD-2023)	07-10 Dec. 2023, IIT Roorkee	STGS-IIT(BHU)
116.	Arpita Tripathi	23171018	International Conference on Nanotechnology for Better Living (ICNBL-2023)	25-29 May, 2023, NIT Srinagar	Self
117.	Arpita Tripathi	23171018	2nd International Meeting on Energy Storge Device & Industry	07-10 Dec. 2023, IIT Roorkee	Self
118.	Mohd Alam	PDF – 291	International Conference on Advancement in Functional Materials (ICAFM 2024)	08-10 Feb. 2024, VBSPU, Jaunpur	Self
119.	Mohd Alam	PDF – 291	Advances in Nanomaterials and Nanotechnology (ANN – 2024)	20-21 March, 2024, University of Delhi	Self
120.	Mohd Alam	PDF – 291	International Conference on Hydrogen Energy and Advanced Materials (ICHEAM-2024)	22-24 April, 2024, BHU, Varanasi	Self

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
121.	Akash Patel	JRF	International Meeting on Energy Storage Devices 2023	08-10 Dec. 2023, IIT Roorkee	Self
122.	Kartik Vishal Shah	20174009	Advanced Materials for Better Technology (AMBT-II)	10-13 Oct. 2023, BHU, Varanasi	Self
123.	Moulik Deviprasad Ketkar	20174031	National Workshop on Quantum Technology 2024	01 Jan. 2024, BHU, Varanasi	Self
124.	Shinde Dhananjay Vijay	22177007	International Conference on Magnetic Materials and Applications	04-06 Dec., 2023, Ramoji Film City, Hyderabad	Self
125.	Shinde Dhananjay Vijay	22177007	INUP-i2i Familiarization Workshop	18-20 Jan. 2024, Online (IIT Madras)	Self
126.	Shinde Dhananjay Vijay	22177007	International Workshop on "Engineering and Integration Challenges in Quantum Communication and Quantum Computing"	21-22 March, 2024, C-DAC Pune	Self
127.	Ravindra Hazam	22177017	International Symposium on Quantum Computing And Innovation	13-15 July, 2023, BHU, Varanasi	Self
128.	Ravindra Hazam	22177017	International Conference on Advanced Materials for Better Tomorrow-II	10-13 Oct. 2023, BHU, Varanasi.	Self
129.	Ekta Tunwal	22177009	Introduction to Quantum Communication and Machine Learning	08-12 Jan. 2024, ABLT (IIT BHU)	Self
130.	Ebi John	23177006	Introduction to Quantum Communication and Machine Learning - Short Term Workshop	08-12 Jan. 2024, ABLT (IIT BHU)	Self
ABROAD					
1.	Ashish Kumar Ranjan	18171501	Advanced Materials Research Grand Meeting MRM2023/IUMRS-ICA2023	11-16 Dec., 2023, Kyoto International Conference Center, Kyoto, Japan	STGS-IIT(BHU)
2.	Avinash Chauhan	18171504	28th International Conference on Statistical Physics, Statphys28	07-11 Aug. 2023, The University of Tokyo, Japan	STGS-IIT(BHU)
3.	Pawan Kumar	18171507	Heliophysics Summer School	17-21 July, 2023 (Online)	NASA
4.	Pawan Kumar	18171507	IAU Symposium 365- Dynamics of solar and stellar convection zones and atmosphere	21-25 Aug 2023, Yerevan, Armenia	IAU + CSIR Travel Grant
5.	Pawan Kumar	18171507	4th Annual NASA Eddy Symposium 2024	29 Oct. – 03 Nov., 2023 Colorado, USA	NASA
6.	Manisha	18171508	Optics & Photonics International Congress (OPIC-BISC 2023)	17-21 April, 2023, Pacifico Yokohama, Yokohama, Japan	CSIR & STGS-IIT(BHU)
7.	Kartika Sangal	18171509	Dr. Ding Yuan Harbin Institute of Technology, Shenzhen, China	01-30 June, 2023, China	
8.	Samiksha Shrivastav	19171001	28th International Conference on Statistical Physics, Statphys28	07-11 Aug. 2023, The University of Tokyo, Japan	STGS- IIT(BHU), SERB travel grant
9.	Harsh Kumar	19171002	Advanced Materials Research Grand Meeting MRM2023/IUMRS-ICA2023	11-16 Dec. 2023, Kyoto International Conference Center, Kyoto, Japan	SERB-ITS
10.	Sourav Chandra	19171004	The 84th JSAP Autumn Meeting 2023	19-23 Sept. 2023, Kumamoto Jo-Hall, Kumamoto, Japan	JSAP & STGS-IIT(BHU)
11.	Sourav Chandra	19171004	SPIE Photonics West 2024	27 Jan.- 01 Feb. 2024, San Francisco, California, USA	SERB-ITS & SPIE
12.	Anuvrat Tripathi	19171006	26th Congress and General Assembly of theInternational Union of Crystallography (IUCr 2023)	22-29 Aug. 2023, Melbourne Convention and Exhibition Centre, Melbourne, Australia	STGS-IIT(BHU)

S. No.	Name of Student	Roll No.	Conference/Seminar/Symposia/ Workshop	Date & Venue	Financial Assistance From
13.	Santosh Kachhap	19171008	International Conference on" European Materials Research Society (E-MRS) Fall Meet 3023)" (Oral Presentation)	18-21 Sept. 2023, Warsaw University of Technology, Warsaw, Poland	STGS IIT (BHU) and DST-SERB Gov. of India
14.	Sarita	19171012	The 84th JSAP Autumn Meeting 2023	19-23 Sept. 2023, Kumamoto Jo-Hall, Kumamoto, Japan	Self (Online)
15.	Sarita	19171012	The 71st JSAP Spring Meeting 2024	22-25 March, 2024, Setagaya campus, Tokyo City University, Japan	Self (Online)
16.	Vindya Vashisht	19171018	Heliophysics Summer School	17-21 July 2023 (Online)	NASA
17.	Vindya Vashisht	19171018	IAU Symposium 365- Dynamics of solar and stellar convection zones and atmosphere	21-25 Aug. 2023, Yerevan, Armenia	IAU + STGS-IIT(BHU)
18.	Shubham Garg	19171021	ACS Spring 2024	17-21 March, 2024, New Orleans, USA	SERB, STGS-IIT(BHU)
19.	Ashish Kumar Singh	19171023	28th International Conference on Statistical Physics, Statphys28	07-11 Aug. 2023, The University of Tokyo, Japan	STGS- IIT(BHU)
20.	Sachin Singh	19171026	2nd International Conference and Expo on Lasers, Optics & Photonics (OPTICS2023) (Invited Speaker)	09-11 Oct. 2023, Holiday Inn Barcelona Sant Cugat in Barcelona, Spain	STGS IIT (BHU) and DST-SERB Gov. of India
21.	Anu B Sreedevi	20171502	ISSI 474 team meeting-What determines the dynamo effectivity of solar active regions	10-14 July, 2023, Bern, Switzerland	ISSI
22.	Anu B Sreedevi	20171502	IAU Symposium 365- Dynamics of solar and stellar convection zones and atmosphere	21-25 Aug. 2023, Yerevan, Armenia	IAU + STGS-IIT(BHU)
23.	Akash Biswas	20171506	IAU Symposium 365- Dynamics of solar and stellar convection zones and atmosphere	21-25 Aug. 2023, Yerevan, Armenia	IAU + STGS-IIT(BHU)
24.	Saurabh kr Srivastava	20171511	The 84th JSAP Autumn Meeting 2023	19-23 Sept. 2023, Kumamoto Jo-Hall, Kumamoto, Japan	STGS-IIT(BHU)
25.	Tanushree Karmakar	20171516	UEC-SAARC symposium on Emerging Technologies (USSET 2023)	06-07 Dec. 2023, University of Electro-communication, Tokyo, Japan	Japan Science and Technology Agency (JST)
26.	Sripan Mondal	21171012	Prof. Guo Yang at Nanjing University, China to conduct the scientific research	01-30 June, 2023, Prof. Guo Yang at Nanjing University, China	Nanjing University and PMRF

Names of students/scholars who got prizes and awards outside the Institute

S. No.	Name of Student	Roll No.	Name of Prize	Date & Venue	Prize awarded by
1.	Kuldeep Kumar Shrivastava	18171007	Best Poster Award	24 November, 2023, MSMICFP-2023, University of Allahabad, Prayagraj	University of Allahabad & The National Academy of Sciences
2.	Mr Shivam Awasthi	18171510	Best Oral Presentation	11-16 December 2023, Kyoto International Conference Center 422 Iwakura Osagicho, Sakyo-ku, Kyoto, Japan	Kyoto International Conference Center, 422 Iwakura Osagicho, Sakyo-ku, Kyoto, Japan
3.	Sourav Chandra	19171004	Best Paper Presentation	13 December, CUSAT, Kerala	OPTIQ-2023
4.	Ankita Chowdhury	21171505	Best Paper Presentation	13 December, CUSAT, Kerala	OPTIQ-2023
5.	Mohd Alam	PDF - 291	Best Poster Presentation	21 March, 2024 Seminar Room, Rajdhani College, University of Delhi	ANN - 2024

Names of Students/Scholars who went for foreign Internship

S. No.	Name of Student	Roll No.	Name of the Organization	Place of Internship	Country	Duration
1.	Sarita	19171012	Japan Science and Technology Agency (JST)	Niigata University, Niigata	Japan	21 Days
2.	Amit Yadav	20171508	Japan Science and Technology Agency (JST)	Niigata University, Niigata	Japan	21 Days
3.	Akash Biswas	20171506	SCOSTEP Visiting Scholar (SVS) program	NASA Goddard Space Flight Center	USA	04 Sep – 01 Dec 2023
4.	Gargi	20171510	National Chung Cheng University	Chiayi	Taiwan	6 Months
5.	Tanushree Karmakar	20171516	Japan Science and Technology Agency (JST)	University of Electro-Communication	Japan	6 Days
6.	Jay Narayan Mishra	20171517	National Chung Cheng University	Chia-yi	Taiwan	5 Months
7.	Prateek Agrawal	21171002	Japan Science and Technology Agency (JST)	Niigata University, Niigata	Japan	21 Days
8.	Anshika Singh	19174005	University of Saskatchewan, Canada	University of Saskatchewan, Canada	Canada	2 Months
9.	Kartikeya Arora	19174011	Universite de Sherbrooke	Sherbrooke	Canada	15 May – 18 July 2023
10.	Deepa	20174006	DAAD WISE Fellowship	German Cancer Research Center,	Heidelberg, Germany	2 Months
11.	Kartik Vishal Shah	20174009	Toronto Metropolitan University	Toronto	Canada	15 May – 18 July 2023
12.	Saksham Pandey	20174016	University of Saskatchewan, Canada	University of Saskatchewan, Canada	Canada	2 Months
13.	Sudhanshu Shrivastava	20174019	Institut fur Biomedizinische Technik, Karlsruher Institutes fur Technologie (KIT), Germany	Karlsruhe	Germany	15 May – 15 July 2023
14.	Moulik Deviprasad Ketkar	20174031	Üniversistat Ulm	Ulm	Germany	15 May – 13 July 2023
15.	Aryan Pratap Srivastava	21174031	Australian National University	Canberra	Australia	22 May – 28 July, 2023

Faculty & their Activity

Faculty and their areas of specialisation

S. No.	Name, Qualification, Employee No.	Date of Award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
PROFESSORS			
1	Prof. Debaprasad Giri, Ph.D., 17048	January 1997	Statistical Physics; Soft Condensed Matter Physics; Computational Bio-Physics
2	Prof. Prabhakar Singh, M.Tech., Ph.D., 18366	16th June 2005	Condensed matter physics Materials Science and Technology
3	Prof. Sandip Chatterjee, Ph.D., 18478	May 1997	Topological Insulators, Multiferroic Materials, Magnetism.
4	Prof. Rajendra Prasad, Ph.D., 17276	1998	Remote Sensing, Satellite image analysis, crop growth variables and soil moisture retrieval algorithms development for their monitoring
ASSOCIATE PROFESSORS			
1	Dr Anita Mohan PhD, 17041	1996	Physics and Diagnostics of Solar, EUV and X-Ray Emission Processes; Synthesis of composites; Tribology
2	Dr. Praveen Chandra Pandey, Ph.D., 18359	2001	Fiber Optics & Photonic Crystal Fibers, PBG and Metamaterials, Photonic materials.
3	Dr. (Mrs.) Shail Upadhyay, Ph.D., 18536	March 2000	Experimental Condensed Matter; Electro ceramic

S. No.	Name, Qualification, Employee No.	Date of Award of PhD Degree	Major Areas of Specialization (Max. 3 Areas)
4	Dr. Abhishek Kr. Srivastava, Ph.D., 19771	2006	Solar Physics
5	Dr. Rakesh Kumar Singh, Ph.D., 50222	8th August 2009	Optics: Experiment, Theory & Computation
6	Dr. Avanish Singh Parmar, Ph.D., 50021	7th August 2009	Biophysics, Nanotechnology, Hybrid Materials
ASSISTANT PROFESSORS			
1	Dr. Sunil Kumar Mishra, Ph.D., 50020	2nd June 2012	Quantum Infomation, Quantum Spins systems, Frustrated Magnets
2	Dr. Saurabh Tripathi, Ph.D., 50028	2012	Structural Phase Transitions in ferroics, Short and long range ordering in functional materials, Experimental Condensed Matter & Materials Science
3	Dr. Swapnil Patil, Ph.D., 50029	30th July 2010	Experimental Condensed Matter Physics; ARPES investigations of the electronic structure of materials
4	Dr. Shradha Mishra, Ph.D, 50033	February 2009	Condensed matter theory, soft matter and statistical physics
5	Dr. Prasun Dutta, Ph.D., 50036	2011	Physics of Interstellar Medium Radio Astronomy Observations and Interpretations, Statistical astrophysics and cosmology
6	Dr. Rajeev Singh, Ph.D., 50170	21st December 2013	Quantum Computers, Quantum Machine Learning, Quantum Devices
7	Dr. Somnath Nag, Ph.D., 50173	20th July 2014	Nuclear Physics (Gamma Ray Spectroscopy, Nuclear structure model calculations – cranked Nilsson Strutinsky Model, Shell Model calculations)
8	Dr. Sunil Kumar Singh, Ph.D,50182	28th September 2011	Spectroscopy Lasers Nanophotonics
9	Dr. Gauhar Abbas, Ph.D., 50199	14th December 2012	Theoretical High Energy Physics
10	Dr. Awaneesh Kumar Singh, Ph.D.; 50213	11th October 2011	Soft Matter Physics, Statistical Physics, Physical Chemistry
11	Dr. Bidya Binay Karak, Ph.D., 50217	August 2013	Stellar and Solar Physics; Magnetohydrodynamics (MHD) and its applications, dynamo theory, astrophysical fluids, turbulence, convection, magnetic field, sunspot, solar and stellar cycles, nonlinear and chaotic behaviors of astrophysical objects
12	Dr. Pavan Kumar Aluri, Ph.D., 50219	5th June 2013	Cosmology : Cosmic Microwave Background - Statistical isotropy - Component separation methods; Alternate theories of Gravity
13	Dr. Biswanath Bhoi, Ph.D., 50303	24th February 2016	Magnetic thin films and Nanoparticles, Spintronics, Spin-wave dynamics, Cavity Magnonics, Hybrid Quantum system
14	Dr. Kul Deep Verma, Ph.D., 50311	3rd Mach 2017	Asteroseismology, Stellar Astrophysics, Galactic Archaeology, Machine Learning
Visiting Faculty			
1	Dr. Arvind Kumar Tripathi, FAC-VF-17	2000	Planetary & Space Sciences, Planetary Space Weather

Technical and Non-Teaching Staff

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
1	Rahul Kant Chaudhary, M. Tech.	Sr. Assistant	13.05.2017
2	Abhishek Kumar, B.Sc.	Jr. Assistant	29.12.2023
3	Awadhesh Kumar Srivastava, B.Com & B. Lib	Skilled Clerical Staff	10.06.2016
4	Vikash Singh, B.Sc.	Skilled Staff	21.12.2010
5	Ramji Ram, High School & Agricultural Diploma	Sr. Technical Superintendent	30.05.1987
6	Manjul Tiwari, B.Sc. & Diploma in Applied Videography	Sr. Technical Superintendent	15.12.2008
7	Bhanu Pratap Prasad, Intermediate Science	Sr. Technical Superintendent	19.11.1990
8	Sujeet Kumar Bose, BA & Diploma in Electrical Engineering	Technical Superintendent	22.02.2007

Sl. No.	Name, Qualifications	Designation, Employee No.	Date of Appointment in the department
9	Pankaj Kumar Asthana, B.Sc.	Jr. Technical Superintendent	05.08.2008
10	Upendra Prasad, M.Sc.& M.Ed.	Jr. Technical Superintendent	16.08.2008
11	Kumar Vikram, Intermediate Commerce & DCA+Tally	Jr. Technical Superintendent	27.08.2004
12	Uma Shankar Pandey, Intermediate	Multi Tasking Staff	16.12.2016
13	Anil Kumar Pal, BA & ITI Diploma	Multi Tasking Staff	05.05.2017

Short-term courses/workshops/seminars/symposia/conferences organised by faculty members

S. No.	Cordinator	Title	Period
1.	Dr. Avanish Singh Parmar	International Conference on Nanotechnology for Better Living (NBL-2023), NIT Srinagar	26–30 May, 2023
2.	Dr. Avanish Singh Parmar	International Conference on Translational Materials for Sustainable Technology (TransMat-2k24), IIT (BHU), Varanasi	01–04 February, 2024

Short-term courses/workshops/seminars/symposia/conferences/training programmes attended by faculty members

S. No.	Name of Faculty Member	Title	Period and Venue
Seminars/Symposia/Conferences			
1.	Prof. Prabhakar Singh	Experimental and Simulation Techniques for Materials Science on the topic, IIT Allahabad	20-27 June 2023
2.	Prof. Prabhakar Singh	National Conference on Solid State Ionics organised by Department of Physics, BHU	1-4 December 2023
3.	Prof. Prabhakar Singh	IMESD-2023 at IIT Roorkee	7-10 December 2023
4.	Dr. Praveen Chandra Pandey	International Conference on Translational Materials for Sustainable Technology (TransMat-2k24)	01–04 February, 2024, IIT(BHU), Varanasi
5.	Dr. Praveen Chandra Pandey	Session Chair, MRSI AGM 2023	12-15 December, 2023, IIT(BHU), Varanasi
6.	Dr. Abhishek Kr. Srivastava	National Seminar On Grand Challenges in Earth System Sciences	01-03 April, 2023, IESD, BHU
7.	Dr. Abhishek Kr. Srivastava	Multi-scale Phenomena on the Sun: Present Capabilities and Future Challenges	03-05 April, 2023, Udaipur Solar Observatory
8.	Dr. Abhishek Kr. Srivastava	NAM-2023	03-07 July 2023, The Cardiff University, Cardiff UK
9.	Dr. Abhishek Kr. Srivastava	An International Conference on Waves and Oscillations in the Solar Atmosphere: Observation, Theory and Applications	02-03 August, 2023, Lijiang, Yunnan, China
10.	Dr. Abhishek Kr. Srivastava	The 3rd SUIT Science Meeting	18-19 Oct. 2023 (Online Mode)
11.	Dr. Abhishek Kr. Srivastava	Meghnad Saha Memorial Workshop on Solar Astronomy Focused on Aditya – L1 Mission	04-06 Dec. 2023, Allahabad University
12.	Dr. Abhishek Kr. Srivastava	ASTRO-2024	04-05 Jan. 2024, Bhubaneswar (Online Mode)
13.	Dr. Avanish Singh Parmar	International Conference on Advanced Materials for Better Tomorrow-II	10-13 October, 2023 at Institute of Science, Banaras Hindu University, Varanasi
14.	Dr. Avanish Singh Parmar	SERB-SSR sponsored workshop	27-28 October, 2023, Department of Pharmaceutical Engineering, IIT(BHU)
15.	Dr. Avanish Singh Parmar	3rd International Conference on Nanomaterials in Biology	19-22 November, 2023, IIT Gandhinagar, Gujarat

S. No.	Name of Faculty Member	Title	Period and Venue
16.	Dr. Avanish Singh Parmar	3rd International Conference on Water Technology (ICWT-2023)	04-07 December, 2023, IIT Bombay, Mumbai
17.	Dr. Avanish Singh Parmar	34th AGM of Materials Research Society of India	12-15 December, 2023, IIT(BHU) Varanasi
18.	Dr. Sunil Kumar Mishra	MeetStatphysIndia 2023	05-07 June 2023, IIT Kharagpur
19.	Dr. Sunil Kumar Mishra	National Workshop on Quantum Technologies (NWQT-2024)	01-02 March 2024, BHU Varanasi
20.	Dr. Swapnil Patil	National Conference on Electron spectroscopy (NCES2023)	15-17 November 2023, Gopalpur, Orissa
21.	Dr. Prasun Dutta	Advanced 21- cm Cosmology , School and Workshop	11-21 December, 2023, NISER, Bhubaneswar
22.	Dr. Prasun Dutta	The 42nd meeting of the Astronomical Society of India (ASI)	31 Jan - 04 Feb 2024, IISC Bangalore
23.	Dr. Rajeev Singh	International Conference on Nanotechnology for Better Life (NBL-2023)	25-29 Maym, 2023, NIT Srinagar
24.	Dr. Rajeev Singh	Advanced Materials for Better Tomorrow (AMBT 2023)	10-13 October, 2023, BHU Varanasi
25.	Dr. Somnath Nag	Isomeric state and dipole bands at high spin in 91Zr	22-28 August 2023, TIFR Mumbai
26.	Dr. Somnath Nag	Awareness Workshop on Peaceful Uses of Atomic Energy	14 October 2023, Indian Nuclear Society IIT(BHU) & BHU
27.	Dr. Somnath Nag	Search for critical point symmetry and octupole correlation	25-31 January 2024 at VECC Kolkata
28.	Dr. Somnath Nag	Quantum Phase transition in 96Mo	17-23 February, 2024, VECC Kolkata
29.	Dr. Sunil Kumar Singh	34th AGM of Materials Research Society of India	12-15 December, 2023, IIT(BHU) Varanasi
30.	Dr. Sunil Kumar Singh	International Conference on Advanced Materials for Better Tomorrow-II	10-13 October, 2023, Banaras Hindu University, Varanasi
31.	Dr. Gauhar Abbas	BSM 2023	06-09 November, 2023, Hurghada – Egypt
32.	Dr. Bidya Binay Karak	28th General Assembly of the International Union of Geodesy and Geophysics (IUGG)	11-20 July, 2023, Potsdam, Germany
33.	Dr. Bidya Binay Karak	IAU 365	21-25 August, 2023, Armenia, Yerevan
34.	Dr. Bidya Binay Karak	Beyond Aditya-L1: Exploring the future of Indian solar physics from space	07-09 November, 2023, ARIES, Nainital
35.	Dr. Bidya Binay Karak	38th National Symposium on Plasma Science & Technology (PLASMA 2023)	04-08 December, 2023, UPES Dehradun
36.	Dr. Biswanath Bhoi	Advanced Materials for Better Tomorrow (AMBT 2023)	10-13 October, 2023, BHU Varanasi
37.	Dr. Kuldeep Verma	Stellar Astrophysics in the Era of Gaia, Spectroscopic, and Asteroseismic Surveys	31 July- 11 August 2023, Munich Institute for Astro-, Particle and Bio Physics, Garching, Germany
38.	Dr. Kuldeep Verma	Planets, Exoplanets and Habitability	05-09 February, 2024, PRL, Ahmedabad
Meetings			
1.	Dr. Bidya Binay Karak	Team Meeting at International Space Science Institute (ISSI)	July 10-14, 2023, Bern, Switzerland

Special lectures delivered by faculty members in other institutions

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
1.	Prof Prabhakar Singh	Conductivity spectroscopy and its applications	IIIT Allahabad	24th June, 2023
2.	Prof. Prabhakar Singh	Shedding light on perovskite halides: Insight into conduction mechanism for photovoltaic applications	NIT Kurukshetra	08th July, 2023
3.	Prof. Prabhakar Singh	Morphological engineering for high proton conduction in metal–oxide diethylmethylamine (metal-organic framework) membrane	BHU	04th December, 2023
4.	Prof. Prabhakar Singh	Catalytic Advancements in Electrocatalytic Proton Exchange Membranes: Strategies and Insights	IIT Roorkee	10th December, 2023
5.	Prof. Prabhakar Singh	Advancements in Proton Exchange Membranes: Strategies and Insights	National Chung Cheng University, Taiwan	06th March, 2024
6.	Prof. Prabhakar Singh	Gauss's Law and Electrostatic Torque on electric dipole	DPS National teachers training programme held at its Noida Headquarter	on 27th and 28th May 2023
7.	Prof. Prabhakar Singh	Perspectives of career orientation	Vindya Valley School, Baburi, Chandauli	13 January, 2024
8.	Dr. Praveen Chandra Pandey	Rise of India as a hub of semiconductor manufacturer	IGNOU, Regional Centre Varanasi	13th March, 2024
9.	Dr. Praveen Chandra Pandey	Sustainable Development	PM Shri Kendriya Vidyalaya Chero Salempur	31st October, 2023
10.	Dr. Praveen Chandra Pandey	Single-ingredient white light emission of $CaMoO_4$:Dy^{3+} phosphor by Sm^{3+} co-doping	ICNBL-2023, NIT and SUCAST Srinagar	25-28 May 2023 Srinagar
11.	Dr. Praveen Chandra Pandey	Sustainable Development and Role of Physics	PM Shri Kendriya Vidyalaya 39 GTC Varanasi Cant	25th November, 2023
12.	Dr. Abhishek Kumar Srivastava	Grand Challenges in Understanding Energy Transport Processes in the Solar Atmosphere	IESD, BHU	02nd April, 2023
13.	Dr. Abhishek Kumar Srivastava	Energy Transport Processes in the Localized Solar Atmosphere	Udaipur Solar Observatory, PRL	03rd April, 2023
14.	Dr. Abhishek Kumar Srivastava	Energetic Waves and Plasma Processes in the Sun's Magnetized Atmosphere	Northumbria University, New Castle, United Kingdom	29th June, 2023
15.	Dr. Abhishek Kumar Srivastava	Impulsive Origin of Cool Chromospheric Jets and Their Contribution in Mass and Energy Transport in the Solar Atmosphere	NAM-2013, Cardiff University, Cardiff, United Kingdom	05th July, 2023
16.	Dr. Abhishek Kumar Srivastava	Progress on Understanding the Mass and Energy Transport Processes in the Solar Atmosphere: Global and Indian Perspectives	UMCS, Lublin, Poland	24th July, 2023
17.	Dr. Abhishek Kumar Srivastava	Waves as a Heating Candidates in the Localized Solar Atmosphere	Lijiang, Yunnan, China	03rd August, 2023
18.	Dr. Abhishek Kumar Srivastava	Aditya-L1: The India's First Solar Space Mission	IIT(BHU)	02nd September, 2023
19.	Dr. Abhishek Kumar Srivastava	Wave Heating in the Solar Plasma	School of Physical Sciences, JNU	22nd September, 2023
20.	Dr. Abhishek Kumar Srivastava	On Understanding the Cool Jets and Transient Brightening in Perspective of SUIT/Aditya-l1		19th October, 2023
21.	Dr. Abhishek Kumar Srivastava	Dynamics of the Solar Atmosphere (Multi-wavelength Perspective)	Meghnad Saha Memorial Workshop on Solar Astronomy Focused on "Aditya – L1Mission"	05th December, 2023
22.	Dr. Abhishek Kumar Srivastava	Understanding Major Scientific Challenges in Solar and Heliospheric Research in the framework of Aditya-L1	ASTRO-2024, Bhubaneswar	04th January, 2024
23.	Dr. Rakesh Kumar Singh	Holography with higher order Stokes correlations- Invited	9th Biomedical Imaging and Sensing conference, by SPIE, Yokohama, Japan	19-21 April, 2023
24.	Dr. Rakesh Kumar Singh	Speckle for metrology using laser Interferometers- Invited Tutorial	National Physical Laboratory(NPL) Delhi	26th July, 2023

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
25.	Dr. Rakesh Kumar Singh	Randomness assisted Imaging- Invited	Japan Society of Applied Physics (JSAP) & Optica joint symposium, Kumamo, Japan	19-23 September, 2023
26.	Dr. Rakesh Kumar Singh	Phase microscope for biologists- Invited	AMBT- BHU,	10-12 October, 2023
27.	Dr. Rakesh Kumar Singh	Holography with classical and quantum light- Invited	Raman Optoelectronics Webinar Series (online), Kerala University, Trivandrum	15th November, 2023
28.	Dr. Rakesh Kumar Singh	Holographic imaging with quantum and classical light -Invited	XLVI- Optical Society of India symposium & International conference on Optics, Photonics and Quantum Information, Cochin University of Science and Technology (CUSAT)	11-13 December, 2023
29.	Dr. Rakesh Kumar Singh	Single-Shot quantitative polarization imaging of live cancer cells- Invited	Optics 4 Life; Photonics Tools for Life Sciences, IIT Delhi	19th December, 2023
30.	Dr. Rakesh Kumar Singh	Quantum Inspired Imaging	International conference on Advanced in Spectroscopic Techniques and Materials, IIT (ISM) Dhanbad	18-20 January, 2024
31.	Dr. Rakesh Kumar Singh	Numerical modelling of Schell model sources; Invited tutorial	IIT Roorkee, OPTCT+SeNcity Workshop, IIT –Roorkee	23-25 February, 2024
32.	Dr. Rakesh Kumar Singh	Label free microscopy: Invited	Symposium on Optics and Photonics, Lucknow University	09th March, 2024
33.	Dr. Sunil Kumar Mishra	OTOC growth in integrable and nonintegrable Floquet Ising models	Organised by Indian Institute of Technology Kharagpur	06th June, 2023
34.	Dr. Sunil Kumar Mishra	Quantum Circuits	Organised by Indian Institute of Information Technology & Management, Gwalior	26th July, 2023
35.	Dr. Sunil kumar Mishra	Quantum Gates and Circuits	Crescent Institute of Science and Technology, Chennai	17th October, 2023 (Online)
36.	Dr. Sunil Kumar Mishra	Topological Quantum Skyrmions	organised by BHU, Varanasi	01st March, 2024
37.	Dr. Saurabh Tripathi	Unambiguous evidence of three coexisting ferroelectric phases in a lead-free $Li_xNa_{1-x}NbO_3$ system: Redefining the morphotropic phase boundary	GSEMSE2023,	19th June, 2023
38.	Dr. Swapnil Patil	Structural and Electronic Properties of Topological Insulators and Nodal Line Semimetals	National Conference on Electron spectroscopy (NCES2023) at Gopalpur, Orissa	15th November, 2023
39.	Dr. Prasun Dutta	Detection of redshifted 21-cm radiation	NISER, Bhubaneswar	11-14th December, 2023
40.	Dr. Somnath Nag	Exploring Nuclear Structure	Organised by Indian Nuclear Society IIT(BHU) & BHU	14th October, 2023
41.	Dr. Somnath Nag	Lectures on CNS calculations for nuclear structure	TIFR, Mumbai	31st Oct. to 03rd Nov. 2023
42.	Dr. Sunil Kumar Singh	Fundamentals of Laser and its bio-medical applications	Sunbeam Women Degree College Varuna, Varanasi,	25th April, 2023.
43.	Dr. Gauhar Abbas	Discrete origins of matter	CTP, The British University in Egypt (BUE), Egypt	16 Nov. 2023
44.	Dr. Gauhar Abbas	Discrete origins of matter	CFP, Zewail City of Science and Technolog, Egypt	14 Nov. 2023
45.	Dr. Awaneesh Singh	8th edition of the International Conference on Nanotechnology for Better Living (ICNBL-2023)	NIT Srinagar	25-29 May, 2023
46.	Dr. Awaneesh Singh	International Conference on Advanced Materials for Better Tomorrow-II	Institute of Science, BHU, Varanasi	10-13 October, 2023
47.	Dr. Bidya Binay Karak	Solar and Stellar Magnetic Fields	Sikkim University	16th June, 2023

S. No.	Name of faculty Member	Topic of Lecture	Institution	Date
48.	Dr. Bidya Binay Karak	Winter school on concepts in solar physics	NIT Delhi	19-23rd December, 2023
49.	Dr. Kuldeep Verma	Constraints from Glitches, PLATO Stellar Science Conference	Milazzo, Italy	26th June, 2023
50.	Dr. Kuldeep Verma	Precise inference of limb-darkening using a regularisation technique: application for a sample of Kepler and TESS exoplanet transit light curves, International Conference on Planets, Exoplanets and Habitability	Physical Research Laboratory, Ahmedabad, India,	08th February, 2024

Visits abroad by faculty members

S. No.	Name of Faculty Member	Country Visited	Date of Leaving india	Date of Returning India	Purpose of Visit	Funding from
1.	Prof. Prabhakar Singh	Taiwan	3 March, 2024	8 March, 2024	National Chung Cheng University, Taiwan	SDT-MOST Project and CPDA
2.	Dr. Abhishek Kumar Srivastava	UK	26 June, 2023	02 July, 2023	Scientific Research	Funding by The University of Northumbria UK
3.	Dr. Abhishek Kumar Srivastava	Poland	13 July, 2023	25 July, 2023	Scientific Research	Funding by UMCS, Lublin, Poland
4.	Dr. Abhishek Kumar Srivastava	China	21 October, 2023	28 October, 2023	Scientific Research	HIT, Shenzhen, China
5.	Dr. Rakesh Kumar Singh	Japan	15 April, 2023	26 April, 2023	Academic: conference and visits to the University of Electro-Communications, Tokyo, Kobe University, & Niigata University Japan	SERB & IIT (BHU)
6.	Dr. Rakesh Kumar Singh	Japan	17 September, 2023	26 September, 2023	JSAP meeting, and visit to Tokyo University	Japan Society of Applied Physics (JSAP) & IIT(BHU)
7.	Dr. Gauhar Abbas	Egypt	06 November, 2023	16 November, 2023	BSM-2023, The British University in Egypt (BUE), Zewail City of Science and Technology	CPDA, IIT (BHU)
8.	Dr. Awaneesh Singh	Australia	18 June, 2023	04 July, 2023	Academic	CPDA
9.	Dr. Bidya Binay Karak	Germany	27 June, 2023	19 July, 2023	Research collaboration, Conference	Humboldt alumni grant & IIT (BHU)
10.	Dr. Bidya Binay Karak	Switzerland	27 June, 2023	19 July, 2023	Meeting	International space science institute (ISSI) + IIT (BHU)
11.	Dr. Bidya Binay Karak	Armenia	20 August, 2023	26 August, 2023	Conference	SERB & IIT (BHU)
12.	Dr. Kuldeep Verma	Germany	30 July 2023	12 August, 2023	MIAPbP program	CPDA & MIAPbP

Honours and awards

S. No.	Name of Faculty Member	Details of Award
1.	Prof. Prabhakar Singh	ACerS Global Ambassador 2023 award by American Ceramic Society
2.	Dr. Rakesh Kumar Singh	Elected member of Executive Council of the Optical Society of India (OSI) for year 2024-2025
3.	Dr. Rakesh Kumar Singh	Best teacher award (UG- 1st year category) 2023, by the IIT (BHU)
4.	Dr. Avanish Singh Parmar	Best Teacher Award -2023 by IIT(BHU), Varanasi

Fellowships of academic and professional societies

S. No.	Name of Faculty Member	Details of Fellowship
1.	Prof. Prabhakar Singh	Life member of Indian Ceramic Society
2.	Prof. Prabhakar Singh	Life Member of Materials Research Society of India (MRSI)
3.	Prof. Prabhakar Singh	Life Member of Indian Physics Association (IPA)
4.	Prof. Prabhakar Singh	Life Member of Indian Thermal Analysis Society (ITAS)
5.	Prof. Prabhakar Singh	Life Member of Indian society for Materials Chemistry (ISMC), BARC, Mumbai
6.	Prof. Prabhakar Singh	Member of the American Ceramic Society, USA, 2022-2023
7.	Dr. Abhishek Kr. Srivastava	Member of the Division of Plasma Physics, the Association of Asia Pacific Physical Societies (AAPPS-DPP)
8.	Dr. Rakesh Kumar Singh	Life member Optical Society of India
9.	Dr. Rakesh Kumar Singh	Senior member , SPIE- USA
10.	Dr. Rakesh Kumar Singh	Senior Member, Optica (formerly Optical Society of America)
11.	Dr. Avanish Singh Parmar	President and Lifetime member of the Society for Interdisciplinary Research in Materials and Biology
12.	Dr. Avanish Singh Parmar	Lifetime Member, Biophysical Society of India
13.	Dr. Avanish Singh Parmar	Lifetime Member, Peptide Society of India
14.	Dr. Prasun Dutta	Life member of Astronomical Society of India

Books, monographs authored/co-authored

S. No.	Name of Author/Co- Author	Title	Publisher
1.	Saini, P, Tarique, H., Kumar, H., Singh, A.K., Pandey, R., Singh, P.	Synthesis and Characterizations of Hexagonal Perovskite-Related Oxide for Solid Electrolyte Application	Recent Advances in Functional Materials and Devices. Springer Proceedings in Materials, 37 (2023) 1-14
2.	S. Singh, R. Pandey, G. Gautam, A.K. Singh, B.P. Singh, A. Dhaiya and Prabhakar Singh,	Investigation of Dielectric and Electrical Behaviour of Y2Ti2O7 Pyrochlore	Recent Advances in Functional Materials and Devices Springer Proceedings in Materials, 37 (2023) 235-244.
3.	Dheeraj Kumar Singh, Sanjay Singh and Prabhakar Singh (Editors)	Nanomaterials Advances and Applications	Springer (2023) ISBN 978-981-19-7962-0
4.	Raghvendra Pandey and Prabhakar Singh	Nanocomposite Ceramics for Energy Harvesting	Nanomaterials Advances and Applications, 241-2666 Springer (2023)
5.	Pragati Singh, Raghvendra Pandey, Prabhakar Singh	Impact of Sintering on Specific Heat, Ion Conducting Channels and Electrical Properties of Na0.5Bi0.5TiO3 SOFC Electrolyte	Advanced Functional Materials for Sustainable Environment (book chapter) (2024) Springer, Switzerland, ISBN: 978-93-81891-80-3
6.	Archana Mishra, Ayushi Rastogi, Avanish Singh Parmar	Bioremediation for Sustainable Environmental Cleanup	CRC Press, USA, 15, 262-278
7.	Priyam Singh, Santosh Kachhap, Manisha Sharma, P. Singh, SK Singh	Lanthanide doped materials for optical applications	Springer Nature ISBN 978-981-99-7145-9
8.	B. Bhoi and M. Diware	Nanomagnets: Basics, Applications, and New Perspective." In the book "Fundamentals of Low Dimensional Magnets"	CRC Press

Editorial boards of journals

S. No.	Name of Faculty Member	Position (Editor/ member)	Name of Journal
1.	Prof. Prabhakar Singh	Associate Editor	Frontiers in Electronic Materials (for the Dielectric Materials section).
2.	Dr. Rakesh Kumar Singh	Associate Editor - Special Issue on :cross cutting research using structured light	OSA continuum, Optica (formerly Optical Society of America_

Design and Development Activities

New facilities added

S. No.	Details (Infrastructure, Equipments, etc.)	Value (in Lakhs of Rupees)
1.	Quartz tube Sealing apparatus	Rs. 2.15
2.	Laser Engraving System	Rs. 9.0
3.	High Temperature muffle Furnace	Rs. 3.35

Patents filed

S. No.	Name of Faculty Member	Title of Patent
1.	Dr. Rakesh Kumar Singh	Method and system for lensless digital holography of light transmitting object, Patent grant No: 451673 (India) dated 14/09/2023
2.	Dr. Rakesh Kumar Singh	A single shot Jones elements Imager, Patent grant No: 474129, dated 29.11.2023
3.	Dr. Avanish Singh Parmar	A composite hydrogel composition and a method of preparation thereof. (File no. 202311009955)

Research and Consultancy

Sponsored research projects *(Ongoing only)*

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
1.	Fabrication of Cathode materials and SOFC for energy applications	2021-2024	UP CST	11.44 Lakhs	Prof. Prabhakar SIngh
2.	High Proton conducting metal phosphonate electrolytes for fuel cell applications	2022-2024	Naval Research Board (NRB) DRDO.	41.20 Lakhs	Prof. Prabhakar SIngh
3.	Surface modification of porous electrodes for energy storage systems	2023-2026	India-Taiwan S&T Cooperation Programme – Call for Proposal (CFP) 2021 (DST-MOST)	33.90 Lakhs	Prof. Prabhakar SIngh
4.	Modifications in Behaviour of 2D Materials induced by confinement of Ionic Liquids	2022-2025	Teachers associate (SERB)eship for research excellence	18.30 Lakhs	Prof. Prabhakar SIngh
5.	Searching for novel Skyrmionic materials for Spintronic applications	Dec 2023-Dec 2026 (3 years)	DAE, BRNS	27.13 Lakhs	Prof. Sandip Chatterjee
6.	Search for Topological Superconductor in Heusler family	March 2024-March 2027 (3 years)	SERB	18.53 Lakhs	Prof. Sandip Chatterjee
7.	Development of microwave scattering algorithms for retrieval of crop biophysical parameters and soil moisture using polarimetric SAR satellite data.	3-years	ISRO	3073520.00	Prof. Rajendra Prasad
8.	Synthesis of movable monostatic radar mapping system for soil moisture retrieval	2 years	NGP-DST New Delhi	2753849.00	Prof. Rajendra Prasad
9.	Nanotechnology-driven advanced tribological solutions to reduce global energy consumption and carbon footprint - A radical step in the design of new-generation lubricants towards meeting the UN sustainability goals 2030	Approved in January 2024 Duration 3 years	CEFIPRA DST	31800000	Dr. Anita Mohan
10.	Development of rare-earth-free metal vanadate phosphors for latent fingerprint detection	2023-2026	SERB	24.31 Lakhs	Dr. Praveen Chandra Pandey
11.	Novel Observations and Modeling of the Heating and Dynamical Plasma Processes in the Localized Solar Atmosphere	2022-2025	ISRO	28.03 Lakhs	Dr. Abhishek Kumar Srivastava
12.	Solar Flares: Physics and forecasting for better understanding of Space Weathe	2022-2025	ISRO RESPOND Project	43.67 Lakhs	Dr. Abhishek Kumar Srivastava (Co-PI)

S. No.	Title	Period	Funding Agency	Amount (in lakhs of Rs.)	Co- ordinator
13.	Spatially resolved digital Holography polarization microscope for diagnosis application	2021-2024	DBT	41.44 Lakhs	Dr. Rakesh Kumar Singh
14.	Tailoring correlations of light using plasmonic and nanostructures	2021-2024	BRNS	33.69 Lakhs	Dr. Rakesh Kumar Singh
15.	Learning assisted phase sensor for rapid screening of cells and automated decision making	November 2023-November 2025	IDAPT HUB Foundation, IIT (BHU)	19.80 Lakhs	Dr. Rakesh Kumar Singh
16.	Study of Quantum Chaos and multipartite entanglement using Quantum Circuits	2022-2025	SERB- DST	21.55 Lakhs	Dr. Sunil Kumar Mishra
17.	Tailoring properties by altering long and short-range structures in eco-friendly, Pb-free ferroelectric perovskite oxides for energy harvesting	3 years	DST-SERB	18.535 Lakhs	Dr. Saurabh Tripathi
18.	Enhancement of detection capability of Pyro-electric detectors in Infrared(IR) and Terahertz (THz) region	2023-2026	DRDO	94.003 Lakhs	Dr. Saurabh Tripathi
19.	Synthesis and characterization of interesting topological materials	March 2024-March 2027 (3 years)	DST-SERB	19.36 Lakhs	Dr. Swapnil Patil
20.	Developing calibration algorithm for HI intensity mapping with the Square Kilometer Array	23/02/2024 to Three years	DST-SERB	6.6 Lakhs	Dr. Prasun Dutta
21.	Experimental study of anisotropy in nuclear charge and current distribution that results in interplay of electric and magnetic rotation in Xe nuclei	3 years	SERB	16.74 Lakhs	Dr. Somnath Nag
22.	Novel and Efficient Hybrid Material of CsPbBr3 Nanocrystals and Organic Complexes for Multi-stimuli and Dynamic Optical Encryption and Decryption	2022-2025	SERB, DST, New Delhi	21.01 Lakhs	Dr. Sunil Kumar Singh
23.	A new paradigm for flavour problem, no.	2022-2025	UPCST	10.40 Lakhs	Dr. Gauhar Abbas
24.	Higgs Physics within and beyond the Standard Model	2023-2026	SERB	11.77 Lakhs	Dr. Gauhar Abbas
25.	Kinetics of Self-assembly and Structural Transitions in Complex Soft Materials Across Multiple Length Scales	3 years (March 2024-27)	Core Research Grant (CRG), Science and Engineering Research Board (SERB), New Delhi, Delhi, India.	Rs. 37.76 Lakhs	Dr. Awaneesh Singh
26.	Development of robust spin-photon hybrid quantum system for Negative refraction	20 Nov 2023 to 19 Nov 2025	SERB	31.90 Lakhs	Biswanath Bhoi
27.	Development of magnetic materials for spin Seebeck energy harvesting	07 Feb 2024 to 06 Feb 2027	CST UP	12.86 Lakhs	Biswanath Bhoi

Faculty members' participation with other universities under MoUs

1. Dr. Rakesh Kumar Singh with Bar Ilan University, Israel
2. Dr. Rakesh Kumar Singh with Niigata University, Japan
3. Dr. Rakesh Kumar Singh with The University of Electro-Communications, Tokyo, Japan

Research Publications

1	Total Number of Papers Published in Refereed International Journals	137
2	Total Number of Papers Presented in National Conferences	19
3	Total Number of Papers Presented in International Conferences	07

Refereed International Journals

1. Mishra JN, Jha PA, Jha PK, Singh PK, Choudhary SR, Singh P (2023) ZnO incorporated hybrid catalytic proton exchange membrane for H2 generation. APL Energy 1, no. 3.
2. Yadav G, Jha PK, Jha PA, Singh PK, Choudhary SR, Singh P (2023) Morphological control for high proton conduction in robust Co3O4-diethylmethylamine (metal–organic framework) membrane, Phys. Chem. Chem. Phys., 25, 32503-32514
3. Sharma U, Pawar V, Singh P (2024) Charge particle dynamics and electrochemical behavior of $SrTiO_{3-\delta}$ as anode material for IT-SOFC applications. International Journal of Hydrogen Energy. 52, 1278-1279.
4. Hera Tarique, Raza Shahid, Pragati Singh, Raghvendra Pandey, Prabhakar Singh (2024) Investigation of structural, morphological, and ionic conduction behaviour of Na+ substituted trimeric strontium silicate Sr3-3xNa3xSi3O9-δ (0.00 ≤ x ≤ 0.20), Materials Today Communications, 39, 108652
5. Hera Tarique1, Raza Shahid, Pragati Singh, Anjani K. Singh, Raghvendra Pandey, Prabhakar Singh, (2024) Influence of K+ substitution on germanium doped strontium silicate (Sr3-3xK3xSi3-3yGe3yO9-δ; 0 ≤ x ≤ 0.20, y=0.1) for application as solid electrolyte, Physica B, 672, 415456.
6. Hera Tarique1, Raza Shahid, Pragati Singh, Anjani K. Singh, Raghvendra Pandey, Prabhakar Singh, (2024) Investigation of sodium and germanium bisubstituted trimeric strontium silicate (Sr33xNa3xSi33yGe3yO9δ; 0 < x < 0.20, y = 0.1) as solid electrolyte, ,Journal of Applied Electrochemistry, 54, 487-502.
7. Alam M, Kumar D, Kumar Shiv, Sawada M, Shimada K, Chatterjee S (2023)Maxwell–Wagner Polarization and Mixed Ferromagnetic and Antiferromagnetic State in Eu_2CoMnO_6": physica status solidi (b) 260(12), 2300305.
8. Kumari S, Alam M, Dixit S, Ghosh L, Ghosh Swayangsiddha,Gupta P K, Rohit J, Anand K, Rana N, Mukherjee S, Mohan A, Banerjee A, Chatterjee S (2023)Spin-phonon coupling and giant dielectric constant in $Bi_{0.5}La_{0.5}Fe_{0.4}Al_{0.1}Mn_{0.5}O_3$": Journal of Materials Science: Materials in Electronics 34(32), 2142.
9. Kumari S, Anand K, Alam M, Ghosh L, Dixit S, Singh R, Jain A K, Yusuf S M, Gautam C, Ghosh A K, Mohan A, Chatterjee S (2023) Enhancement of Multiferroic and Optical Properties in $BiFeO_3$ Due to Different Exchange Interactions Between Transition and Rare Earth Ions": Physica Status Solidi (b)**:** (2023)
10. Alam M, Ghosh L, Dixit S, Jena M, Kumari S, Kumar S V, Kumar D, Verma A, Ghosh AK, Saha S, Choudhary RJ, Chatterjee S (2023)Giant dielectric constant, magnetocaloric effect and spin-phonon coupling in EuTbCoMnO6 semiconductor": Physica B: Condensed Matter 415043.
11. Dixit S, Ghosh S, Patel N, Alam M, Bandyopadhyay K, Shahi N, Kumar Y, Sawada M, Shimada K, Saha S, Singh S, Chatterjee S (2024)Raman effect and unusual transport properties of Co-doped Mn_2FeAl Heusler alloy":Europhysics Letters 144(5), 56003.
12. Singh SK, Prasad R, Srivastava PK, Yadav SA, Yadav VP, Sharma J (2023) Incorporation of first order backscattering power in Water Cloud Model for improving the leaf area index and soil moisture retrieval using dual-polarized Sentinel-1 SAR data, Remote sensing of Environment, Volume 296, 113756.
13. Singh S.K., Prasad R., Tiwari V., Srivastava P.K. (2023) An improved volume power approach to estimate LAI from optimized dual-polarized SAR decomposition, International Journal of Remote Sensing, Volume 44, 2023 - Issue 18.
14. Verma B, Singh P, Prasad R, Srivastava PK, Dave R (2023) Leaf chlorophyll content retrieval for AVIRIS-NG imagery using different feature selection and wavelet analysis, Advances in Space research, https://doi.org/10.1016/j.asr.2023.06.005.
15. Bala R., Yadav V.P., Kumara D.N., Prasad R. (2024) Assessment of Surface Energy Fluxes relation with land cover parameters in four distinct Indian cities using remote sensing data. Theoretical and applied climatology, 155(4):1-15
16. Bala R., Yadav V.P., Kumara D.N., Prasad R. (2024) Quantification of Surface Urban Heat Island Intensity using MODIS satellite imagery in different Indian cities. Journal of the Indian Society of Remote Sensing, Volume 52, Issue 2, p.327-341
17. Awasthi S, Pramanik S, Singh K, Mohan Anita, Pal B (2024) Highly Flexible non-Volatile Resistive Memory Device based on ZnO Nanoparticle/Graphene Heterostructures Embedded in Poly(Methyl Methacrylate). ACS Applied Nano Materials. *ACS Appl. Nano Mater.* 7, 6, 6392–6400.

18. Chauhan V, Dixit P, Pandey PK, Chaturved S, Pandey PC (2023) Dy3+-Assisted Negative-Thermal Quenching in Ho3+-Doped SrMoO4 for Luminescence Thermometry and Lighting Applications, The Journal of Physical Chemistry C, 127, 19159-19171, (IF: 3.7)
19. Singh P, Mishra H, Pandey PC, Rai SB (2023) Structure, photoluminescence properties, and energy transfer phenomenon in Sm 3+/Eu 3+ co-doped CaTiO 3 phosphors, New Journal of Chemistry 47, 1460-1471. (IF: 3.591)
20. Kumar H, Kumar R, Ramani U, Singh BK, Pandey PC (2023) Al-doped ZnO based long range optical fibre sensor for efficient low refractive index detection, Optical and Quantum Electronics, 55(7), 608. (IF: 3.0)
21. Kumar R, Singh BK, Pandey PC (2023) Cone-shaped resonator-based highly efficient broadband metamaterial absorber, Optical and Quantum Electronics, 55(7), 579. (IF: 3.0)
22. Dixit P, Chauhan V, Pandey PK, Pandey PC (2023) Improvement in luminescence of thermally stable CaMoO4: Tb3+ green phosphor by Bi3+ ions, Materials Chemistry and Physics, 127913. (IF: 4.6)
23. Pandey PK, Dixit P, Chauhan V, Pandey PC (2023) Luminescence properties and energy transfer studies in thermally stable Bi2O3: Sm3+, Eu3+ phosphor, Journal of Alloys and Compounds, 952, 169911. (IF: 6.371)
24. Ramani U, Kumar H, Kumar R, Singh BK, Pandey PC (2023) Rectangular-Shape Cladding-Based Photonic Crystal Fiber Surface Plasmon Resonance-Based Refractive Index Sensor, Plasmonics, 1-9. (IF: 3.0)
25. Kumar R, Singh BK, Pandey PC (2023) Highly effective gallium arsenide split-disk resonator-based ultrathin metamaterial absorber, Bulletin of Materials Science 46 (3), 164.
26. Kumar H, Ramani U, Kumar R, Singh BK, Pandey PC (2024) High refractive index sensing highly sensitive and low loss SPR sensor based on hollow-core D-shaped optical fiber, Modern Physics Letters B, 38 (18),, 2450101, 2024 (IF: 1.9)
27. Kumar R, Kumar H, Ramani U, Kumar S, Singh BK, Singh PP, Pandey PC (2024) Wide-angle and polarization-insensitive perfect metamaterial absorber, Modern Physics Letters B, 38 (18),, 2450105, (IF: 1.9)
28. Chauhan V, Dixit P, Pandey PK, Chaturvedi S, Pandey PC (2024) Emission color tuning and dual-mode luminescence thermometry design in Dy3+/Eu3+ co-doped SrMoO4 phosphors, Methods and Applications in Fluorescence, 12, 015002 (IF: 3.2)
29. Sonali, Chauhan V, Pandey PC, Shivakumara C (2024) Role of Sensitizer Ions in Enhancing the Luminescence Intensity of Eu3+-Activated NaLa(MoO4)2 Phosphors and Judd–Ofelt Analysis for Solid-State Lighting and Temperature-Sensing Applications, ACS Applied Optical Materials 2 (1), 41-56.
30. Nirala G, Katheriya T, Yadav D, Pandey S, Upadhyay S (2023) Effect of Nb doping on epsilon negative behaviour of Sr2MnO4. Journal of Materials Science 57 (33), 15862-15875
31. Katheriya T, Upadhyay S (2023) High temperature study of dielectric and electrical conduction behaviour of La2NiO4. Physica Scripta 98 (10), 105969
32. Rai VS, Prajapati D, Kumar V, Verma H, Upadhyay S, Verma MK, Kumar A, Singh NB (2023) Studies on Impedance and Dielectric Properties of Bi2/3Cu3Ti4?xSixO12 (x = 0.05 and 0.1) Ceramics Synthesized by the Semi-wet Method. Journal of Materials Engineering and Performance
33. Nirala G, Verma H, Baranwal R, Upadhyay S (2023) Study Of Negative Permittivity Behavior Sr7Mn4O15. SrO Nanocomposite. Journal of Condensed Matter 1 (02), 90-93.
34. Kumar V, Kumar A, Singh S, Kumar K, Verma MK, Rai VS, Nirala G, Upadhyay S, Yadav N, Singh NB, Tiwary D, Mandal KD (2024) The emergence of Griffiths phase in $CaCu_3Ti_{(4-x)}Mn_xO_{12}$ (CCTMO, $x = 1$, 2 and 3) geometrically frustrated antiferromagnetic complexes perovskite, Journal of Materials Science: Materials in Electronics 35 (2), 136
35. Prajapati D, Rai VS, Kumar A, Singh NB, Verma H, Upadhyay S, Mandal KD (2024) Phase Evolution, Dielectric, and Electric Behavior of Sm-Doped BCTO Ceramic Fabricated by Semi-Wet Method. Crystal Research and Technology, 2300270
36. Katheriaya T, Nirala G, Upadhyay S (2024) Establishing The Correlation Of Negative Permittivity And AC Conductivity Of La2-XSrxNiO4 (X= 0, 0.1, 0.3, 1) For Microwave Shielding Application. Journal of Materials Chemistry C
37. Verma H, Tripathi A, Upadhyay S (2024) A comprehensive study of dielectric, modulus, impedance, and conductivity of $SrCeO_3$ synthesized by the combustion method. International Journal of Applied Ceramic Technology
38. Mondal S., Srivastava A.K., Mishra S,K., Sangal K, Kayshap P., Guo Y., Pontin D.I., Uritsky V.M., Ofman L., Wang T., Ding Y. (2023) Reconnection generated plasma flows in the quasi-separatrix layer in localised solar corona, 2023, The Astrophysical Journal, 953, 84.

39. Yuan D., Fu L., Cao W., Kuźma B., Geeraerts M., Trelles Arjona, J.C, Murawski K., Van D.T., Srivastava A.K., Miao Y., Feng S. Feng X., Quintero N.C., Ruiz C.B., Su J. (2023) Transverse Oscillations and an Energy Source in a Strongly Magnetised Sunspot, Nature Astronomy (https://rdcu.be/dc0g4), https://doi.org/10.1038/s41550-023-01973-3. Also see the "News and Views: Wave Energy in the Solar Atmosphere" on our paper written by Marco Stangalini in "Nature Astronomy" (https://doi.org/10.1038/s41550-023-01955-5)
40. Srivastava A.K. and Singh Balveer (2023) Numerical simulations of the decaying transverse oscillations in the cool jet, Physics, 5, 655.
41. Didel S., Pandey J.C., Srivastava, A.K., Singh G, (2024) Study of the Energetic X-ray Superflares from the Active Fast Rotator AB Doradus, Monthly Notices of the Royal Astronomical Society, 527, 1705.
42. Mondal S., Srivastava A.K., Pontin D.I., Yuan D., Priest E.R. (2024) 2.5-D MHD Simulation of the Formation and Evolution of Plasmoids in Coronal Current Sheets, The Astrophysical Journal, 963, 139.
43. Sarkar T, Chandra S, Singh RK. (2023) Phase recovery with intensity and polarization correlation. Progress in Optics. 68-1st Edition (Invited).
44. Pal SK, Somers L, Singh RK, Senthilkumaran P, Arie A. (2023) Focused polarization ellipse field singularities: Interaction of spin-orbital angular momentum and the formation of optical Möbius strips. Physica Scripta. 98(5):055507.
45. Chandra S, Singh R, Singh RK. (2023) Poincare vector correlations to estimate polarization dynamics in the laser speckle, Physica Scripta. 98(6):065504.
46. Chandra S, Sarkar T, Kumar R, Das B, Singh RK. (2023) Hanbury Brown–Twiss approach for imaging through a dynamic scattering medium. Optics Letters. 48(13):3391-4.
47. Manisha, Mandal AC, Rathor M, Zalevsky Z, Singh RK. (2023) Randomness assisted in-line holography with deep learning. Scientific Reports. 13(1):10986.
48. Sarkar T, Yadav A, Karmakar T, Singh RK. (2023) Phase shifting to measure the modal composition of the scattered helical beam. Journal of Optics. 25(11):115601.
49. Rathor M, Chaubey SK, Tamang R, Koch B, Singh RK. (2023) Single-Shot Quantitative Polarization Imaging of Live Cancer Cells. ACS Photonics. 10(10):3755-62.
50. Chatterjee K, Singh RK, Jha R. (2023) Detection of vortex charge and beam displacement by wavefront division interferometry. Applied Physics Letters. 123(12).
51. Gautam A, Athira TS, Naik DN, Singh R, Narayanamurthy CS, Singh RK. (2023) Recording of incoherent vector holograms using elements of the spatial cross-spectral density matrix. Optics and Lasers in Engineering. 169:107687.
52. S, Jha R, Singh RK (2023) Tightly focused linearly and radially polarized beam effect on the LSPR peak with varying particle size, Physica Scripta. 98(11):115523.
53. Tiwari V, Bisht NS, Singh RK. (2023) A compact and lens less digital holography setup for polarimetric analysis of spatial light modulator. Optics & Laser Technology. 167:109748.
54. Gautam A, Arora G, Senthilkumaran P, Singh RK. (2024) Detecting topological index of randomly scattered V-point singularities using Stokes correlations. Journal of Optical Society of America A. 41(1):95-103.
55. Chandra S, Gautam A, Singh RK. (2024) Folded interferometer to measure coherence–polarization matrix. Optics Letters. 49(2):326-9.
56. Pal SK, Singh RK, Senthilkumaran P. (2024) Influence of Primary Coma on the Tightly Focusing Characteristics of Circular Basis Hybrid Order Poincaré Sphere Beams. Photonics. MDPI 11(1):98.
57. Pal SK, Singh RK, Senthilkumaran P. (2024) Effect of primary astigmatism on the tight focusing of ellipse field singularities. Optics & Laser Technology. 169:110078.
58. Gautam A, Naik DN, Narayanamurthy CS, Singh RK. (2024) Effect of Polarization on Cross-Spectral Density Matrix. Photonics. MDPI 11(2):142.
59. Sarkar T, Chandra S, Sheoran G, Singh RK. (2024) Leveraging the depolarization of scattered light for holography with the Stokes correlation. Applied Physics Letters. 124(7).
60. Roy A, Parvin R, Karmakar A, Mandal A, Singh RK, Brundavanam MM. (2024) Dual-shot approach for polarization retrieval through a scattering medium. Journal of Optics. 26:045608.

61. Sarkar T, Singh RK. (2024) Pilot-assisted beam and correlation to recover information through scattering media. Applied Physics B. 0(3):49.

62. Garg S, Singh A.K., Parmar A.S., Rosy (2023) Hexagonal Boron Nitride Decorated Polypropylene Separator for Dendritic Free Sodium Deposition and Stripping. Journal of The Electrochemical Society 170 (12) 120513 (Impact Factor: 3.9)

63. Pratap R, Niveria K, Srivastava SK, Chaudhary S, Sharma P, Verma AK, Parmar A.S. (2023) Biogenic Synthesis of Gold Nanoparticles Using Dual Extract of Tulsi-Vinca for Breast Cancer Tumor Regression in Mice. Nanomedicine 18 (26) 1941-1959 (Impact Factor: 5.5)

64. Kumari P, Pratap R, Gautam VS, Das M, Hassan N, Lahiri J, Mishra A, Yadav SK, Kharwar RN, Parmar AS (2023) Facile Synthesis of Graphitic Fungal Carbon Dots for Sensing of Food Adulterants and Bio-imaging of Human Kidney Cell Line. ChemistrySelect 8 (39), e202302437 (Impact Factor: 2.1)

65. Naik GG, Pratap R, Mohapatra D, Singh S, Kumar DK, Parmar AS, Patra A, Sahu AN (2023) From Phytomedicine to Photomedicine: Quercetin-derived Carbon Nanodots- Synthesis, Characterization and Healthcare Applications. Journal of Materials Science 58 (34) 13744-13761 (Impact factor: 4.5)

66. Gaur DK, Agrahari K, Singh BP, Alam Md B., Parmar AS, Manohar R, Singh S (2023) Optical properties and zeta potential of polyvinyl pyrrolidone capped gold nanoparticles dispersed nematic liquid crystal mixture E7. Optical Materials 145, 114317 (Impact factor: 3.9)

67. Garg S, Singh A, Parmar AS, Rosy (2023) Boron Carbon Nitride Assisted Electro-functionalization of Screen-Printed Electrode for Tryptophan Sensing. ACS Applied Nano Materials 6 (16), 14849-14860 (Impact Factor: 5.90)

68. Naik K, Singh P, Yadav M, Srivastava SK, Tripathi S, Ranjan R, Dhar P, Verma AK, Chaudhary S, Parmar AS (2023) 3D Printable, injectable Amyloid-based composite Hydrogel of Bovine Serum Albumin-Aloe Vera for Rapid Diabetic Wound Healing. Journal of Materials Chemistry B 11 (34) 8142-8158 (Impact Factor: 7.00) : (Featured in as FRONT COVER PAGE of Journal)

69. Rai K, Yadav K, Das M, Chaudhary S, Naik K, Singh P, Dubey AK, Yadav SK, Agrawal SB, Parmar AS (2023) Effect of carbon quantum dots derived from extracts of UV-B-exposed Eclipta alba on alcohol-induced liver cirrhosis in Golden Hamster. Photochemical & Photobiological Sciences 22,1543–1559 (Impact Factor: 3.1)

70. Mohapatra D, Pratap R, Pandey V, Shreya S, Naik GG, Mandal SC, Timenyin SO, Dubey PK, Parmar AS, Sahu AN (2023) Bioengineered dual fuorescent carbon nano dots from Indian long pepper leaves for multifaceted environmental and health utilities. Environmental Science and Pollution Research 30 (18) 52182-52208 (Impact factor: 5.8)

71. Trivedi H, Ghorannevis Z, Chaudhary S, Parmar AS (2023) Investigations on tailoring physical properties of RF magnetron sputtered Cadmium Sulphide thin films. Materials Letter X, 18, 100190 (Impact factor: 1.7)

72. Garg S, Parmar AS, Rosy (2023) Hexagonal boron nitride as anode for sodium ion battery – A reality check! Journal of The Electrochemical Society. 170 (2), 020535 (Impact factor: 3.9)

73. Pratap R, Vishal V, Chaudhary S, Parmar AS (2023) Fabrication of white light emitting diodes via high yield surface passivated carbon quantum dots doped with terbium. RSC Advances, 13, 1974-84 (Impact factor: 3.9)

74. Pratap R, Hassan N, Yadav M, Srivastava SK, Chaudhary S, Verma AK, Lahiri J, Parmar AS (2024) Biogenic Synthesis of Dual-emission Chlorophyll-rich Carbon Quantum Dots for Detection of Heavy Toxic Metal Ions – Hg (II) and As (III) in Water and Mouse Fibroblast Cell Line NIH-3T3. Environmental Science Nano 11 (4) 1636-1653 (Impact Factor: 7.3)

75. Hemanth B, Bharti R, Parmar AS, Ghosha UU (2024) Self-pinning colloids on rough surface. Colloids and Surfaces A: Physiochemical and Engineering Aspects 690, 133767 (Impact Factor: 5.2)

76. Ranjan R, Rai R, Naik K, Parmar AS, Dhar P (2024) Scalable phosphorylated cellulose production with improved environmental sustainability, crosslinkability and processability using 3D bioprinting for dye remediation. International Journal of Biological Macromolecules 264, 130577 (Impact factor: 8.2)

77. Pratap R, Das A, Mishra A, Chaudhary S, Parmar AS (2024) Developing a Rapid and Sensitive Colorimetric Sensor for Detection of Food Adulterant Rhodamine-B in Real Samples. ChemistrySelect 9 (1) e202302748 (Impact Factor:2.1)

78. Naik GG, Madavi R, Minocha T, Mohapatra D, Pratap R, Shreya S, Patel PK, Yadav SK, Parmar AS, Patra A, Satpathy S, Kazi M, Hussain MD, Sahu AN (2024) In Vitro Cytotoxic Potential of Cow dung and expired tomato sauces-derived Carbon nanodots Against A-375 human melanoma cell line. Arabian Journal of Chemistry 17 (2) 105576 (Impact factor: 6.00)

79. Shukla RK, Chotorlishvili L, Vipin V, Verma H, Ernst A, Parkin Stuart SP, Mishra SK (2023) Quantum information diode based on a magnonic crystal, Materials for Quantum Technology.

80. Kumar H, Tripathi S (2024) Similarities and differences in the ordering at short and long ranges in a NaNbO3 based Pb-free smart system: A key to functional properties, J. Phys. D: Appl. Phys. 57, 335502.

81. Pal D, Sharma B Bh, Garg N, Dan S, Gangwar VK, Singh M, Garg AB, Poswal HK, Patil S, Chatterjee S (2023)Experimental and theoretical revelation of a unique band topology in Sb2Te3 topological insulator by substitution of Cu—A high pressure study": Materials Science and Engineering: B 290, 116347.

82. Dan S, Kargeti K, Sahoo RC, Dan S, Pal D, Verma S, Chakravarty S, Panda SK, Patil S (2023) Magnetotransport properties and Fermi surface topology of the nodal line semimetal InBi": Physical Review B 107, 205111.

83. Dikshit S, Mishra S (2023) Ordering kinetics in active polar fluid, Europhysics Letters 143, no. 1 : 17001.

84. Mishra PK, Mishra S. (2023) Inhomogeneous Active Systems, Physics News 53.

85. Kushwaha P, Semwal V, Maity S, Mishra S, Chikkadi V (2023) Phase separation of passive particles in active liquids, Physical Review E 108, no. 3: 034603.

86. Singh JP, Mondal PS, Semwal V, Mishra S (2023) Current reversal in polar flock at order-disorder interface, Physical Review E 108, no. 3 : 034608.

87. Jena P, Mishra S. (2023) Ordering kinetics and steady state of Malthusian flock, Physics of Fluids 35, no. 10.

88. Mishra PK, Krishna A, Mishra S (2023) Active Brownian particles can mimic the pattern of the substrate, Soft Materials 21, no. 4 : 377-387.

89. Eswaran P, Mishra S (2024) Synchronized Rotations of Active Particles on Chemical Substrates, Soft Matter.

90. Semwal V, Joshi J, Dikshit S, Mishra S (2024) Macro to micro phase separation of chiral active swimmers, Physica A: Statistical Mechanics and its Applications 634: 129435.

91. Semwal V, Kumar A, Singh JP, Mishra S (2024) Dynamics of active run and tumble and passive particles in binary mixture, The European Physical Journal Special Topics: 1-8.

92. Nandakumar, Meera search by orcid; Dutta, Prasun (2023) Large-scale turbulence cascade in the spiral galaxy NGC 6946, Monthly Notices of the Royal Astronomical Society, Volume 526, Issue 3, pp.4690-4697, IF: 4.8

93. Ramanujam, Niruj Mohan; Dutta, Prasun search by orcid; Kavila, Indulekha; Chakraborty, Manoneeta; Dhurde, Samir; Hota, Ananda; Konar, Chiranjib; Oberoi, Divya; Pandey-Pommier, Mamta; Rao, Mayuri Sathyanarayana (2023) Square Kilometre Array—India Consortium: Education and Public Outreach, Journal of Astrophysics and Astronomy, Volume 45, Issue 1, article id.2, IF: 1.1

94. Elahi, Kh Md Asif search by orcid; Bharadwaj, Somnath search by orcid; Pal, Srijita; Ghosh, Abhik search by orcid; Ali, Sk Saiyad; Choudhuri, Sami ; Chakraborty, Arnab; Datta, Abhirup; Roy, Nirupam; Choudhury, Madhurima search by orcid; Dutta, Prasun (2023) Towards 21-cm intensity mapping at z = 2.28 with uGMRT using the tapered gridded estimator - III. Foreground removal, Monthly Notices of the Royal Astronomical Society, Volume 525, Issue 3, pp.3439-3454, IF: 4.8

95. Dokara, Rohit search by orcid; Roy, Nirupam search by orcid; Menten, Karl search by orcid; Vig, Sarita search by orcid; Dutta, Prasun search by orcid; Beuther, Henrik search by orcid; Pandian, Jagadheep D. search by orcid; Rugel, Michael; Rashid, Md search by orcid; Brunthaler, Andreas (2023) Metrewave Galactic Plane with the uGMRT (MeGaPluG) Survey: Lessons from the pilot study, Astronomy & Astrophysics, Volume 678, id.A72, 13 pp., IF: 6.5

96. Shaw, Abinash Kumar search by orcid; Chakraborty, Arnab; Kamran, Mohd; Ghara, Raghunath; Choudhuri, Sami ; Ali, Sk. Saiyad; Pal, Srijita; Ghosh, Abhik; Kumar, Jais search by orcid; Dutta, Prasun; Sarkar, Anjan Kumar (2023) Probing early Universe through redshifted 21-cm signal: Modeling and observational challenges, Journal of Astrophysics and Astronomy, Volume 44, Issue 1, article id.4, IF: 1.1

97. Elahi, Kh Md Asif search by orcid; Bharadwaj, Somnath search by orcid; Ghosh, Abhik search by orcid; Pal, Srijita; Ali, Sk Saiyad; Choudhuri, Samir; Chakraborty, Arnab; Datta, Abhirup search by orcid; Roy, Nirupam; Choudhury, Madhurima search by orcid; Dutta, Prasun (2023) Towards 21-cm intensity mapping at z = 2.28 with uGMRT using the tapered gridded estimator - II. Cross-polarization power spectrum, Monthly Notices of the Royal Astronomical Society, Volume 520, Issue 2, pp.2094-2108, IF: 1.1

98. Pratik Purohit, Prasun Dutta, Prasun K. Roy (2023) Empirically validated theoretical analysis of visual-spatial perception under change of nervous system arousal, Front. Comput. Neurosci., 12 May 2023, Volume 17, IF: 1.2

99. Tiwari T., Shrivastava K. K., Roy D. and Singh R. (2023) A modified quasi-classical analysis to capture the effects of strong interaction in open QED lattices. Annalen der Physik. 2023, 2300402.

100. Arora K., Singh R. and Hosur P. (2023) Suppression of one-dimensional weak localization by band asymmetry. Physical Review B. 1 08, 064211.

101. Mukherjee A., Bhattacharya S, Trivedi T, Tiwari S, Singh RP, Muralithar S, Yashraj, Katre K, Kumar R, Palit R, Chakraborty S, Jehangir S, Nazir Nazira, Rouoof SP, Bhat GH, Sheikh JA, Rather N, Raut R , Ghugre SS, Ali S, Rajbanshi S, Nag S, Tiwary SS, Sharma A, Kumar S, Yadav S, Jain AK (2023) Evidence of transverse wobbling motion in 151Eu. Phys Rev C 107: 054310.

102. Prajapati Mamta, Nag Somnath, Singh AK et al. (2024) Possible wobbling phenomenon in 125Xe. Phys Rev C 109 : 034301

103. Dey Atreyee, Singh A. K., Basu Anwesha, Nag Somnath et al. (2024) Yrast and nonyrast states in 126Te. Accepted 20 March 2023

104. Dubey, C., Yadav, A., Baloni, D., Kachhap, S., Singh, S.K., & Singh, A.K. (2023) Impact of crystal structure on optical properties and temperature sensing behavior of $NaYF_4$: Yb3+/Er3+ nanoparticles. RSC Advances. 13(30): 20975–20983.

105. Dubey, C., Yadav, A., Baloni, D., Singh, S., Singh, A.K., Singh, S.K., & Singh, A.K. (2023) Multi-stimuli-responsive and dynamic color tunable security ink for multilevel anticounterfeiting. Methods and Applications in Fluorescence. 11(2): 25001.

106. Kachhap S., Fatima, S., Yadav A., Singh A.K., Singh S.K. (2023) Expanding the Emission of CsPbBr3 Nanocrystals in the Blue Region. ACS Applied Optical Materials. 1(12): 1974–1986.

107. Singh S., Kachhap S., Sharma M., Singh S.K. (2023) Enhancing the temperature sensing property of a $Ca_{0.79-x}Bi_xEr_{0.01}Yb_{0.2}MoO_4$ phosphor via local symmetry distortion and reduction in non-radiative channels. RSC Advances. 13(22): 14991–15000.

108. Thakur H., Singh S., Gathania A.K., Singh S.K., Kumar I., Singh R.K. (2023) Impact of varying Li_+ concentration on the upconversion emission and temperature sensing characteristics of YVO_4: Tm^{3+}/Yb^{3+} phosphor. Inorganic Chemistry Communications. 158: 111495.

109. Thakur H., Singh S., Gathania A.K., Singh S.K., Singh R.K. (2023) Effect of $Li_+/K_+/Zn^{2+}$ doping on the optical and temperature sensing properties of Tm^{3+} and Yb^{3+} doped YVO_4 phosphor. Ceramics International. 49(15): 25935–25944.

110. Sajwan S., Sharma M., Kachhap S., Singhal M., Singh A.K., Tyagi M., Sarkar P.S., Chauhan N., Singh S.K. (2024) Structural and optical properties of $Zn_{2.95}Ga_{2-x}SnO_8$: xCr^{3+}: An excellent X-ray charging-based persistent phosphor. Journal of Alloys and Compounds. 978: 173405.

111. Sharma M., Mishra J.N., Singh S., Singh P., Singh S.K., Singh P. (2024) Tm^{3+}/Yb^{3+}: $NaGdF_4$ nanoparticles decorated g-C_3N_4/$BiOBr_{0.75}I_{0.25}$ multicomponent heterostructure: Structural, optical properties and UV-Visible-NIR responsive photocatalytic degradation of Rhodamine B and reduction of Cr (VI). Materials Research Bulletin. 112884.

112. Yadav A., Dubey C., Singh S.K., Singh A.K. (2024) Improving the Stability of Lead-Free $CsSnBr_3$ Halide Perovskite by DDAB-Assisted Postpassivation Surface Engineering. ACS Applied Optical Materials. 2(3): 492–500.

113. Abbas G, Singh V, Singh N, Sain R (2023) Flavour bounds on the flavon of a minimal and a non-minimal ${\mathcal {Z}}_2 \times {\mathcal {Z}}_N$ symmetry, Eur. Phys. J. C 83, no.4, 305

114. Abbas G, Adhikari R, Chun EJ (2023) Flavonic dark matter,Phys. Rev. D 108,no.11, 115035.

115. Abbas G, Jain A, Singh V, Singh N (2024) Renormalization-group improved Higgs to two gluons decay rate, Eur. Phys. J. Plus 139, no.2, 114

116. Chauhan A., Gogoi D., Puri S., Singh A. (2023) Effect of amphiphilic polymers on phase separating binary mixtures: A DPD simulation study, Journal of Chemical Physics, 159, 204901.

117. Chauhan A., Gogoi D., Puri S., Singh A. (2023) Segregation of fluids with polymer additives at domain interfaces: a dissipative particle dynamics study, Soft Matter, 19 (34), 6433-6445.

118. Singh A.K., Singh A. (2023) Phase separation kinetics of block copolymer melts confined under moving parallel walls: A DPD study, Computational Materials Science, 226, 112224.

119. Shrivastava S., Upadhyay A., Pradhan S.S., Saha S., Singh A. (2024) Evolution of stable Pickering emulsion by polymer brush-modified Janus particles: insights from DPD simulation and experimental study; (accepted in Langmuir, currently in press, 2024).

120. Pandey K., Verma D.K., Singh A., Saha S. (2024) Architecture-dependent transport behavior of iron (0) entrapped biodegradable polymeric particles for groundwater remediation, Chemosphere, 357, 141892.

121. Singh A.K., Chauhan A., Singh A. (2024) Growth kinetics and morphology characterization of binary polymeric fluid under random photo illumination, Journal of Chemical Physics, 160, 024907.

122. Chauhan A., Singh A.K., Singh A. (2024) Photomodulated phase-separation kinetics of block copolymer melts: A DPD Simulation Study, Molecular Simulation, 50(5), 394-403.

123. Biswas A., Karak B.B., Kumar P. (2023) Exploring the reliability of polar field rise rate as a precursor for an early prediction of solar cycle, Monthly Notices of the Royal Astronomical Society, 526, 3994–4003

124. Sreedevi A., Jha B., Karak B.B., Banerjee D. (2023) AutoTAB: Automatic Tracking Al- gorithm for Bipolar Magnetic Regions, Astrophysical Journal Suppliment, 268, 58

125. Golubeva E.M., Biswas A., Khlystova A.I., Kumar P., Karak B.B. (2023) Probing the variations in the timing of the Sun's polar magnetic field reversals through observations and surface flux transport simulations, Monthly Notices of the Royal Astronomical Society, 525, 1758-1768

126. Karak B.B. (2023) Models for the long-term variations of solar activity, Living Reviews in Solar Physics (invited review), 20, 3

127. Biswas A., Karak B.B., Usoskin I., Weisshaar E. (2023) Long-Term Modulation of Solar Cycles, Space Science Reviews, 219, 3

128. Vashishth V., Karak B.B., Kitchatinov L. (2023) Dynamo modelling for cycle variability and occurrence of grand minima in Sun-like stars: rotation rate dependence, Monthly Notices of the Royal Astronomical Society, 522, 2601.

129. Sreedevi A., Jha B.K., Karak B.B., Banerjee D. (2024) Analysis of BMR tilt from AutoTAB catalog: Hinting towards the thin flux tube model? The Astrophysical Journal, 966, 112

130. Ghosh A., Kumar P., Prasad A., Karak B.B. (2024) Characterizing the solar cycle variability using nonlinear time series analysis at different amounts of dynamo supercriticality: Solar dynamo is not highly supercritical, The Astronomical Journal, 167, 209

131. Aluri P.K., Cea P., Chingangbam P., Chu M.C., Clowes R.G., et al. (2023) Is the observable Universe consistent with the cosmological principle?, Classical and Quantum Gravity, 40, 9, 094001

132. Verma S., Maurya A., Singh R., Bhoi B., (2024) Control of Photon-Magnon Coupling in a Planar Hybrid Configuration, J. Supercond. Nov. Magn.

133. Verma S., Maity M., Maurya A., Singh R., Bhoi B., (2024) Evolution of microstructure, magnetic and microwave properties of sputter deposited polycrystalline YIG thin films, J Mater Sci: Mater Electron 35, 105

134. Calura F, Palla M, Morselli L, ..., Verma K, et al. (2023) A Bayesian chemical evolution model of the DustPedia Galaxy M74, Monthly Notices of the Royal Astronomical Society, 523, 2351

135. Winther M.L., Børsen-Koch V.A., Rørsted J.L., ..., Verma K, et al. (2023) Did Kepler-444 have a long-lived convective core?, Monthly Notices of the Royal Astronomical Society, 525, 1416.

136. Goupil M.J., Catala C., Samadi R.,.., Verma K., et al. (2024) Predicted asteroseismic detection yield for solar-like oscillating stars with PLATO, Astronomy & Astrophysics, 683, A78.

137. Tripathi AK, Singhal RP, Deirdre E. (2023) Wendel Diffuse auroral intensities produced by whistler mode and electron cyclotron harmonic waves, Astrophysics and Space Science, (2023) 368:61, https://doi.org/10.1007/s10509-023-04217-y

Proceedings of International Conferences

1. Rakesh K. Singh. 2023. Holography with higher-order Stokes correlations. Proceedings of SPIE 12608: 89-90, 9th Biomedical Imaging and Sensing Conference (OPIC-BISC), Yokohama, Japan, April 2023.

2. Manisha Dixit, Aditya C. Mandal, and Rakesh K. Singh. 2023. Second-order correlation of randomness for enhanced quality imaging. Proceedings of SPIE 12608: 116-169, 9th Biomedical Imaging and Sensing Conference (OPIC-BISC), Yokohama, Japan, April 2023.

3. Sourav Chandra, Tushar Sarkar, Raj Kumar Bhargab Das, and Rakesh K. Singh. 2023. Looking through a dynamic scatterer. The 84th JSAP Autumn Meeting 2023, Kumamoto Jo-Hall, Kumamoto, Japan, September 2023.

4. Rakesh K. Singh. 2023. Randomness assisted imaging. The 84th JSAP Autumn Meeting 2023, Kumamoto Jo-Hall, Kumamoto, Japan, September 2023.
5. Sarita, Rajan Jha, Rakesh K. Singh. 2023. Near-field intensity enhancement under an aberrated focusing The 84th JSAP Autumn Meeting 2023, Kumamoto Jo-Hall, Kumamoto, Japan, September 2023.
6. Sourav Chandra, and Rakesh K. Singh. 2024. Experimental measurement of complex elements of correlation matrix of polarized light. Proceedings of SPIE 12852: 46-50, Quantitative Phase Imaging X, SPIE Photonics West, San Francisco, California, USA, January, 2024.
7. Sarita, Rajan Jha, Rakesh K. Singh. 2023. Effect of defocusing on plasmonic response of nanoparticle. The 71st JSAP Spring Meeting 2024, Setagaya Campus, Tokyo City University, Japan, March 2024.

Proceedings of National Conferences

1. Sarita, Rajan Jha, Singh Rakesh Kumar (2023) Tuning the plasmonic response by an aberrated system. International conference on Advanced Materials for Better Tomorrow-II, Pg. No. 129, Banaras Hindu University, India, 10-13 October.
2. Singh Rakesh Kumar (2023) Phase microscope for biologists. International conference on Advanced Materials for Better Tomorrow-II, Pg. No. 35, Banaras Hindu University, India, 10-13 October.
3. Singh Rakesh Kumar (2023) Holographic imaging with quantum and classical light. International conference on Optics, Photonics & Quantum Information, Pg. No. 43, CUSAT, Cochin, Kerala, India, 11-13 December.
4. Gautam Akanksha, Singh Rakesh Kumar (2023) Vortices in correlation function. International conference on Optics, Photonics & Quantum Information, Pg. No. 171-172, CUSAT, Cochin, Kerala, India, 11-13 December.
5. Chandra Sourav, Singh Rakesh Kumar (2023) Measurement of Coherence-Polarization matrix by One-Shot Approach. International conference on Optics, Photonics & Quantum Information, Pg. No. 171-172, CUSAT, Cochin, Kerala, India, 11-13 December.
6. Sarita, Chowdhury Ankita, Jha Rajan, Singh Rakesh Kumar (2023) Convergence angle affecting tightly focused aberrated beam. International conference on Optics, Photonics & Quantum Information, Pg. No. 147-148, CUSAT, Cochin, Kerala, India, 11-13 December.
7. Karmakar Tanushree, Agrawal Prateek, Singh Rakesh Kumar (2023) Sampling the Light Source for single pixel detection. International conference on Optics, Photonics & Quantum Information, Pg. No. 117, CUSAT, Cochin, Kerala, India, 11-13 December.
8. Yadav Amit, Sarkar Tushar, Suzuki Takamasa, Singh Rakesh Kumar (2023) Detection of vortex beam with high topological charge. International conference on Optics, Photonics & Quantum Information, Pg. No. 267, CUSAT, Cochin, Kerala, India, 11-13 December.
9. Rathor Mohit, Chaubey Shivam Kumar, Singh Rakesh Kumar (2023) Holographic microscope for inspection of surface defects. International conference on Optics, Photonics & Quantum Information, Pg. No. 167-168, CUSAT, Cochin, Kerala, India, 11-13 December.
10. Agrawal Prateek, Karmakar Tanushree, Singh Rakesh Kumar (2023) High-resolution imaging with random illumination. International conference on Optics, Photonics & Quantum Information, Pg. No. 115, CUSAT, Cochin, Kerala, India, 11-13 December.
11. Chaubey Shivam Kumar, Rathor Mohit, Tamang Rupen, Koch Biplob, Singh Rakesh Kumar (2023) Quantitative polarization microscopy for live cell imaging. International conference on Optics, Photonics & Quantum Information, Pg. No. 159, CUSAT, Cochin, Kerala, India, 11-13 December.
12. Chowdhury Ankita, Prajapati Vishal, Singh Rakesh Kumar (2023) Tailoring spatial coherence by layered interface. International conference on Optics, Photonics & Quantum Information, Pg. No. 121, CUSAT, Cochin, Kerala, India, 11-13 December.
13. Ali Sajad, Rajbanshi Subhendu, Nag Somnath et al. (2023) Quadrupole Band Structure in 142Eu 67 : 43, Proceedings of the DAE Symp. on Nucl. Phys, IIT Indore, India
14. Malik Vishal, Palit Rudrajyoti, Srivastava Praveen C,Dey Piku , Das Biswajit, Sindhu Aditi , Garg Umesh ,Goel Nidhi , Kundu Ananya , Nag Somnath, Negi Dinesh, Patel Deepak (2023) High spin spectroscopy of 90Nb 67 : 55, Proceedings of the DAE Symp. on Nucl. Phys, IIT Indore, India
15. Goel Nidhi , Nag Somnath et al. (2023), Rotation of 89Y nucleus about the longest principal axes 67 : 81, Proceedings of the DAE Symp. on Nucl. Phys, IIT Indore, India

16. Kumar Aalakh , Prajapati Mamta et al. (2023) , Nag Somnath, Spectroscopic study of 114Sb nucleus 67:83, Proceedings of the DAE Symp. on Nucl. Phys, IIT Indore, India
17. Prajapati Mamta, Goel Nidhi, Kumar Aalakh, Nag Somnath et al. (2023) , Enhanced E1 transitions in 119I 67 : 111, Proceedings of the DAE Symp. on Nucl. Phys, IIT Indore, India
18. Mukherjee A. , Bhattacharya S. , Trivedi T.,Tiwari S. , Singh R. P., Muralithar S., Yash Raj , Katre K. , Palit R. , Chakraborty S., Raut R. , Ghugre S. S., Ali S., Rajbanshi S. , Nag S. et al. (2023) Low-lying Band Structure in 149Pm Nucleus 67 : 131, Proceedings of the DAE Symp. on Nucl. Phys, IIT Indore, India
19. Prajapati Mamta, Nag Somnath , Pai H. , Chakraborty S. , Ray Prithwijita (2023) Shell model calculation for 114Te to address the anomalies in E2 transition probabilities 67:333, Proceedings of the DAE Symp. on Nucl. Phys, IIT Indore, India

Distinguished Visitor

S. No.	Name of the visitor & Designation	Date of Visit	Purpose of Visit
1.	Prof. Gregory N Morscher ASEC 504, Mechanical Engineering Department, University of Akron, Akron, OH 44325	07.02.2023 to 19.02.2023	To deliver a series of lectures under the Fulbright-Nehru Fellowships, jointly funded by the Governments of India and the U.S.
2.	Prof. Umesh Garg , Professor of Physics at the University of Notre Dame	13.02.2023	Deliver a talk on "From Heavens to Earth, the Little Nucleus Reigns Supreme"
3.	Dr. Sanjit Ghosh, BNL, New York, USA	17-02-2024-21-02-2024	Interaction with the students and faculty members
4.	Prof. Durgesh Tripathi, IUCAA Pune	29-30 May, 2023	Deliver a talk on "Building of the solar ultraviolet Imaging Telescope (SUIT) on board Aditya-L1 mission: why and how"
5.	Prof. Jagdev Singh, IIA, Bangalore	29 May – 01 June 2023	Deliver a talk on "Spectroscopic observations of the coronal emission lines and VELC onboard ADITYA-L1 mission"
6.	Prof. Viktor Fedun, ACSE, The University of Sheffield	25-28 July 2023	Deliver a talk on "Solar atmosphere vortices and their importance for waves excitation and energy transport"
7.	Dr. S.K. Tiwari and Navdip Panesar, LMSAL, Palo-Alto, USA	12-14 March, 2024	--

Other activities

International collaboration/achievements by the Department

SOC Member for 2022-2025 for organizing the Astronomical Society of India (SOC) annual meetings.

1. Moderator of the Session "Aditya-L1 and Beyond" on 5th April 2023 in "Multi-scale Phenomena on the Sun: Present Capabilities and Future Challenges" during April 3-5, 2023, at Udaipur Solar Observatory. Session Chair:- Prof. Anil Bhardwaj; Moderator of Panel Discussion: Dr. A.K. Srivastava.
2. Dr. Bidya Binay Karak is continuing collaboration with an international team of leading scientists sponsored by the International Space Science Institute (ISSI), Bern. Through this team, Dr. Karak and his student Mr. Akash Biswash participated in the team meeting which was held during 20-24 June 2022. The full travel and other costs of Akash for attending this team meeting at Bern was fully funded by ISSI.
3. Dr. Pavan Kumar Aluri, Assistant Professor, Department of Physics, IIT(BHU) initiated a collaboration agreement with University of Oslo (UiO), Norway and IIT(BHU) under the project Global Component Separation Network (GCSN) sponsored by Norwegian Research Council with UiO as the project host institution. Under this agreement, three Ph.D. students working with Dr. Pavan Kumar Aluri attended two fully funded in person workshops during Aug. 22nd - Sep. 02nd, 2022 and Jan. 23rd - 27th, 2023 at the University of Oslo, Norway.

Indian Faculty visits in the Department

S. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1	Prof. S. Prabhu, TIFR-Mumbai	Visit to our department and delivered a talk on "Terahertz (THz) Spectroscopy Applied to the study of Materials"	12th October 2023, Seminar Room, Department of Physics, IIT (BHU) Varanasi

Foreign Faculty Visits in the Department

S. No.	Name of Faculty Member	Purpose of Visit	Date and Venue
1.	Prof. Balpreet Singh Ahluwalia, Department of Physics and Technology, UiT The Arctic University of Norway	Visit to our department and delivered a talk on "Development of advanced optical microscopy for bio-imaging application"	20th October 2023, Seminar Room, Department of Physics, IIT (BHU) Varanasi
2.	Prof. Olav Gaute Hellesø, Head of the Department of Physics and Technology, UiT The Arctic University of Norway	Visit to our department and delivered a talk on "Optical trapping and Raman spectroscopy of biological nanoparticles"	20th October 2023, Seminar Room, Department of Physics, IIT (BHU) Varanasi
3.	Dr. Kanhaiya Singh, Associate Professor, Department of Surgery, University of Pittsburgh, USA	Academic Collaboration with Dr. Avanish Singh Parmar	24.11.2023 Department of Physics, IIT(BHU), Varanasi
4.	Prof. Yukitoshi Otani, Department of Optical Engineering and the director of Center for Optical Research and Education (CORE), Utsunomiya University, Japan	Visit to our department and delivered a talk on "An Ultrasound-driven Liquid Crystal Lens Paving the Way for Future Tunable Devices"	6th March 2024, PH-8, Department of Physics, IIT (BHU) Varanasi
5.	Prof. Jessica Onaka, Institute for Promotion of Research Center for Optical Research and Education, Japan	Visit to our department and delivered a talk on "An Ultrasound-driven Liquid Crystal Lens Paving the Way for Future Tunable Devices"	6th March 2024, PH-8, Department of Physics, IIT (BHU) Varanasi

Any other Information

1. Dr. A.K. Srivastava is an SOC Member for 2022-2025 for organizing the Astronomical Society of India (SOC) annual meetings.
2. Moderator of the Session "Aditya-L1 and Beyond" on 5th April 2023 in "Multi-scale Phenomena on the Sun: Present Capabilities and Future Challenges" during April 3-5, 2023, at Udaipur Solar Observatory. Session Chair:- Prof. Anil Bhardwaj; Moderator of Panel Discussion: Dr. A.K. Srivastava.
3. Started two student chapters: SPIE (Society of Photo Optical Instrumentation Engineers)- USA and Optica (formerly Optical Society of America) Mentor of both chapters: Dr. Rakesh Kumar Singh, Physics
4. Start-Up company: Section 8 company "Proamyloido Care Pvt. Ltd." Is opened by Dr. Avanish Singh Parmar

24. Centre for Computing and Information Services (CCIS)

Year of Establishment: April, 2017

Head/Coordinator of the Department: Dr. Hari Prabhat Gupta w.e.f. 01 January 2024

1. Background

Centre for Computing and Information Services inaugurated on 6th April 2017 has been established as a central facility to provide 24x7 digital backbone to the Computing, Web, Email and Network services of the institute. Centre for Computing and Information Services offers high-end computational servers, high availability web servers, network services and provides a robust platform for various academic and research importunities of the institute. Licensed software, email services and in-house software development for the institute needs are also managed by the Centre. CCIS is one of the growing unit and projects are in early stage for developing it into a facility centre poised horizontally to meet the crescent demand of computerization and software solution required for scientific and research infrastructure of the institute.

2. Services Offered

2.1 Computing

Services:

Management of the user login and authentication to all the compute nodes. Running multiple software and their license servers.

We have licenses of the following software running on our servers:

- MathWorks Campus Wide License Standard Campus Configuration.
- ANSYS- Academic Multiphysics solution with following licenses:
    - 50 Task ANSYS Research Mechanical; CFD Bundle
    - 50 Task ANSYS Research HF Bundle
    - 50 Task ANSYS Research EM Bundle
    - 500 Task ANSYS Academic Teaching Mechanical & CFD Bundle
    - 500 Task ANSYS Academic Teaching HF Bundle
    - 500 Task ANSYS Academic Teaching EM Bundle
    - 5 Task ANSYS Academic Research CFD (Chemical Kinetics)
    - 1 Task ANSYS Academic Research SCADE Bundle
    - 25 Task ANSYS Academic Teaching SCADE Bundle
    - 150 Task ANSYS Academic Space Claim Bundle (Mech)
    - 256 Core ANSYS Academic Research HPC for FEA and CFD
    - 256 Core ANSYS Academic Research HPC for HF and EM
    - ANSYS Academic EnSight Post Processing Tool (5 Task)
    - 5 Task ANSYS Research Mechanical including Additive suite bundle
    - 5 Task ANSYS Discovery Simulation
    - ANSYS Academic Lumerical Research–5 Task (Product with 3 Year TECS)
    - ANSYS GRANTA Edupack – 10 Task (Product with 3 Year TECS)
    - ANSYS LSTC University Department – 500 Core (Annual Lease for 3 Year)
    - 5 ALH Licenses for 1 year
- Mathematica Software (Perpetual software, network version): 30 User licenses
- CST Studio Software (Perpetual) with basic components: 01 No each.

- Origin Lab Software (100, Network version, Perpetual license)
- MedeA VASP – 01 User (MedeA core GUI, Job/Task Server, VASP, VASP GUI, LAMMPS GUI, Infomatica, COD & COD GUI)
- Simulia ABAQUS- 2 Users license (Research Edition)
- Casa-XPS- Unlimited Pack (Windows desktop)
- Gaussian, GaussView: Site License for Linux Platform.

User can login to the compute nodes and run their application using available purchased licensed software or open source software.

Hardware:

Three Compute Servers are available for providing the computing facility to all the students and faculty members of the Institute. Server are having following configuration:

- 1x Dell R-930 Server: Populated with 4x18 core of Intel Xeon E7-8870 v3 @ 2.10 GHz processor with 45MB L3 Cache, 256GB DDR4 RAM, 8 x 1.2TB 15K hot plug SAS, 01 NVIDIA Tesla P4 GPU
- 3xDell R-730 Server: Populated with 2x10 core of Intel® Xeon® processor E5- 2660v3 @ 2.60 GHz with 25MB L3 Cache, 2U Form factor, 128 GB DDR4 RAM, 3 X 600GB 15K hot plug SAS, 01 NVIDIA Tesla K 40C
- 1xDell R-540 Server: 2 X Intel® Xeon® Silver 4114 2.2G, 10C/20T, 9.6GT/s, 96GB RAM, 3 X 600GB 10K RPM SAS 12Gbps HDD
- 1xDell R-440 Server: 2 X Intel® Xeon® Gold 6132 2.6G,14C/28T,10.4GT/s, 12 X 16GB RAM, 3 X 600GB 10K RPM SAS 12Gbps HDD
- GPU Computer Server: Populated with 2 x Intel Xeon E5-2609 v4 (8 Cores, 20M Cache, 1.70 GHz), 128GB DDR4 RAM, 8 Nos. NVIDIA GeForce GTX-1080Ti 11GB GDDR5x, 3584 CUDA cores.

2.2 Storage:

Services:

Providing space for the storage requirement for running scientific and research applications of the faculty and students. It is integrated with webservers to provide space for Institute website and other portals.

Hardware:

Dell SC4020 Storage: Two controllers running in an active-active mode with automatic failover to each other in case of one controller failure with 20 TB on SAS 10K RPM drives and 100 TB on NL-SAS drives with 105 TB raw capacity (Approx. 70TB usable considering the RAID overhead).

2.3 Web Services

Services:

Two primary web servers are running in High Availability for hosting our Institute website. These servers are configured with RHEL Operating System. In the session 2018-19, two more web servers were installed and configured with Centos and Windows Server Operating Systems. There are multiple web servers running on virtual and physical servers catering the needs of web hosting facilities for various portals of the institute.

Applications:

New applications are designed, developed and deployed at CCIS on the regular basis as per the institute needs. Recently, CCIS has designed a new website for the institute to replace the older one. The Institute's website is built in-house and it has replaced several small websites running earlier on different domain and servers making it a truly one website of IIT (BHU). It incorporates all the departments, school, units, offices and covers all the activities governed by the institute placing a uniform structure throughout. In addition, it has decentralized access for website content modification and individual login for all the faculties to maintain their profile. Apart from institute website few of the many websites their test and backup are hosted on these servers. Some of the developed and hosted applications are listed below-

- Services Platform
- Instrument Booking System
- Alumni Registration Portal.

- Alumni Giving Back Portal
- Best Faculty Award Portal
- Faculty appraisal portal.
- Guest housing booking system.
- Intellectual Property Rights (IPR) Portal
- Non faculty recruitment portal.
- Admin information management System.
- Grievances Portal
- ERP IIT BHU.
- Rajbhasha Portal.

Hardware:

- 2xDell R-730 Server: Populated with 2x10 core of Intel® Xeon® processor E5- 2660v3 @ 2.60 GHz with 25MB L3 Cache, 2U Form factor, 128 GB DDR4 RAM, 3 X 600GB 15K hot plug SAS
- 2xDell R-440 Server: 2 X Intel® Xeon® Silver 4114 2.2G, 10C/20T, 9.6GT/s, 96GB RAM, 3 X 600GB 10K hot plug SAS.
- 4xHPE ProLiant DL360 Gen10 Plus, (2.10 GHz, Intel Xeon Silver 4310), 24 cores, 2 chips, 2 threads/core, 48 CPU, 3*1.2TB SATA, 64GB DDR4 RAM

2.4. Email Services

Facilitating with email services to the all faculty members, students and staff of the institute using Google Workspace Education Plus for Higher Academic Institution. Services includes email services, classroom and google drive etc. The entire users are allocated in various groups as per their department, section, offices, and designation, restricting them access over individual groups for sending emails.

2.5. Network Services:

Network Infrastructure at IIT (BHU) provides wired connectivity and mobility with the latest wireless security along with benefits of seamless roaming and connectivity anywhere and anytime to the users within the campus. The network comprises of CORE, DISTRIBUTION and ACCESS layer switches across the campus. Core–Distribution layer is on 10 G and Distribution to Access layer is on 1G/10G.

Deployment of WLAN comprises of Cisco WLAN Controller in High availability mode for easy access of Wi-Fi within the campus. Along with LAN connectivity, every Department, Hostel, Teachers' Flat and Guesthouse is also deployed with Indoor and Outdoor APs to get seamless Wi-Fi connectivity.

The total Fiber layout is more than 18 Km. within the IIT (BHU) campus. There are more approx. 10000 users, including Faculty, Staff and Students to access the internet through Wi-Fi or LAN. The whole infrastructure includes 370+ switches and more than 1250 APs for indoor and outdoor network connectivity. The institute has 10 GBPS NKN connectivity.

3. People at CCIS

S. No.	Name	Designation
1	Dr. Hari Prabhat Gupta	Head, CCIS
2	Mr. Mahesh Pandey	System Analyst (Grade-I)
3	Dr. Roshan Singh (on deputation)	System Analyst (Grade-I)

4. Conclusion

As per the available statistics, the students, faculty members and other research staff of the Institute are heavily using the software facilities hosted on the servers. After establishment of the unit, further, an extended server area has been created for hosting more servers. In addition to this new web portal are regularly developed and deployed as per the institute needs. We are continuously in process of enhancing the services available at CCIS for computing, web hosting and campus wide network.

25. Shreenivas Deshpande Library

Introduction:

Institute libraries play a vital role by supporting academic achievement, enhancing learning and development, and promoting intellectual growth. The library system at the Indian Institute of Technology (Banaras Hindu University), Varanasi, comprises the primary Shreenivas Deshpande Library alongside five departmental libraries designed to underpin the institute's diverse educational, research, and extension initiatives. Having an excellent print collection of over 1,50,000 books, journals, theses, dissertations, reports, standards, and pamphlets, the library also provides access to over 15,000 electronic journals, more than 3,500 e-books, and scientific, engineering, and technology databases. The library offers various facilities like a One-search library web catalogue, Mobile App, Collaborative Learning Space, Inter-Library Loan, Remote Access facility, digital library, modern reading room, meeting/presentation space, etc. The entire Library area is Wi-Fi enabled, CCTV monitoring, a Reading table with power socket & power backup, fully centralized AC, etc. Library operational hours from 08:00 AM to 01:00 AM (midnight) all days, including Saturdays, Sundays, and government holidays, ensuring extensive accessibility. The library has also created the Indian Research Information Network System (IRINS) database of institute researcher's profiles and institutional repositories. The library also supports research activities by providing the Research Support Tools. Recently, the library organized the IEEE Authorship and Open Access Symposium: Tips and Best Practices to Get Published by IEEE Editors and the Workshop on CAS SciFinder-n for Academic Research.

Manpower:

Sl. No.	Name	Designation
1	Dr. Navin Upadhyay	Deputy Librarian
2	Shri. Kanu Chakraborty	Assistant Librarian
3	Shri Kumar Karn	Senior Technician (Deputed from the Workshop)
4	Smt Anshu Kaushal	Senior Assistant (Office)
5	Ms. Sujata	Junior Library Assistant (Circulation section)
6	Mr. Uday Pratap Singh	Junior Library Assistant (Circulation section)
7	Ms. Renuka	Junior Library Assistant (Periodical section)
8	Ms. Mansa	Junior Library Assistant (Technical section)

Library collection:

The development of the library's collection constitutes a pivotal aspect of its operations and supports the academic and research work of the students, faculty, staff, and various other stakeholders. The conglomeration of resources within the library, including but not limited to books, journals, theses, reports, standards, databases, pamphlets, and additional reading materials across disciplines such as Science, Engineering, Technology, Architecture, Planning & Design, Humanities, Social Sciences, and Management, is deemed its most significant resource. The total collection of the library as of March 31, 2024, stands as follows:

Sl. No.	Category	Number
1	Books (Reference and General)	93,849
2	Text Book Bank	24,763
3	ST/SC Book Bank	8,740
4	Bound Volume of periodicals	17,925
5	Theses	1269
6	Dissertation	1018
7	Compact Disc	1722

The library added 1006 books, including 66 books received as donations in FY 2023-2024.

Databases/Standards/E-books/Journals:

The Periodical section procures and maintains print and online journals for the academic needs of the Institute. In this financial year, the library added more than 180 selective titles of e-books (Textbooks and Reference Books) from publishers Taylor and Francis, Elsevier, Wiley, etc. This year, the library newly subscribed to The Electrochemical Society and JoVE Journal complete. Also again subscribed to old dropped publishers last year, like the American Insitute of Physics (AIP), The Optical Society of America (OSA). Also, the library subscribed to Libsys-10 on the cloud, including Discovery, Remote, and Mobile app facilities. The following databases, Standards, e-books, and e-journals are accessible through Institute networks as well as Remote Access portal.

Databases:

- Begell House
- DELNET Database
- MathSciNet
- PressReader
- SciFinder Scholar
- Scopus
- Springer Materials
- Web of Science

Standards:

- ACI MCP
- Indian Standards(BIS)
- ASTM Standards

E-Books:

- ASM Handbook Online
- Begell House
- Bloomsbury Architecture Library
- CBS - Architecture Planning and Design
- Elsevier (selected titles)
- McGraw Hill (selected Text and Reference books)
- Taylor & Francis (selected titles)
- Springer (selected titles)
- Wiley Online (selected titles)
- Royal Society of Chemistry (All e-books published up to 2016).
- South Asia Archives
- World E-book Library

Online e-Journals:

The library provides online access to more than 15,000 full-text journals 24×7 on the institute-wide network and remotely, as follows:

Publisher	Description
ACM Digital Library	ACM journals (42+), conference proceedings, magazines, newsletters, and multimedia titles.
American Concrete Institute	Materials, Structural, Concrete International & Symposium Volume ACI MCP, Materials Journals, ACI Structural Journal, ACI Concrete International, ACI Symposium Volumes
American Chemical Society	49 journals with Legacy Archive for Universities.
American Institute of Physics	It provides access to 19 full-text journals in the area of physics. Backfiles Access: 1997 onward
American Mathematical Society	The AMS journals package includes 15 online journals published by AMS, including 6 open access journals. Backfiles Access: 1999 onwards
American Physical Society	The current collection includes access to 13 leading peer-reviewed research journals. Backfiles Access: All
American Society of Civil Engineers (ASCE)	It publishes 33 journals and contains over 1, 70,000 bibliographic records of everything ASCE has published since 1970.

Publisher	Description
American Society of Mechanical Engineers (ASME)	ASME collection provides access to 29 journals, including a complete package for ASME journals + AMR.
ASTM Journals	Full package of ASTM journals.
Begell House (Engineering Research Collection)	Begell House is a STM academic publisher of medical and scientific journals and books, with a concentration on engineering and biomedical sciences. Engineering Research Collection has access of 29 e-Journals, 3 Databases, 3 Reference titles, 1 e-book & 2 Proceedings titles.
Bentham Science	Bentham Life science collection 59 titles (access 2012 to 2021).
Bloomsbury Architecture Library	Bloomsbury Architecture Library is a leading digital resource for the study of architecture, urbanism, and interior design. Its dynamic digital platform offers access to wide-ranging text and image content collections, from architectural history to cutting-edge design guidance.
Canadian Science Publishing	Canadian Journal of Civil Engineering Backfiles access: 1996 onward
Cambridge University Press	Journal of Fluid Mechanics, Backfiles Access: 2000 Onwards (Newly Added)
CIM Magazine	The Canadian Institute of Mining, Metallurgy and Petroleum (CIM) is an association for minerals industry professionals
De Gruyter	1. International Journal of Nonlinear Sciences and Numerical Simulation 2. Functional calculus and Applied Analysis
Economic and Political Weekly (including archive access)	The Economic and Political Weekly, published in Mumbai, is an Indian institution which enjoys a global reputation for excellence in independent scholarship and critical inquiry.
Electrochemical Society	The Electrochemical Society is to advance theory and practice at the forefront of electrochemical and solid state science and technology, and allied subjects. Complete access to 13 titles.
Emerald Engineering Collection	59 Journals of Engineering collection. Backfiles Access: 1994 Onwards
Foundry Trade Journal	Foundry Trade Journal
IEEE - IEEE/IET Electronic Library (IEL)	The IEEE Xplore digital library provides access if more than 467 journals, 72 magazines, more than 8000 conference proceedings and standards.
Inderscience	1. International Journal of Exergy 2. International Journal of Nanomanufacturing
Indian Geotechnical Society	Indian Geotechnical Journal
Informa Healthcare	1. Drug Development and Industrial Pharmacy, 2. Pharmaceutical Biology, 3. Expert Opinion on Drug Delivery
Institute of Materials, Minerals and Mining	Advances in Applied Ceramics: Structural, Functional and Bioceramics
Informs	The entire 16-journal INFORMS PubsOnLine Suite package
IOP	It provides access to 76 full-text journals in the area of physics. Backfiles Access: 10 years rolling back
JoVE Complete	JoVE is the world-leading producer and provider of science videos with the mission to improve scientific research and education. Millions of scientists, educators and students at thousands of universities, colleges, hospitals and biopharmaceutical companies worldwide use JoVE for their research, teaching and learning. Accelerate your science research and education with 18,000+ videos of laboratory methods and science concepts.
JSTOR	JSTOR Archive provides access to more than 2500 journals and primary content on an access fee basis.
Microwave Journals	Microwave Journals
NACE International	Corrosion
Nature	Nature
PNAS	Proceedings of the National Academy of Sciences of the United States of America publish more than 3200 papers annually.
Project MUSE	Project MUSE promotes creating and disseminating essential humanities and social science resources through collaboration with libraries, publishers, and scholars worldwide—more than 733+ journal access. Backfiles Access: All access
Royal Society of Chemistry	It provides access to RSC Gold 2018 Excluding Archives with 51 full-text journals/magazines/alerting services. Backfiles Access: 2008
SAGE	Imech collection 17 titles. Urban Studies & Planning Collection all titles
ScienceDirect	Nine Subject collections (Access to 1233 titles): Chemical Engineering Chemistry, Computer Science, Engineering, Environmental Science Material Science, Mathematics, Pharmacology, Toxicology and Pharmaceutics Physics and Astronomy Energy (Newly added)

Publisher	Description
Science Online	Only Science Magazine
SIAM	SIAM publishes 17 peer-reviewed journals. Backfile Access: 1997 onwards
SPIE Digital Library	Journal of Applied Remote Sensing
Springer	Springer: 1700 titles
Springer Nature	Access of 17 selected titles.
Taylor & Francis	Access of 57 selected titles
The Indian Institute of Architects (IIA)	The Indian Institute of Architects (IIA) is the National body of Architects in the country. IIA is represented on various national and international committees connected with architecture, art and the building industry and is also actively associated with International Union of Architects (UIA) Commonwealth Association of Architects (CAA) and South Asian Association for Regional Co-operation of Architects (SAARCH).
The Optical Society of America	17 flagship, partnered, and co-published journals; OSA's magazine, Optics & Photonics News; and the conference proceedings from all of OSA's Topical Meetings, Backfiles Access: Vol 1. Issue 1
Wiley Online Library	Access of 144 selected titles.

Print Journals:

- Architectural Digest
- Architectural Record
- CIM Magazine
- Current Science
- New Scientist

Research Support Tools:

The library provides several Research Support Tools and software to support the research activities. We have also implemented a remote access (LsRemote) facility to access all e-resources outside the campus network. Grammarly, Turnitin, DrillBit, and EndNote-21 desktop versions are the most popular research tools among the faculty and research scholars. There are more than 5000 regular users of Grammarly. We have Instructor and student accounts on Turnitin for all Faculty and Research Scholars. More than 500 users are currently using another Plagiarism detection software, DrillBit. More than 3500 users use remote access facilities to access e-resources outside the campus. The research support tools and software available are as follows:

- Grammarly (Writing Enhancement Tools)
- Turnitin (Anti-Plagiarism Software)
- DrillBit **(**Anti-Plagiarism Software**)**
- Endnote 21 Desktop version and web Version (Reference Tool)
- LsRemote (Remote Access platform through LSDiscovery)
- LSDiscovery (Onesearch and full-text article download facility)
- Mobile App: LSDiscovery (Web OPAC, Remote, full-text article download, etc)

Infrastructure/Services/Facilities:

The complete library is fully air-conditioned, has Wi-Fi enabled, is under CCTV surveillance, and is equipped with an alarming fire system. New reading hall with modern equipment, power backup, laptop charging connectivity on the reading tables, etc.

Collaboration learning space:

The library has created a Collaborative Learning Space on the ground floor. The collaborative learning space has been designed to facilitate space for the useres who wants to learn/discuss together/in a group to solve problems, work on a project, or have a meaningful discussion. In this space, we provided the users comfortable furniture and other facilities.

Meeting/presentation space:

The library has created a meeting/presentation space on the first floor. This space can be used by the faculty/Research Scholar/ Students for presentations or academic meetings among groups of students. The room has more than 25 sitting capacities, with comfortable furniture and other facilities like a whiteboard, projector, sound systems, computer, etc. The library has also created a separate property counter for depositing students' belongings, a capacity of 500 bags at a time.

e-Library:

In this space, 50 PCs are meant for users to access e-books, e-databases, e-journals, and other e-resources installed in the e-Library section. All systems are highly configured modern systems with high-speed LAN connections. Some of the systems are dedicated to software testing and project implementation. The library provided comfortable furniture and other facilities to the users in this space.

Computer-Aided Reference Service:

The library provides reference services to users in various ways. The dedicated email libraryservies@iitbhu.ac.in is exclusively for reference service facilities, and the "Ask the Librarian" link on the library website is dedicated to all types of ready reference services. Also, the library introduced the "Request Call Back" service to provide quick response for all users. The library, on average, responds to more than 30 to 35 queries daily to users related to plagiarism checks, article requests and other library and research-related issues.

Scholarly Profile of Faculty (IRINS), Institutional Digital Repository (IDR) and e-Theses on Shodhganga:

Thel ibrary recently created Scholarly Profile IRINS (Indian Research Information Network System) and added more than 414 faculty publications on this platform, which is being regularly added and updated. The library is also enriching the IDR (Institutional Digital repository), which currently has 987 PhD theses, 1835 articles, 20 videos, etc., linked to the National Digital Library and globally accessible. 985 awarded PhD theses have been uploaded on the Shodhganga portal.

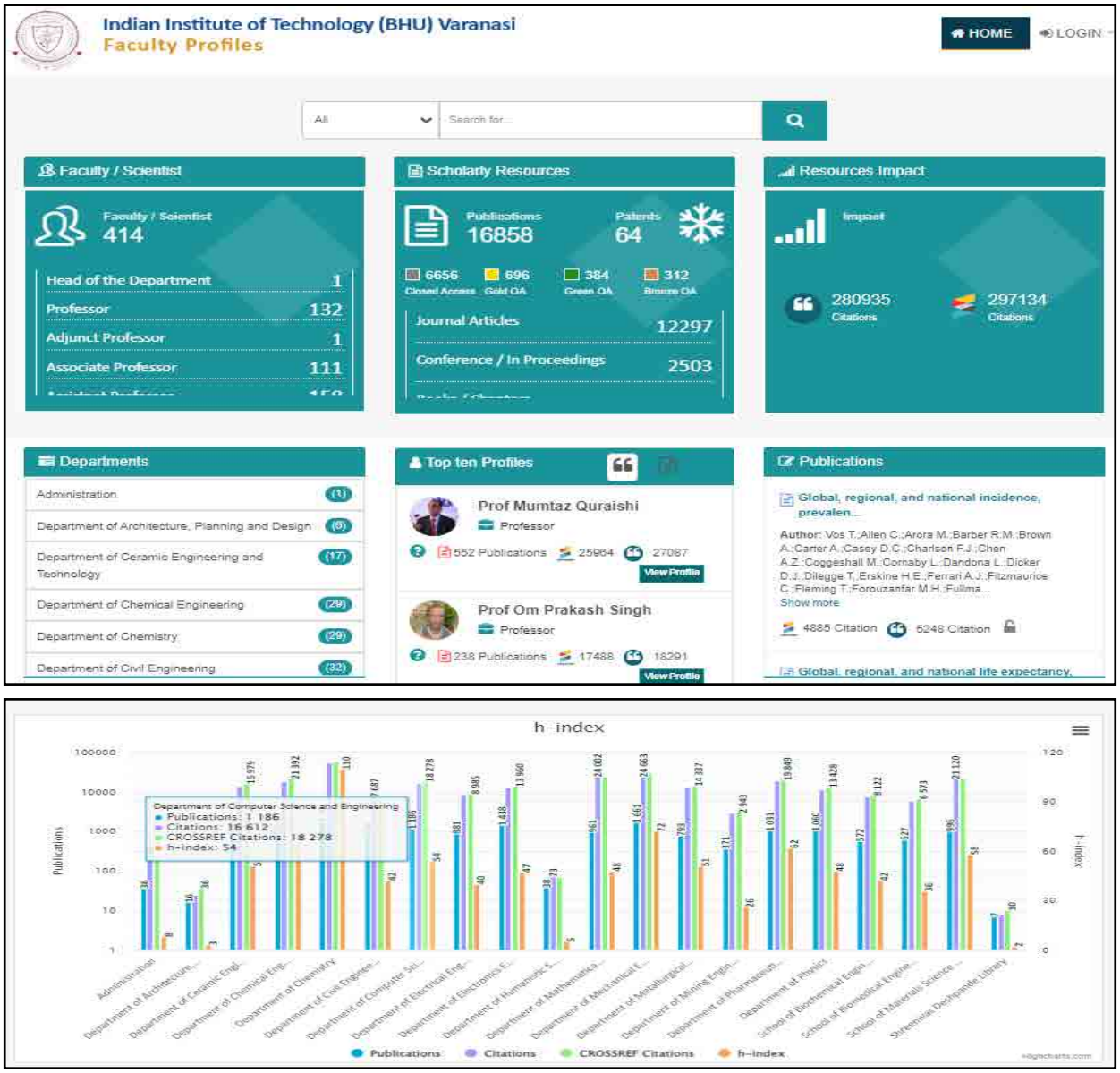


Figure: IRINS profile of the Institute

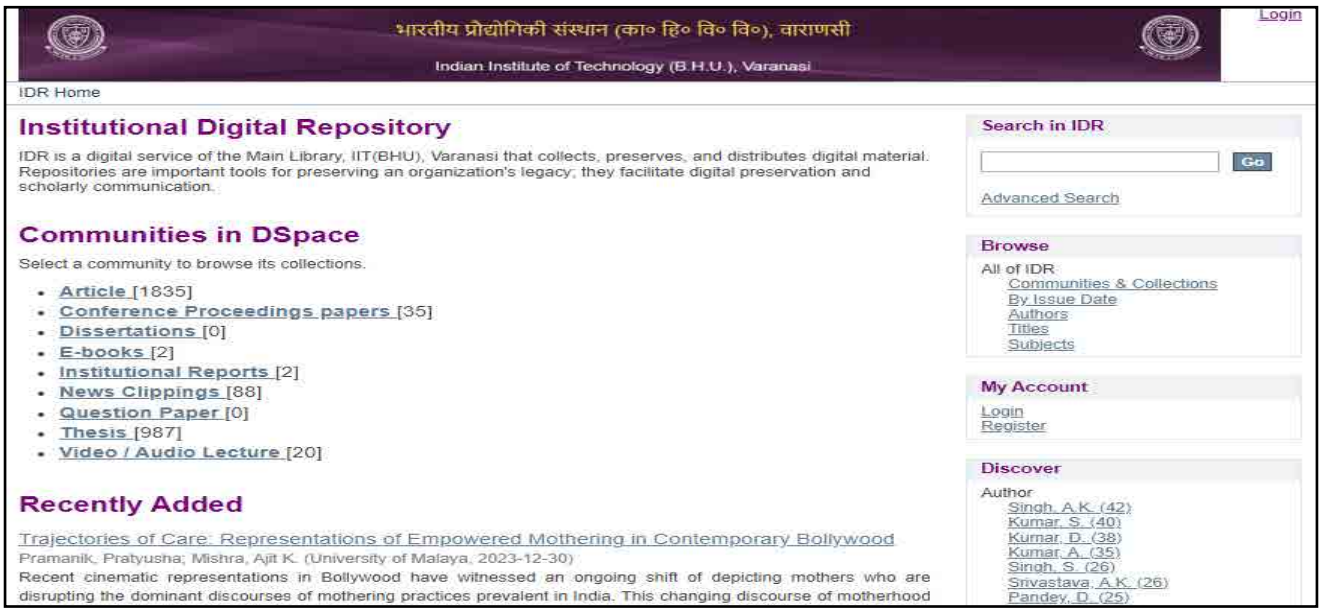


Figure: Institutional Digital Repository

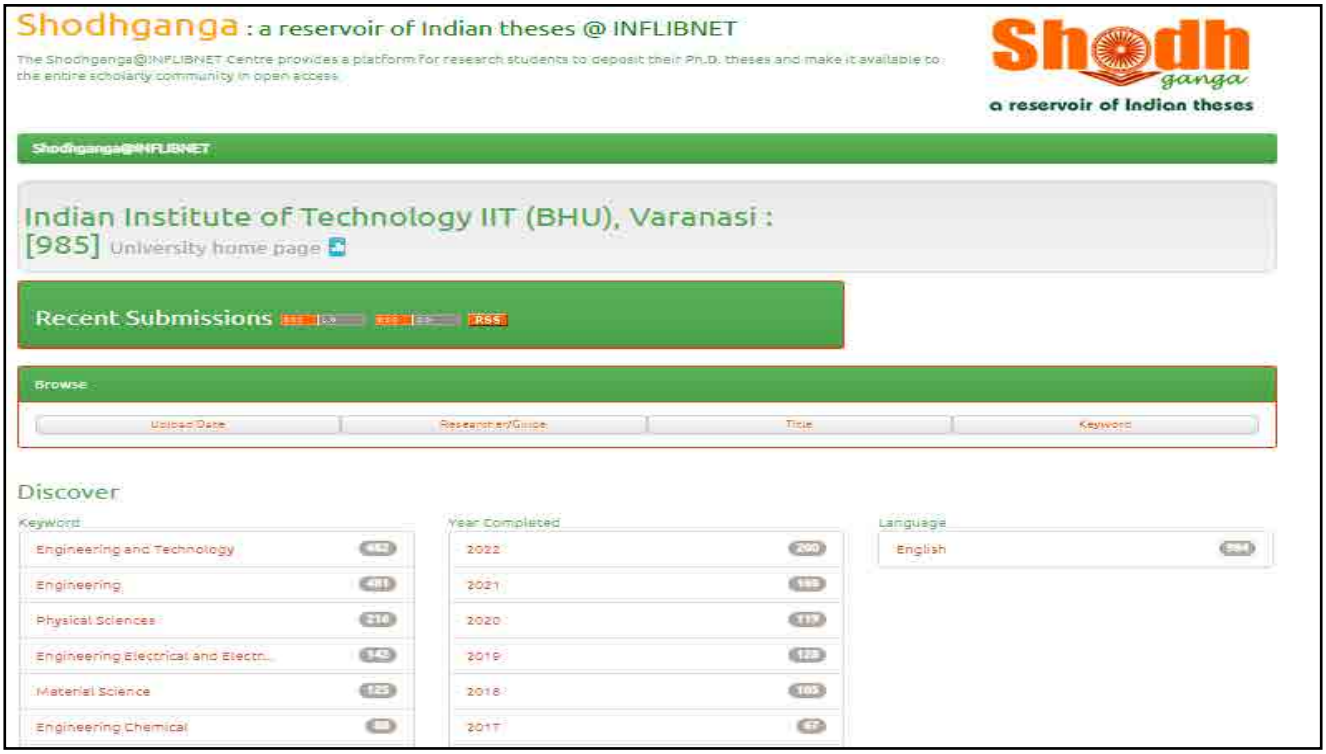


Figure: Institute's profile on the Shodhganga Portal

Seminar /Conference/Workshop Organized:

Workshop on CAS SciFinder-n for Academic Research:

The Workshop on CAS SciFinder-n for Academic Research was organized on 12th Jan 2024 at ABLT, IIT (BHU), Varanasi, in collaboration with the Shreenivas Deshpande Library and Scifinder-n. A total of more than 120 PG students, research scholars, and faculty members were in attendance at this workshop. The expert-led session covered various aspects such as the Introduction to SciFinder n, techniques for Literature Searching, Substance Searching, details of Reaction and Retrosynthesis, Introduction to SciFinder Discovery Platform, and the New Enhancements in SciFinder n. Dr. Navin Sarkar of CAS Scifinder-n, India, presented the session and provided valuable insights on the Scifinder-n database. The session was moderated by Deputy Librarian Dr Navin Upadhyay, and the workshop was efficiently managed by Assistant Librarian Mr Kanu Chakraborty.

IEEE Authorship and Open Access Symposium: Tips and Best Practices to Get Published from IEEE Editors:

The Shreenivas Deshpande Library, in association with the IEEE, organized the Authorship and Open Access Symposium on 31 August 2023. More than 230 research scholars and faculty members attended this Authorship and Open Access Symposium. From this event, authors benefit from best practices in preparing a manuscript, navigating the journal submission process, and essential tips to help an author get published. It also reviews the opportunities authors and academic institutions have to enhance the visibility and impact of their research by publishing in the many open-access options available from IEEE. The session was presented by Dr. Ashutosh Dutta of Johns Hopkins University, USA, who provided critical insights on IEEE's peer review and submission processes and tips on what editors look for in submissions. In addition, it covered topics such as IEEE Open Access programs for institutions, research strategies using IEEE Xplore, author tools from IEEE, and other essential resources for authors.

Web of Science User Awareness Program "Embark on a Successful Research Journey with Web of Science:

The Shreenivas Deshpande Library, in association with the Clarivate (Web of Science), organized the User Awareness Program "Embark on a Successful Research Journey with Web of Science." 4-part series program (on 4th Aug, 18th Aug, 1st Sep & 22nd Sep), 2023 through an online platform. More than 160 research scholars and faculty members attended this User Awareness Program.

Introduction to EndNote™ 21:

The Shreenivas Deshpande Library, in association with the EndNote, Clarivate, organized a webinar on "Introduction to EndNote™ 21" with objectives: It helps researchers save time, stay organized, collaborate with colleagues, and get published on on 26 Jun 2023 at 11:00 AM IST, 2023 through an online platform. More than 80 research scholars and faculty members attended this program.

Lecture Delivered in Conference/ Webinar /Workshop by Deputy Librarian:

1. Delivered lecture in the 14th Faculty Induction Program through online mode, November 30, 2023, at HRDC, BHU Varanasi.
2. Delivered a lecture as an expert in the Faculty Development Programme at Dherendra Mahila PG College, Varanasi, on 28th November 2023.
3. Delivered lecture as an expert in the Two-day National Seminar organised by the Central Library SVNIT, Surat, from 19-20 September 2023.

Research publication by Deputy Librarian:

1. Chakraborty, M., Chakraborty, K., & Upadhyay, N. (2023). A study of the GNU General Public licence-based patient information Management System to manage healthcare systems. *International Journal of Information Studies*, *15*(2), 55–58. https://doi.org/10.6025/ijis/2023/15/2/55-58

Seminar/Conference/Workshop attended by Deputy Librarian:

1. Attended International Symposium "DLSDE" and Co-Chaired a technical session from 20th November to 22nd November, 2023 at the IIT Kharagpur.
2. Attended IOP Library Advisory Board Meeting at Jaipur from 27 to 29th September, 2023.

Research publication by Assistant Librarian:

1. Chakraborty, M., Chakraborty, K., & Upadhyay, N. (2023). A study of the GNU General Public licence-based patient information Management System to manage healthcare systems. *International Journal of Information Studies*, *15*(2), 55–58. https://doi.org/10.6025/ijis/2023/15/2/55-58

Seminar/Conference/Workshop attended by Assistant Librarian:

1. Participated on a webinar on empowering Library professionals in the Digital Age: Essensial Skill for a technology Driven Environment by The Energy and Resources Institute, UNESCO, IGNOU, India, on March 8, 2024.
2. Attended SLA webinar on Exploring the Open Access Landscape in Engineering on March 22, 2023.
3. Attended DELNET-IIT Delhi Webinar on "CORAL : An Open Source Electronic Resource Management System" on March 7, 2024

Budget allocated and expenditure the F.Y. 2023-24

The total budget under Plan OH-35 (Purchase of books, journals & e-subscriptions) Rs. 9,92,63,778 /- was allocated and utilised.

Library Pictures (Reading Hall, e-Library and Periodical Section):

Library Building

Reading hall-III

e-Library (Computer Lab)

Institute Faculty & Alumni Publication

Book Stack with Reading space

New Arrival Books

Hindi Pakhwada 2023

Hindi Pakhwada 2023

26. Students Life

Introduction: The Institute nurtures technical, social, cultural, and sporting activities pursued by the Students' Gymkhana through different councils, Students' Parliament and other student groups. Besides games and sports, the artistic and creative talents of students are encouraged through various activities like dramatics, debates, music, visual arts, etc. and clubs like Radio, Audio, Photography, Automobile, Aero-Modeling, Cine and Computer Club. Students Gymkhana successfully organized its annual techno-management festival Technex, cultural festival Kashi Yatra & games event Spardha. Apart from these, students of IIT (BHU) participated in various IIT meet and brought laurels to the Institute. The students' activities are usually classified in the following councils:

- Council of Social Services.
- Cultural Council
- Film and Media Council
- Science and Technology Council
- Sports Council

Achievements of Council for Social Service:

1. The students interacted and were in regular touch with people from nearby *basti* people, enquired about their well-being. They made sure ration and daily requirements are available to them. 'Robinhood Army' helped in Patiya Basti by providing Ration. We provided financial support to the needy with the help of alumni.
2. The students helped the underprivileged children from nearby localities in their studies, by creating a database of those who needed help in the form of online teaching, providing worksheets, parent counselling, organizing quiz, storytelling etc. Volunteers were allotted for Navodaya Batch. Database was made on how many students are ready and eligible for preparation of Navodaya this year.
3. Students of the four schools in which Sahyog volunteers visited to ask about their knowledge of the pandemic and their well-being. Students formulated a proper dedicated team (Emergency Food Response Team) for providing food etc.. The students were helped by the professors and alumni of the institute. The students also contacted the district administration and helped them in receiving relief materials for these underprivileged people.
4. The students created inspirational Facebook posts, brainstorming sessions and discussion sessions to enthuse the student's community of the institute with their social responsibilities
5. Mess Worker Relief Movement was initiated in the institute and students participated as volunteers in the relief work being carried out by the institute for helping the casual workers like mess workers, dhobis etc. Their efforts helped in over 61 lakhs being distributed to over 400 mess workers and dhobies.
6. A Covid Resources Help Group was created in the mid of April 2021, students initiated a team, which later expanded into teams for specialised groups exclusive for a region. Many student volunteers, who were from or were representatives of other student bodies, or weren't associated with any joined in a spur, and contributed well. We also shared about the process and forum with faculty.all to cater to needs of theirs.
7. The students organized regular events through online mode to celebrate festivals like Diwali Celebrations, Christmas Celebrations, Republic Day Celebrations, Kashi Utsav 2021, Daan Utsav with the underprivileged children. The underprivileged children participated in events like painting, drawing models and reciting poems which were organized and judged by the students of the institute.
8. The students organized Ed-TALK an event organised especially for the freshers. The main theme of the talk was "Unlocking Education During Lockdown".The talk started with the question - "What is education?". Everyone shared their thoughts on the same (using mettle). It was exciting to hear different points of view of people about education.
9. Several other events like Abhipraya '20 - A case study event aimed at engaging freshers in studying social problems and presenting ideas along with learning various skills, Webinar on the topic of Mental Health, Plantation drive were organized by the students. A case study event on a problem statement on pollution in Ganga by the name Vaktavya was also organized where people were to sensitize people on the issue of Ganga pollution and problems associated with it.
10. Jagriti 2024, Institute's annual socio-awareness and celebratory weekend, Jagriti '21, was organised online from March 26th to 28th, 2021, witnessing quality participation and sensitising talks. All the events are available on Jagriti's YouTube channel to witness. (https://youtube.com/channel/UCQRro0vg5F5kaGqm88q2avQ)

Achievements of Cultural Council:

1. We are proud to announce the addition of a new club, to the Cultural Council - the Fashion Club **Aavaran** in the session 2023-24. This vibrant new club aims to weave together the threads of tradition and contemporary style, offering a platform for fashion enthusiasts to express their creativity, design innovative pieces, and showcase their talents. From intricate embroidery to cutting-edge fashion designs, Aavaran members strive to celebrate the beauty of diversity in fashion.
2. The annual inter-branch freshers cultural competition Aagman'23 was organized with immense success for the first-year students in the Swatantrata Bhawan hall. This 3-day long extravaganza, by the 8 clubs of the Cultural Council, witnessed an all-time high, 850+ participation from first-year students in 33 different categories of the cultural events, and received huge participation and applause
3. During the summer of 2023 when there were no on-campus activities, the clubs conducted various online events without losing enthusiasm and used the opportunity to its full potential. With the Literary Club's Kavya Kunj'23, Masquerades Club's Act it Out'23, Dance Club's Move 6.0, Indian Music Club's Symphony'23, and Fine Arts Club's Kalakriti'23, all the clubs kept their cultures alive.
4. The 12th edition of IIT BHU MUN was successfully conducted with the participation of a total of 300 delegates from across the 22 nationalities in international diplomacy through academic debating in this year's conference
5. The Inter IIT Cultural Meet 6.0 hosted by IIT Kharagpur, saw participation from 22 IITs with IIT BHUVaranasi standing 8th in the overall tally.The Cultural Council, as well as the Film and Media Council, pulled out all thestops to prove its dominance in various fields of Cultural, Film-making, and Digital Arts.The haul of medals in the Inter IIT Cultural Meet 6.0 has showcased the diversityand immense abilities of each club of the Council and the cohesiveness of theCouncil. FINE ARTS CLUB: OVERALL RUNNER-UP (Canvas Painting: 2nd position, Paper Costume Design: 3rd Position, Charcoal Art: 6th position, Live sketching: 7th position); THE LITERARY CLUB (Hindi Poetry Writing: 3rd Position, English Poetry Writing: 8th Position, Sacred word games: 4th position, Scrabble: 5th position, Cryptic Crossie: 5th position. Creative Writing English and Hindi: 2nd and 7th position); DANCE CLUB (Street Battle: 3rd Position, Duet Competition: 4th Position, Group Dance Competition: 8th Position); AAVARAN (Fashion Show: 6th Position, Online Modeling: 10th Position); QUIZ CLUB (General Quiz: 7th Position, Biz Quiz: 5th Position, Sports Quiz: 5th Position, Mela Quiz: 5th Position, India Quiz: 5th Position, Sci-Tech Quiz: 6th Position); MASQUERADES (Stage Play: 6th Position, MonoAct: 7th Position, Mime: 6th Position, Street Play: 9th Position); INDIAN AND WESTERN MUSIC CLUBS (Classical Vocal Solo: 8th Position, Band Competition: 9th Position, Western Solo Singing: 8th Position, Pair on Stage: 7th Position)

KASHIYATRA' 24 (19 - 21 Jan 24)

Kashiyatra, IIT BHU Varanasi, the Annual Socio-Cultural fest of IIT BHU Varanasi, the 3-day fest brimming with Indian culture fused with the enthusiasm of the youth was held successfully in full swing. The three-day extravaganza sent a wave of hysteria and zeal all over the campus of IIT BHU Varanasi. The theme launch event of Kashiyatra marked an evening filled with jaw-dropping showcases by all clubs of the Cultural Council. With the theme "Cadence Kaleidoscope", Kashiyatra received endorsements from well-known artists and celebrities.

Events during Kashiyatra'24:

- Spic Macay artists Pt. Ronu Majumdar and Pt. Uday Bhawalkar blessed the inauguration of Kashiyatra
- Talk Shows by Narendra Raj, Kritagga Nayyar, Piyush Patel, Befikra Tejas, and Television celebrities Chandan Roy, Satish Ray, Anushka Kaushik, and Luv Vispute
- International Carnival featuring Beatbox Band: Flowguardz, Graffiti Artists: Mr. Joker and Casem, and Street Musician: Tiago Taborda
- Pronites by Vishal-Sheykhar and Akhil Sachdeva, and DJ Night by Ravator

Achievements of Film and Media Council:

- Gold in Animation events at Inter IIT Cultural Meet 6.0 organised by IIT Kharagpur.
- Gold in Online Theme Photography, in Inter IIT Cultural Meet 6.0.
- Gold and Silver medals in Street photography in Inter IIT Cultural Meet 6.0, held at IIT Kharagpur.
- The Outreach Club bagged Gold in the Lights, Camera, SF event organised by Spring Fest '24, IIT Kharagpur.
- The Media Club bagged Silver in English Creative Writing at Inter IIT Cultural Meet 6.0 organised by IIT Kharagpur.

- Silver in Online Photostory, which was shot in Varanasi concurrently with theme photography for Inter IIT Cultural Meet 6.0.
- Secured 3rd position in Design Marathon at Inter IIT Cultural Meet 6.0organised by IIT Kharagpur.
- 5th in the Photoshop battle at Inter IIT Cultural Meet 6.0 organised by IIT Kharagpur.
- The Animation Club surpassed the 2000 followers mark on Instagram, which was the result of undertaking diligent projects like Camp Organisation, Nova Presentation for school students, collaborating with IIT Jodhpur to further spread knowledge in the field, conducting various workshops on all aspects of animation including Modelling, Texturing and VFX.
- The Cine Club showed its cinematic prowess through projects like Music Video, Class Song '2024 and Swarasya. They also created coverages and after-movies for key festivals and events organised at IIT (BHU), including Aagman, Spardha, Kashiyatra, and Technex. The club also conducted various workshops and contests like Ad Film Making, First Cut, B-roll and Trim it Up to familiarise students with filmmaking.
- The Design Club, in collaboration with the Photography Club, designed the Institute Calendar. They also created official websites and marketing materials for Spardha, FMC Weekend, and Kashiyatra. The club launched various challenges, including Isometric Challenge, Winter Design, and Chibi Design and conducted workshops on Pixel Art, Basic Illustration and Figma to hone the skills of students.
- The Media Club witnessed a growth of 500+ followers and launched several new segments, including Banarasi Preneurs and Podcomania, while carrying on with the Freshers Survival Guide, Ping Sermon articles emphasising the facets of college life, Placement & Internship Report, Inter IIT Meet Results. The club also interviewed renowned guests and celebrities and conducted workshops on writing and journalism.
- The Outreach Club undertook several projects to boost the institute's publicity, including videos for the Student Activity Center and Satish Dhawan Hostel. The club released flagship videos about Freshers, Convocation, Placement Diaries, and Positions of Responsibility. They also conducted events like Vlog It to acquaint students with the art of vlogging and camera handling.
- The Photography Club's Instagram page reaches over 20,000 accounts monthly. Projects including, Magazine Series, Masaan Holi Album, Banaras Through Graffiti and Fashion Album gained immense praise. These, along with Manipulation Week, the Mentorship program and Product & Portrait Photography tasks honed the skills of club members.

Achievements of Science and Technology Council

- National Finalist in Flipkart Grid 4.0 Robotics Challenge
- Top 3 in E-Yantra held at IIT Bombay
- Stage 1 qualification in DD Robocon'24
- Work accepted at the prestigious IEEE Robosoft'24 Conference
- Finalist in Robonautica 2023 fest held at IISC Bangalore
- 2nd Position at Cognizance held at IIT Roorkee in automotive engineering showcase
- Showcase in Bajaj Torq Challenge
- 2nd Rank in Global IQC University Rankings by World Quant
- 4th Position in Quant at Inter IIT Tech Meet 12.0
- 13th Position in IMC Prosperity Challenge
- Winner in SARCathon at Bizarro! held at IIT Bombay
- 7 medals at NSSC competition held at IIT KGP including 2 Gold, 3 Silver and 2 Bronze.
- Ranked 7th globally in Pearl CTF conducted by IIT Dhanbad.
- CSAW CTF 2nd Runner Up in India Region
- 11th rank in ICPC Asia West Finals and have qualified to represent India in the prestigious ICPC World Finals 2024.
- Grabbed Bronze medal in the High Prep event of Inter IIT 12.0 Tech Meet in Trumio
- Grabbed Silver medal in the High Prep event of Inter IIT 12.0 Tech Meet in Aptos.

- Grabbed Bronze Medal in the low prep event of Inter IIT 12.0 Tech Meet in DRONE, Panchayati Raj
- Secured 3rd rank in UTOPIA, IIM Calcutta
- 1st Runner up in Dark Pattern Buster Hackathon organized by Ministry of Consumer Affairs, India
- 26 selections in GSoC'24
- 6 selections in LFX Mentorship
- 7 selections in Summer of Bitcoin'24

Technex (16-18 March 2024)

Technex is an annual festival of the Science and Technology Council. This year Technex has seen participation from various colleges across the country. Total 1100 students have participated in the technex. Several events are organized in Technex 2024 which are listed below:

- ROBONEX: MicroMouse, Robowars, Pixelate
- QUANTSTIEN: Data Prophet, Trade Pulse, Aptiquest
- EXTREME ENGINEERING: Wheelwise, Machina Madness, Goldbergs Alley
- ASCENSION: DroneTech, La-Trajectoire, RockIt
- BYTE THE BITS: HackItOut, MLWare, GameJam, ICM, Technex CTF

Achievements of Sports Council

Intra-Freshers (August 2023):

The council conducted an Intra-Fresher tournament for all the sports in the council to promote the sports spirit and enthusiasm among freshers in the institution. Every sport saw outstanding participation from the freshers and thrilling competition. It also provided the freshers clarity to join the sports they are interested in and where they can excel as athletes and represent the institute with pride in the Inter-IIT Sports Meet and other sports out-festivals.

Major Dhyan Chand Tournament (26th to 29th Aug 2023):

In honor of the renowned hockey player Major Dhyan Chand, our council organized the Major Dhyan Chand Tournaments. A sizable number of athletes competed in the football and hockey tournaments. Numerous teams from the outside took part in the activity as well.

Swachhata Run (October 2nd 2023):

To uphold the pledge to clean the country and honor Mahatma Gandhi Ji, our council organized the Swachhata Run on October 2. About 300 sports enthusiasts participated in the event, aiming to stay healthy and keep the environment clean for improved hygiene.

Spardha' 22 (14th to 16th October 2023):

Spardha is the annual sports festival of the Indian Institute of Technology (IIT) BHU, organized by the Sports Council of IIT BHU. The event aims to promote sportsmanship, encourage healthy competition, and provide a platform for students from various colleges to showcase their athletic talents. Spardha 2023 occurred between the 14th and 16th of October 2023, with a series of sports events and activities.

Inter -IIT Sports-Meet:

Aquatics Sports Meet (3 - 6 Oct 2023):

Our Aquatics team participated in the event organized at IIT Gandhinagar. All the respective IITs have participated in the event. Our team bagged 3-Silver and 3-Bronze medals

Sports Meet (Dec 2023):

The teams participated in the Inter-IIT Sports Meet held at IIT Bombay and IIT Gandhinagar. The IIT-BHU contingent had an overall position of 12th among all participating 23 IITs. Our Volleyball (Women's) team secured 4th position in the tournament. The athletics (Women's) team secured 4th position in the relay event.

27. Training and Placement Cell

Overview

IIT (BHU) Varanasi's Training and Placement Cell acts as a bridge between ambitious students and the world of thriving careers. This year witnessed a phenomenal turnout, with a record-breaking 352 companies visiting campus to hold campus interviews and made an average CTC of INR 22.56. The number of companies visiting the campus has increased by ~ 14.28% compared to last academic year i.e. 2022-23. The highest package offered this year was 1.68 Cr INR by N.K. Securities. This diverse group of recruiters offered a symphony of exciting opportunities across various industries. From the foundation of core engineering to the dynamic realm of IT and beyond, students explored possibilities in finance, cutting-edge research and development, and strategic consulting firms. This impressive display showcased the vast range of career paths available to IIT (BHU) Varanasi graduates.

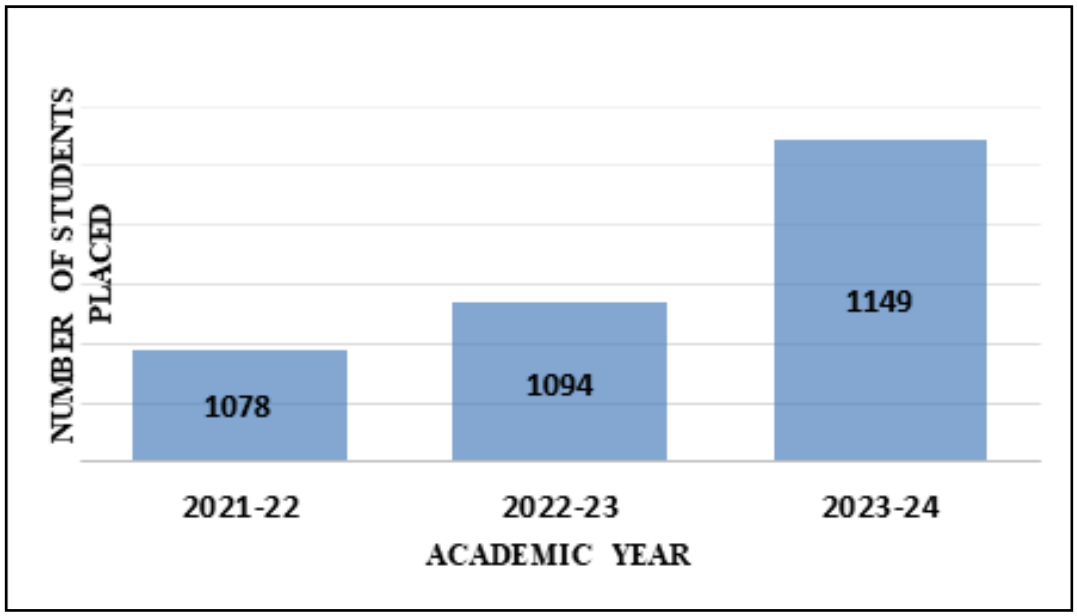
The institute's commitment to excellence extends beyond placements. The Training and Placement Cell actively fosters international exposure for deserving students. This year, companies like ThoughtSpot and Accenture Japan extended their reach beyond geographical boundaries, offering coveted international opportunities. This surge in international placements is a testament to the institute's growing reputation and the caliber of its graduates who are increasingly sought after by leading corporations worldwide.

ServiceNow, Oracle, Intuit, Decimal Point, Sciforn Solutions, Sprinklr, Axxela, AQR CAPITAL, Siemens EDA, Cohesity, D.E. Shaw, Wells Fargo, Zomato, Flipkart, Google, Nvidia, Axis Bank, Standard Chartered, Jaguar Land Rover, Arista, Truminds, P&G, Texas Digital, Mastercard, Winzo, Salesforce, American Express, MyKaarma, VISA, Future First, JPMC, Dev Rev, Walmart(SDE), Eightfold, A.P.T. Portfolio, NK Securities, IBM, Goldman Sachs, Cisco, BNY Mellon, Axtria, TruckX Inc., UiPath, Qualcomm, Perceptive, Morgan Stanley and Uber visited our campus for full-time recruitment.

The Placement Cell goes a step further by facilitating a robust internship program. During the 2023-24 session, an impressive 380 students secured paid internships, gaining invaluable real-world experience. This program allows them to test the waters of different fields, refine their skills, and build a strong foundation for their future careers. Additionally, there's been a heartening rise in the number of companies seeking students with specialized skills in quantitative analysis, consulting, and core engineering. This trend reflects the institute's dedication to equipping students with a well-rounded education that caters to the ever-changing demands of the job market.

APT Portfolio, Rubrik, Quadeye, ITC, JPMC, D.E. Shaw, Sprinklr, Uber, Goldman Sachs, Google, HUL, Microsoft, AQR Capital, JPMC, Oracle, Intuit, Mastercard, American Express, UIPath, Mykaarma, Axxela, Nvidia, Winzo, Cohesity, Wells Fargo, Schrodinger, InfoEdge, Texas Instruments and Thoughtspot visited our campus for Internship.

Improvement in placement during the last three years is shown in the figure below: -



The Training and Placement Cell doesn't just connect students with jobs; it also collaborates with leading organizations and institutes to create internship and training programs. This gives students valuable real-world experience before they even graduate. Additionally, the Cell has taken the initiative by running two successful editions of the Career Development Programme (CDP) in 2023 and 2024. This program specifically focuses on enhancing students' preparedness for their future careers. It's attracted a lot of interest, hosting over 20 companies for more than 25 events across six sought-after profiles, including Quantitative Finance, Software Development, Data Analytics, and Consulting. Over 3,000 students have registered to participate in workshops, networking sessions, and even hackathons led by renowned industry professionals. These events provide students with practical skills and industry insights, giving them a competitive edge in the job market.

28. Resource and Alumni

Dean (Resource and Alumni): Prof. Hiralal Pramanik (w.e.f 01/01/2024)

Introduction:

The Resource & Alumni office of the Institute works for the functions as delineated by the Director of the Institute (Vide letter No. IIT (BHU)/2014-15/504/L Dated 9th September 2014 and Subsequent modification. The following works/functions are carried out as:

i) Alumni Processes and Functions [through dedicated office and Student Alumni Interaction Cell (SAIC)]

ii) Gandhi Technology Alumni Centre-Guest Houses. (Through Coordinator, GTAC).

iii) Alumni Interactions: Coordinating with alumni at regional, national, and international level for overall development of the Institute. Identifying and recognizing the alumni and organizing alumni reunions with the help of alumni.

iv) Seeking and Raising Donations and Endowments for student scholarship/ awards, medals, Faculty chairs and facility development.

v) Newer Dimensions.

Objectives:

Developing effective mechanism of communication through all alumni by creating complete database, developing and using tools and technologies, websites, portals and keeping them updated with their Alma matters.

Some ongoing activities related to above include:

Alumni Registration portal developed for registration of alumni and collecting their contact details for enriching the database for effective communication. 18,139+ Alumni have already registered on the portal.

Alumni Newsletter: Being published since January-2021 and communicated monthly to all alumni groups. Keeping all the alumni updated with their Alma matters through Alumni Newsletters and posting the information on website and social media platform on regular basis

Regular Communications to alumni through Group Email IDs (~25000), Institute Website, Alumni Website, and Social Media Platforms (LinkedIn, Facebook, Twitter, Instagram etc.).

- Honoring the alumni through distinguished alumnus awards and facilitating them at various occasions. Nine (09) alumni were awarded distinguished alumnus award in different categories during 2023-24.
- Organizing regular meetings/ reunions etc.
- Engaging the alumni for overall development of the Institute fraternity through intellectual talks, seminars, workshops, online classes etc.
- Interacting with alumni groups for:

Creation of Scholarships, endowment funds, angel funds etc.

Creation of Alumni funded Institute Chair Positions in various Depts./ Schools/ Centers.

Exploring the possibility for minor/ major donations for Infrastructural development, development of centers, schools, facility etc.

Alumni Association of IIT (BHU) (AASSII), Varanasi

1. AASSII's first priority was to get as many alumni as possible to register at the Alumni portal to increase communication with a large number of alumni and make them aware of developments at the institute, challenges being faced and enlist their support. Thanks for support from the previous Dean - Prof Rajeev Srivastava and our current Dean Prof. Hiralal Pramanik, to enrol several thousand alumni from across the world and current registration at the portal of institute more than 18,139+. With the Institute's support, we will continue in our efforts to contact alumni who are yet to be part of Alumni Association.
2. Life membership programme was re-launched and this year we saw around 1200+ members subscribing to it during 2023-24. Members enjoy a varied array of schemes which benefit them and their families directly.
3. AASSII also launched the third round of the Group Health Insurance scheme this year for its members in the months of January and February in two phases respectively which was a major success with many of our members subscribing policies for themselves along with their family members.

4. AASSII's office actively participated and helped in organizing various reunions at the Institute campus.
5. AASSII's office acts as an integral part of the Office of the Dean, Resource and Alumni Affairs and assists in completing day to day functionalities and duties. This also includes initiating membership and registration drives for the registration portal, help in analyzing and submission of required data and research sheets, etc.
6. AASSII's office also helped in the facilitation of booking the IIT-(BHU) guest house for all Alums.
7. Re-introduction of HDFC Diners credit card for all life members who fit under a certain criteria.
8. AASSII is also in talks to introduce a Life Insurance Scheme for all its members.
9. Organized events and strategy meets in Bombay, Bangalore, etc. to help startup founders kickstart their journey.
10. Senior AASSII members also play an integral part as a collaborative initiative between the institute and the students by giving back to the Alma Mater - a programme where they take classes by coming back to the institute and interact with the students - resolving their doubts, answering their questions and motivating them for a better future.

    We have identified teams and leaders for each of these initiatives to work on in a time bound manner. Given below are some of the updates on progress in these initiatives. Benaras, Lucknow and Western India associations successfully integrated with AASSII as part of One Alumni Association. Work in progress on integration of AIBA with AASSII as AASSII NCR Chapter. Diwali and Holi Milan events were organised by local, NCR, Western India and BLR chapters with active participation from alumni and their families. AASSII has started organising talks on soft skills at regular intervals. Motivation - Unlocking your superpower, Lifestyle, Yoga, How to overcome challenges in life were some of the topics covered during these talks. How to plan your investments - was also one of the key highlight events which AASSII worked through and organized in the early part of this year.
11. AASSII also held a membership initiation drive during the Convocation event. Several members participated and it was duly supported by students from SAIC.
12. AASSII also supported this year's Technex events by being a major sponsor for their Robotics event and funded their entire prize money.
13. An online cum offline Annual General Meeting meeting was set up and held at the IDAPT building which had the presence of our Hon. Ex. Director Prof. Pramod Kr. Jain, AASSII President Shri Nitin Malhotra, Dr. Ramji Agrawal (Sr. VP AASSII), Shri Virendra Nath Gupta (Secretary), Shri Amitabh Deva (Treasurer), and our DORA Prof. Hiralal Pramanik including other illuminaries. Several topics of discussions were being held including the future scope of work for AASSII by collaborating with the Institute's due support.

IIT (BHU) Foundation, USA

IIT (BHU) Foundation, a non-profit body based in Albany, New York, USA, was a specific response to the need for a capital campaign to support IIT (BHU). Started by our highly passionate alumni to enable IIT (BHU)'s transformation into a trendsetting pioneer of technical education over the next century. Through the benevolence of alumni donor network contemporized with the strategic plans of their beloved alma mater, the Foundation seeks to foster the development of the Institute by capital raised through generous gifts, bequests, grants, and donations of the alumni.

Student Alumni Interaction Cell (SAIC):

SAIC is dedicated to foster 3-fold interaction among students, alumni, and the Institute, creating a vibrant community that provides opportunities to thrive for the benefit of the commonwealth. Under the guidance of the former Dean (Resource and Alumni Affairs), Prof. Rajeev Srivastava (Apr '23-Dec '23), and Dean (Resource and Alumni Affairs), Prof. Hiralal Pramanik (Jan '24- current), the cell further strengthened its alumni relations. The new SAIC team for session 2023-2024 was formed in December 2023.

The Alumni Visiting Faculty (AVF) program continued in the hybrid mode. The program witnessed renowned alumni taking full-credit courses as visiting faculty, with 9 alumni teaching 4 courses in the odd semester and 3 courses in the even semester. The courses received enrollment from 900+ students for the academic year 2023-24. The Alumni-Guided Mock Interviews were conducted across 2 drives for the intern and the placement season. It saw participation from 700+ students and 250+ alumni. A total of 830+ interviews were conducted in both drives for 8+ domains. SAIC enhanced its SocialMedia presence among alumni and students through 11 initiatives, including a collaborative video with the Cine Club, 10 Instagram reels with 50k+ views, 10 Alumni Achievement posts, and the release of "SAIC Wrapped" and "Hostel Diaries," also initiating the 'Know Your Alumni' series.

Under the Beyond the Degree initiative, SAIC collaborated with the Electronics Engineering Society, the Club of Programmers, The Business Club, the Research Cell, and more to organize more than 12 informative talks and workshops. Along with this, Student Executives from SAIC and other volunteers from the Institute ensured the smooth conduction of the Y-20 summit at RICCC from 17th to 20th August 2023 at Varanasi. The cell also organized the second edition of SARC TANK, a Pan IIT

series of competitions in collaboration with the Alumni Cell, IIT Bombay. Volunteers from SAIC organized a booth during the 12th Convocation Ceremony, engaging the graduands in creative activities such as 'Wall of 2023', 'Nostalgic Notes,' 'Pin your memories,' and a photo booth for the 2023 graduates who became the alumni of IIT (BHU). SAIC's registration booth at the ceremony also motivated graduands to register themselves on the official Alumni Registration Portal.

Alumni Connect:

With the mission to strengthen the bond between the alumni and the students, frequent engaging sessions and formal/ informal meets were organized both online and in person.

The annual Student Alumni Mentorship Program, aimed at providing personalized guidance and insights to students from the alumni, witnessed registrations from 450+ students who received one-on-one guidance from 140+ alumni mentors across 12 diverse domains. We also organized the Ask The Alumni initiative as part of the previous program, which received registrations from 165+ students and around 50+ alumni. This initiative is specially curated for 1st-year students, targeting their holistic development.

Connect & Learn - the Student Alumni Meet-up saw an increase in participation from both students and alumni this year. We received 100+ student registrations and 50+ alumni registrations this year across the cities of Bangalore and Delhi.

To update the alumni community about the latest developments at the Institute, Student Alumni Interaction Cell (SAIC) released 11 editions of its monthly alumni newsletter- Alma Communiqué, from April 2023. Covering information from different sections of all the realms- students, alumni, and the Institute, the newsletter had an overall readership of 4000+ alumni from across the globe.

In the online setting, SAIC's website (saic.iitbhu.ac.in) acted as the single-point platform for all alumni services and updates throughout the year. It hosted 14,000+ users and touched a total of 51,000+ page views. Apart from increasing the awareness of the Alumni Registration Portal through its social media platforms, SAIC also converted its database to add 6,300+ members to the portal. The current registration stands at 18,139+. Moving forward, SAIC aims to build more alumni connections and closely knit the Institute's vast alumni network together. The UI/UX design and the front-end development of the new SAIC website have been completed. The back-end development is in process.

Alumni Reunions/ Meetups:

The Institute witnessed 7 mesmerizing reunions, bringing families of 275+ alumni together to reminisce fond memories whilst establishing connect with the Institute.

Dates	Batch	Number of Alumni Attended
Jul 22 '23	2003	35+
Nov 17 '23 - Nov 19 '23	1993	30+
Nov 22 '23	BENCO-64	25+
Nov 24 '23 - Nov 27 '23	CSE 2003	15+
Feb 16 '24	MIN 1999	15
Feb 17 '24	1984	85+
Feb 20 '24	1979	70+

The Al Alumni Sports meet was organized where students interacted with Alumni visiting the Institute for Spardha in collaboration with the Sports Council.

Distinguished Alumni Award 2023-24:

Sl. No.	Name of Candidate	Category
1	Prof. Alok Gupta	Academics
2	Dr. Manu K Vora	Public Life
3	Shri Sudhir Singh	Industry/Entrepreneurship
4	Shri Ghanshyam Prasad	Profession
5	Shri Pratik Maheshwari	Young Alumnus achiever awards
6	Dr. Akshay Kumar Rathore	
7	Shri Abhilash Sridharan	
8	Shri Soumyo Sarkar	Distinguished Service to the Institute
9	Shri Vikash Aggarwal	

Lecture Series:

Sl.No.	Speaker	Affiliation	Topic and Date of the lecture
1	Prof. S. Pushpavanam	IIT Madras	10/04/2023 Microfluidics: Revolutionising Chemical Industry and Diagnostics
2	Swami Vidyapradananda	Head, Department of Sports Science and Yoga, RKMVERI	31/08/2023 Leading a healthy life in this digital age
3	Prof. P. K. Joshi	HBCSE, TIFR Mumbai	22/09/2023 Activities of Nuclear Physics in India
4	Prof. Joy Sen	Professor, Architecture and Regional Planning, IITKGP	03/11/2023 Indian Knowledge systems and its current relevance
5	Prof.Ranganathan Narayanan	Department of Chemical Engineering, University of Florida	13/12/2023 Patterns of the Divine and Patterns by Design:Dimensionless Groups and Rules of Pattern Formation in the Physical Science

1. Contributions Received from Alumni/Corporate in FY 2023-24:

In FY 2023-24, total contributions received by the Institute from Alumni is Rs. 6,30,49,054**/-** The details are as follows:

Endowment Scholarship, Medals, Awards and Other Donations received by the Institute during FY 2023-24:

S. No.	Name of Person/Trust	Amount of Donation	In favour of	Type	Purpose
1	Shri Atul Bhandari	10,00,000/-	Registrar, IIT (BHU)	Donation	Omprakash Bhandari Endowment Fund
2	Shraman Foundation	12,52,995/-	Registrar, IIT (BHU)	Donation	Shraman Foundation Scholarship
3	1982 Batch	50,385/-	Registrar, IIT (BHU)	Donation	Shatabdhi Kosh
4	IIT BHU) Foundation Fund – Jay Chaudhry Faculty Chair	81,90,000/-	Registrar, IIT (BHU)	Donation	Jay Chaudhry Faculty Chair
5	Sri Vinod Ghai	12,25,145/-	Registrar, IIT (BHU)	Endowment	Jinendra Kumar Jain Scholarship
6	Shraman Foundation	12,52,995/-	Registrar, IIT (BHU)	Donation	Shraman Foundation Scholarship
7	Sri Vinod Ghai	1,35,06,401	Registrar, IIT (BHU)	Donation	Vinod Ghai Centenary Centre of E-waste management and recycling
8	Sri Sagar Bhimavrapu	5,00,000/-	Registrar, IIT (BHU)	Endowment	Sagar Bhimavrapu Gold Medal
9	HSIL Corporate Social Responsibility	17,48,000/-	Registrar, IIT (BHU)	Donation	Dr. R. K. Somany Memorial Scholarship
10	Sri Nikesh Arora	15,93,087/-	Registrar, IIT (BHU)	Donation	IIT (BHU) Foundation Scholarship
11	Prof. K. Anantha Padmanabhan	2,10,046/-	Registrar, IIT (BHU)	Donation	T. R. Anantharaman Scholrship
12	Sri Ramesh Srinivsan	3,25,20,000/-	Registrar, IIT (BHU)	Donation	Student Activity Center
Total		**6,30,49,054/-**			

2. Year- Wise Funds & Donors:

Session	Total Funds from Alumnus (in lakhs of Rupees)	Total No. Of Donors
2018-19	89.41317	16
2019-20	104.98871	11
2020-21	191.87632	06
2021-22	895.11871	10
2022-23	15,31,45,371/-	18
2023-24	6,30,49,054/-	12

29. Gandhi Technology Alumni Centre (GTAC)

About

Gandhi Technology Alumni Centre (GTAC) has been established in 2007 with the help of alumni's of IIT (BHU) for the purpose of providing stay to guests which includes alumni's, employees, students etc. Since then it has been a long journey till now. It has developed a lot from then.

Present Admin: Dr. Amit Tyagi (Coordinator)

Total No. of Rooms:

There are total of 72 rooms in GTAC, which includes 4 suites and 68 rooms. All rooms are air conditioned and have facilities like TV, telephone, two beds, table and chairs etc.

Dining Facilities:

Provides dining facilities to In-house guests.Provides breakfast, lunch, dinner, tea, snacks etc. to the In-house guest and provide catering facilities to the institute departments/units whenever required.

Waiting Room:

A waiting room is also there so that guest can meet someone or wait for the time being. Also it serves purpose of meeting room in required condition.

Hall or Conference room:

For conferences, meeting, seminars etc. for the students or faculties of the Institute.

Activities:

- Provides stay to the guest during convocation of the Institute.
- BOG meetings and faculty recruitment interviews.
- Provides stay to the Alumni's and guest during alumni meet of IIT (BHU) alumni's.
- Provides stay to the participants of QIP programmes of different departments of IIT (BHU).
- Provides stay to the participants of IIT cultural programmes like Spardha and Kashi Yatra.
- Provides stay to the participants of programmes like Technex.
- Provides stay to the parents of the students taking admission in IIT(BHU) or parents visiting their children.
- Provides stay to the friends and relatives of the IIT's faculty member and non-faculty members.
- Provides stay for the participants of the departmental programmes of IIT (BHU).
- Provided stay to Paramedical/Medical staff deployed in COVID 19 duty during August, 2020 to January, 2021.

Images:

An extension of the guest house is ready and soon will be available for the guests of the Institute.

30. Research and Development Activities

Introduction:

Institute has a mission to fulfill the needs of the nation through Research and Innovation. Faculty members and students are engaged in cutting edge research under various schemes. To inculcate research culture in the students, the institute has set up Tinkering Labs in various departments. Students are involved in research projects from almost the early stage of their education. The institute gives partial support to the research initiatives of faculty members through grants like Seed Money, Research Support Grant, and R & D Thrust Area Grants.

The institute has also provided Lab Grants for up-gradation of teaching labs and supports Central Instrument Facility acquisitions. Faculty members of the institute are active in frontier areas of research, and Govt. research sponsoring agencies and many reputed industries have supported their efforts. A tremendous initiative of IIT (BHU) Varanasi, green and sustainable technology initiative, aims at promoting interdisciplinary research with industry collaboration for developing indigenous green, clean, and sustainable technologies that may be cost-effective, fulfill the local needs, and can be scalable to a global scale. The initiative aims to achieve excellence in research and capacity building on green & sustainable technologies and related applications, and leverage these technologies for the benefit of India.

The institute is also interested in expanding collaboration with renowned foreign universities and Institutions to enhance the exchange of research activities. IIT (BHU) Varanasi since its conversion into an IIT entered 56 numbers of International MoU's with various Institutes and now 25 MoU's are active. IIT (BHU) Varanasi has developed a research and innovation friendly environment supported through state of art infrastructure at Department/School level. In IIT (BHU) Varanasi, total numbers of on-going projects are 406 till F.Y 2023-24 amounting to Rs. 147.69 Crores. including 11 Internationally funded projects of amount Rs. 2.31 Crores. Additionally, there are 45 Institute projects/schemes running in the Institute with a total cost of ~436 crores.

While in the financial year 2022-23 total 91 sponsored projects amounting to ~27.17 crores were received by the faculty members of the Institute, in 2023-24, 93 new projects with total value 29.75 crores were awarded to the faculty members of Institute. Likewise. 05 new Institute projects/schemes of total value ~Rs. 54.81 crores were sanctioned in 2022-23. Significant improvement was seen in 2023-24 with 07 new Institute projects/schemes with total value of approximately 118 crores.

The Institute has shown significant improvement in IPR as well. While in 2022-23, total 32 patents were filed and 49 patents were awarded, in the financial year 2023-24, 46 patents were filed and 66 patents were awarded.

The lists of new and on-going projects as well as consultancy/testing projects are shown below:

New R&D Project started in 2023-24

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
Department of Architecture, Planning & Design					
1	Application of sthapatya veda and vedic architecture in creating healthy indoor environment - study area Varanasi	02 years	IKS	10.00	Dr. Aaditya Pratap Sanyal
2	Socio economic impact of PM Awas Yojana (U) in Varanasi District	06 months	ICSSR	15.00	Dr Vishal Chettry
School of Biochemical Engineering					
3	Development of all natural silk protein-anthocyanin based restorative hair dye formulation	01 yr	CGMFP	24.86	Dr. Sumit Kumar Singh
4	High solids anaerobic digestion for effective garbage disposal with forward linkage to power generation	03 years	MoE	30.40	Dr. Abhishek Suresh Dhoble
5	Transcriptome analysis of Cancer cell line treated with Gedunin and 2INC000O45971961 as novel Bruton's tyrosine kinase (BTK) inhibitor	03 years	DRDO	58.67	Dr. Abha Mishra
6	Understanding the molecular mechanism of anti-thyroid drug (propylthiouracil)- induced 'redox imbalance and epigenetic alteration	03 years	CST-Od	3.50	Dr. Aditya Kumar Padhi
7	Scale-up studies of isoprene production from genetically engineered cyanobacteria for biofuel application	02 years	CST-UP	6.00	Dr Sanjay Kumar

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
8	Reverse Engineering & high-throughput redesigning of double-y B-barrel core folded proteins: Comprehending their functional diversity for augmenting therapeutics	02 years	SERB	26.51	Dr. Aditya Kumar Padhi
School of Biomedical Engineering					
9	Engineering cell-based hydrogel patch for Diabetic Wound Repair	01 year	RSUK	3.93	Dr. Sudip Mukherjee
10	Development of EEG-based biometric system to identify friend and foe in defence application	02 year	DRDO	56.94	Dr. A.R. Jac Fredo
11	Investigation of Cell-of-origin of TNBCs and Luminal types of Breast Cancer and Development of targeted therapy.	05 years	DBT	52.50	Dr. Brijesh Kumar
12	Novel Polymeric Nanomedicine for Cancer therapy Based on the Bio-informatics and Data analysis	02 years	I-DAPT	21.70	Dr. Pradip Paik
13	Development of Implantable Engineered-Cells-Nano-Polymer-hydrogel based immune therapeutic tools for pancreatic cancer	03 years	MoE	67.60	Dr. Pradip Paik
14	Development of implantable hydrogels containing engineered cells secreting glucocerebrosidase for long-term treatment of Gaucher disease type 1	03 years	ICMR	32.64	Dr. Sudip Mukherjee
15	Engineering cell-based smart hydrogel patch for All-Round Rapid Wound Repair (ARRWR) in diabetic rats	1.5 years	DBT	1.62	Dr. Sudip Mukherjee
16	An immunoprotective hydrogel-based implantable construct containing xenogeneic islets for type 1 diabetes therapy	02 years	SERB	29.44	Dr. Sudip Mukherjee
17	Development of bio-resources for the generation of hepato-biliary tissues for mechanistic insights into liver regeneration	02 years	SERB	30.44	Dr. Gowri Manohari Balachander
School of Ceramic Engineering					
18	Solution spray processed SnO2 based Electron transport layer (ETL) for perovskite solar cell (PSC)	02 years	CSIR	1.47	Dr. Mohammad Imteyaz Ahmad
Department of Chemical Engineering & Technology					
19	Study of solid hydrodynamics in an elevated temperature gas-solid fluidized bed with secondary gas injection through side wall pneumatic nozzles	03 years	BRNS	86.36	Dr. Rajesh Kumar Upadhyay
20	Development of a 10 kW membrane reformer prototype for production of fuel cell grade green hydrogen for power generation	02 years	DST	396.01	Dr. Rajesh Kumar Upadhyay
21	Computational modeling and implementation of O2 Evolution and phase change of positive electrodes in Li-ion Batteries	01 year	OEWS	1.90	Dr. Abir Ghosh
Department of Chemistry					
22	Utilization of low grade coal for production of high quality graphene and carbon nano-particles for energy storage	02 Years	CMPDI	86.61	Dr. Yogesh Chandra Sharma
23	Studies on development of low global warming potential (GWP) compounds and their blends as alternatives for common refrigerants and examination of their ozone depletion potential	03 years	MoEn	50.00	Dr. Yogesh Chandra Sharma
24	Synergetic Metal/Lewis base- catalyzed asymmetric annulations	02 years	SERB	31.46	Dr. Rakesh Kumar Saunthwal
25	Development of new bioinspired catalysts based on Earth-Abundant transition metals and selenolate ligand for selective Hydrofunctionalization reactions	02 years	SERB	30.63	Dr. Saravanakumar Elangovan
26	Single-Molecule signature of knot formation in proteins	02 years	SERB	23.37	Dr. Prabhat Tripathi
27	Photo-Triggered Catalyst-Free approach for C-Arylation and N-Arylation with Diazonium salt via Electron-Donor-Acceptor Complex (EDA)	03 years	SERB	46.86	Dr. Sundaram Singh

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
Department of Civil Engineering					
28	Hydrological experiment and water fluxes modeling for SWOT and sentinel - 3A/3B missions: Ganga River	01 year	SAC-ISRO	10.34	Dr. Shishir Gaur
29	Development of Integrated Low-Cost Identification and Alert system for overloading, over speeding, and lane discipline violation of vehicles operating on Expressways	02 years	I-DAPT	17.88	Dr. Brind Kumar
30	An experimental- numerical study of improved delamination toughness in polymer composite laminates through the incorporation of nano-graphene particles	02 years	SPARC	67.19	Dr. Rosalin Sahoo
31	Development of an Efficient and Portable Bridge Weigh-In-motion System for In-service condition Monitoring	02 years	SERB	28.30	Dr. Samim Mustafa
32	An experimental numerical approach to enhance the mechanical stability of nano graphene reinforced polymer composite in an in-situ environment emphasizing temperature	03 years	SERB	20.61	Dr. Rosalin Sahoo
33	Coupled consolidation study of unsaturated soils from a numerical perspective	03 years	SERB	17.14	Dr. Manash Chakraborty
34	Exploring prospects of shared e-micro mobility in Rural India	06 months	THINK	2.11	Dr. Anshuman Sharma
Department of Computer Science & Engineering					
35	Privacy-aware Federated Learning based Security Solutions for Beyond 5G Networks	02 years	SERB	22.47	Dr. Vignesh Sivaraman
36	A pilot project on LoRaWAN-enabled smart building at IIT(BHU)	01 year	I-DAPT	11.00	Dr. Hari Prabhat Gupta
37	Efficient Multiparty Computation	05 years	DST	7.00	Dr. Obbattu Sai Lakshmi Bhavana
38	Efficient Multiparty computation and applications	02 years	SERB	20.43	Dr. Obbattu Sai Lakshmi Bhavana
39	Design and development of computer based intervention model for enhancing numerical of pupils of cope with mathematics curricula in primary school	03 years	DST	50.03	Dr. Bidyut Kumar Patra
40	Analyse the convergence bounds of federated learning with closer-to-practice constraints	03 years	SERB	6.60	Dr. Hari Prabhat Gupta
41	AI-Based platform for persons with visual impairment for effective social inclusion	02 years	ICSSR	11.82	Dr. Sanjay Kumar Singh
Department of Electrical Engineering					
42	Reconfigurable on board wired and wireless battery charger for electric vehicle	03 years	CST-UP	17.08	Dr. Rajeev Kumar Singh
Department of Electronics Engineering					
43	Knowledge partnership for digital metrology	05 years	MoCA	25.38	Dr. Naveen Singh Rajput
44	Design and development of antenna for surface acoustic wave (SAW) wireless temperature sensor	02 years	DRDO	31.02	Dr. Manoj Kumar Meshram
45	Demonstration of room-temperature electroluminescence from two-dimensional Semiconductor - Metal hybrid structures, towards the realization of nano-lasers	02 years	SERB	31.42	Dr. Ankit Arora
46	Design and Analysis of OTFS-based Multiuser Terahertz Communication for 6G and Beyond	03 years	SERB	4.39	Dr. Sanjeev Sharma
47	Exploring normally-on Ferroelectric Fin/FET devices for neuromorphic computing applications	03 years	SERB	6.60	Dr. Shivam Verma
Department of Humanistic Studies					
	NIL				

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
Department of Mathematical Sciences					
48	Instability mechanism of magnetohydrodynamic non-isothermal annular poiseuille flow: A numerical study	03 years	SERB	6.60	Dr. Manish Kumar Khandelwal
49	Wavelets Adaptive Schemes for Tumor Growth Model	03 years	CST-UP	11.44	Dr. Vineet Kumar Singh
50	Study of runs in multi-state trials	02 years	SERB	14.71	Dr. Amit Kumar
51	Mixed local-nonlocal double phase elliptic and parabolic problems	02 years	SERB	14.71	Dr. Rakesh Arora
52	Motives and algebro-geometric invariants of certain moduli spaces of connections	02 years	SERB	14.71	Dr. Anoop Singh
53	Non smooth optimization and duality theory under variable dominance and interval uncertainty	03 years	SERB	27.47	Dr. Debdas Ghosh
54	Approximation of runs in multi-state trials with appropriate distributions	03 years	SERB	6.60	Dr. Amit Kumar
55	Approximation methods generalized strum-liouville problems	03 years	SERB	6.60	Dr. Rajesh K. Pandey
56	Efficient layer adapted methods for parabolic interface problems with boundary and interior layers	03 years	SERB	21.01	Dr. Sunil Kumar
Department of Mechanical Engineering					
57	A novel meso micro scale coupling approach for wind resource assessment	02 years	GE-SERB	37.26	Dr. Arnab Sarkar
58	Averera Project (Development of connected vehicle technology for an urban concept autonomous vehicle)	02 years	I-DAPT	29.99	Dr. Amitesh Kumar
59	Development of catalytic integrated air-stream gasifier for the gasification of agriculture waste and valorization of gasified fly ash on concrete work	03 years	DST	40.85	Dr. Jeevan Vachan Tirkey
60	Development of stealth drones with camouflaging features for border surveillance using advanced designing and 4D printing	02 years	I-DAPT	19.96	Dr. Pawan Sharma
61	Improving oxidative resistance of Carbon-graphite materials to be used in fabrication of mechanical seals for aero-engines	02 years	DRDO	47.17	Dr. Rajnesh Tyagi
62	High temperature tribological studies of nanocomposite/multilayer coatings for dry sliding applications	02 years	SPARC	59.53	Dr. A.P. Harsha
Department of Metallurgical Engineering					
63	Structure-property correlation in creep-resistant squeeze-cast Mg-Al-Ca-Mn alloy-based nonocomposites	03 years	SERB	20.73	Dr. Ashok Kumar Mondal
64	Microstructure and Crystallographic Texture dependence of cyclic deformation and corrosion behaviour in Extruded MG-AL-ZN-SN alloys	03 years	CSIR	23.50	Dr. Subhasis Sinha
65	Development of L10-FeNi (tetrataenite,ordered phase) for permanent magnet applications	03 years	SERB	48.78	Dr. Nand Kishore Prasad
Department of Mining Engineering					
	NIL				
Department of Pharmaceutical Engineering & Technology					
66	Development of exosome-based drug delivery system for naturally inspired novel multifunctional Neuroprotective molecules and their biological evaluation in Alzheimer's disease models	03 years	ICMR	22.26	Dr. Gyan Prakash Modi
67	Targeting CDK9 by coumarin based inhibitors: Design, Preparation and Biological Evaluation	03 years	SERB	25.79	Dr. Shreyans Kumar Jain
68	Design, synthesis and biological evaluation of mechanism-based novel theranostic agents for Alzheimer's disease	03 years	SERB	33.22	Dr. Gyan Prakash Modi
69	Development of enzyme enhancement treatment for neuronopathic Gaucher disease	03 years	ICMR	70.25	Dr. Sairam Krishnamurthy
70	Development of regenerative nanofibrous bioactive conduit for treatment of spinal cord injury	03 years	ICMR	98.41	Dr. Sairam Krishnamurthy

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
71	Exploring naturally inspired piperine derivatives as multitarget directed ligands for the management of Alzheimer's disease	03 years	SERB	46.03	Dr. S. Hemalatha
72	Development and evaluation of Intra-nasal nanocarriers for the treatment of Alzheimer's disease	03 years	ICMR	60.96	Dr. Ruchi Chawla
73	Exploiting synthetic lethality of type II NADH dehydrogenases for complete sterilization of mycobacterium tuberculosis	03 years	ICMR	20.90	Dr. Deepak Kumar
74	Folic acid functionalized drug cocktail loaded lipid nano constructs for ameliorating the triple negative breast cancer therapy	03 years	ICMR	32.63	Dr. Ashish Kumar Agrawal
75	Multiepitope nanoglycoconjugate vaccine development against Mycobacterium tuberculosis	03 years	SERB	35.03	Dr. Jairam Meena
76	Pharmacological exploration & repurposing of an antimalarial-drug for the treatment of triple-negative breast cancer using bovine milk exosomes as a delivery vehicle	03 years	ICMR	50.63	Dr. Ashish Kumar Agrawal
77	Targeting cytochrome bd oxidase (cyt-bd) inhibitor for the development of rational drug combination for complete sterilization of Mycobacterium tuberculosis	03 years	ICMR	43.34	Dr. Deepak Kumar
Department of Physics					
78	Surface modification of porous electrodes for energy storage systems	03 years	DST	33.90	Dr. Prabhakar Singh
79	Synthesis of movable monostatic radar mapping system for soil moisture retrieval	02 years	DST	27.53	Dr. Rajendra Prasad
80	Learning assisted phase sensor for rapid screening of cells and automated decision making	2.5 years	I-DAPT	19.80	Dr. Rakesh Kumar Singh
81	Development of robust spin-photon hybrid quantum system for negative refraction	02 years	SERB	31.90	Dr. Biswanath Bhoi
82	Development of magnetic materials for spin seebeck energy harvesting	03 years	CST-UP	12.86	Dr. Biswanath Bhoi
83	Looking for novel skyrmion materials for spintronic applications	03 years	BRNS	27.80	Dr. Sandip Chatterjee
84	Developing calibration algorithm for HI intensity mapping with the Square Kilometer Array	03 years	SERB	6.60	Dr. Prasun Dutta
85	Developing of a 3D non-kinematic dynamo model for the solar and stellar cycles	03 years	SERB	6.60	Dr. Bidya Binay Karak
86	Synthesis and characterization of interesting topological materials	03 years	SERB	19.36	Dr. Swapnil Patil
87	Kinetics of self-assembly and structural transitions in complex soft materials across multiple length scales	03 years	SERB	37.76	Dr. Awaneesh Kumar Singh
88	Higgs physics within and beyond the standard model	03 years	SERB	11.77	Dr. Gauhar Abbas
89	Search for topological superconductor in Heusler family	03 years	SERB	18.53	Dr. Sandip Chatterjee
School of Materials Science & Technology					
90	Exploration of Indian Clays for the development of functional materials through surface modification	03 years	SERB	19.95	Dr. Pralay Maiti
91	Quantum phase transition in X2 Luln (X=Pt, Pd) Heusler Alloys via chemical substitution	03 years	UGC	0.45	Dr. Sanjay Singh
92	Experimental Investigation on machine learning aided cost-effective electromagnetic wave absorber coating using Microwave heat heterogenous Electronics waste	03 years	CSIR	26.50	Dr. Ravi Panwar
93	Development of stable & high luminescence colloidal quantum dots and its light emitting device application	02 years	SPARC	47.63	Dr. Bhola Nath Pal

Other ongoing R&D Project in 2023-24

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
Department of Architecture, Planning & Design					
1	Traditional Principles of settlement planning in heritage temple sites of Odisha/ erstwhile kalinga region	02 Yrs	IKS, AICTE	10.00	Dr. Rabi Narayan Mohanty
School of Biochemical Engineering					
2	Flow and segregation of granular materials out of hoppers and two & three dimensional devices	3 Yrs	CST-UP	10.44	Dr. Vishal Mishra
3	Targeted drug delivery of methotrexate/gallic acid-folate conjugated Poly L-Lysine nanoparticles	3 yrs	DBT	34.61	Dr. Abha Mishra
4	Development of bi-functional electrochemical nanobiosensors for bacterial exotoxin detection: Implication towards screening of toxin producing bacterial isolates	5 Yrs	SERB	38.00	Dr. Pranjal Chandra
5	Validation of Glutathione synthetase from Leishmaniadonovani as new drug target or discovery of new drug candidate	3 yrs	ICMR	41.42	Prof. Vikash Kumar Dubey
6	Characterization of indigenous cow's dung and urine for scientific advancement and development of utility items	3 yrs	DST - SUPRA	31.40	Dr. Abhishek Suresh Dhoble
7	Bioengineering of living materials to fabricate functionalized bacterial nanocellulose for high performance applications	5 Yrs	DBT	42.50	Dr. Prodyut Dhar
8	Design and Validation of field deployable miniaturized Nano-Bio-Sensing System for Detection of the Parasitic liver fluke fasciolagigantica	3 yrs	ICMR	45.37	Dr. Pranjal Chandra
9	Development and evaluation of an innovative poly herbal Bi layer wound dressing material	3 Yrs	DRDO	32.03	Dr. Pradeep Srivastava
10	Metabolic engineering of rapid growing cyanobacteria for farnesene production and its scaleup studies	03 yrs	SERB	35.09	Dr. Sanjay Kumar
11	Complete utilization of banana from farm till its disposal: A step towards the agricultural circular economy for the growth of agriculture and farmers in UP	03 yrs	UPCST	11.94	Dr. Vishal Mishra
12	A Novel, Rapid, High-Throughput Characterization of Microbiome Dynamics through Cytomics and Machine Learning	02 yrs	SERB	28.61	Dr. Abhishek Suresh Dhoble
13	Integrated computational and experimental studies to potential therapy of kala-azar targeting Dephosphocoenzyme A Kinase (LdDPCK) of the pathogen as a target	02 yrs	I-DAPT	20.00	Prof. Vikash Kumar Dubey
14	Human IL-2 fused leishmanial trypanothione synthesis (TS) as protein vaccine candidates	03 yrs	ICMR	46.13	Prof. Vikash Kumar Dubey
School of Biomedical Engineering					
15	Neem seed based nanocapsules and nanomedicine for targeted drug delivery and cancer therapy	3 Yrs	SERB	40.46	Dr. Pradip Paik
16	Functional-hollow-porous-bipolymer based Nanoformulations and Interventions for treatment of Cancer and prevention of Tuberculosis, concept of nanomedicine with multiple drugs for multiple diseases.	3 Yrs	DST	52.18	Dr. Pradip Paik
17	Development of Cardiac Model for Prediction of Human Heart Failure using Noninvasive medical imaging and Computational Fluid Dyanamic techniques	03 Yrs	ICMR	52.31	Dr. Sanjay Kumar Rai

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18	Development of Microfluidic tools for neuromuscular synatogenesis and nanotoxicological studies	5 Yrs	DST	35.00	Dr. Sanjeev Kumar Mahto
Department of Ceramic Engineering					
19	Novel Electrode Materials for Reversible alkali –ion (Li+/Na+) capacitors and Pseudocapacitors	3 Yrs	SERB	36.65	Dr. Preetam Singh
20	Development of High Alumina(Al2O3) & DOPED High Alumina materials for Ceramic Cartridge Applications	06months	Yantransh Auto Pvt. Ltd	0.60	Dr. Santanu Das
21	Development of high strength ceramic magnet for rotating machine applications	3 yrs	SERB-IMPRINT	25.91	Dr. Pradip Roy
22	Seasonal study on photocatalysis experiments in India environment	02 Yrs	IAA-RIF-2020 Grant Project, Swansea University, U.K.	15.14	Dr. Santanu Das
23	Complex of online and onsite lectures on materials for hydrogen generation by solar water splitting	4 Year	Norway Council of Education and Research, Norway	2.07	Dr. Santanu Das
24	Development of high Thorough out Processing route for CIGS PV absorber films by spray pyrolysis of Pre-synthesised Nanoparticle Ink	3 Years	SERB	46.03	Dr. M.I. Ahmad/ Dr. S. Das
25	Combined effect of dynamic electrical stimulation and surface charge on cellular functionality of electrovector and piezoelectrically toughened bioceramics	3 YEARS	SERB	43.22	Dr. Ashutosh Kr. Dubey
26	Pressure Assisted Flash Joining of Ceramic Materials	3 Years	SERB	45.91	Dr. Mohammad Imteyaz Ahmad
27	Cell laden 3-D bioprinted 2-dimensional (2-D) hydroxyapatite nanocrystals/alginate/collagen piezo-biocomposite scaffold for bone tissue engineering applications	3 Years	SERB	36.96	Dr. Ashutosh Kumar Dubey
28	Wafer-scale integration and interfacial engineering of 2D van der Waals superlattice for next-generation nano-scale devices	3 Years	SERB	38.87	Dr. Santanu Das
29	Development of nano bonded alumina magnesium borate refractory castable application for Indian petrochemical industry	3 Years	SERB	43.28	Dr. Manas Ranjan Majhi
Department of Chemical Engineering & Technology					
30	Controlled synthesis of MoO3 nanoparticles inside mesoporous materials for oxidative dehydrogenation of organic molecules with CO2	03 Yrs	SERB	32.29	Dr. Vijay MarutiShinde
31	Direct cooling of the Silicon Photovoltaic Module Enabled by an Array of Micro channel built in the backside EVA -Layer	03Yrs	SERB	41.52	Dr. Ravi Prakash Jaiswal
32	Modelling & simulation of ultra-high temperature coating on substrate using CVD/CVI Process	02 Yrs	DRDO	9.81	Dr. Vijay Maruti Shinde
33	Detailed study on the effect of mining as well as Thermal Power Stations on Natural water bodies in Singrauli Region and Recommendation Thereof	03 Yrs	NCL	58.77	Prof PK Mishra
34	Study the BioCNG production potential of different feed stocks	01 Year	TransBharat Biofuel Pvt. Ltd.	5.84	Dr. J.P. Chakraborty
35	Production of high-purity methane from renewable biomass through anaerobic digestion	01 Yr	TransBharat Biofuel Pvt. Ltd.	1.20	Dr. J.P. Chakraborty
36	Preparation of Dense Palladium/ Palladium-alloy Membranes and Optimization of Multi-pass Membrane Separator to Generate Ultra-Pure Hydrogen for On-site Applications	03 Yrs	SERB	42.57	Dr. R.K. Upadhyay

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37	Novel integrated engineering approach for effective carbon dioxide removal using biphasic amine blends for coal-based thermal power plant	03 Yrs	SERB	21.67	Prof. Monoj Kumar Mondal
38	RKVY-RAFTAAR, Agribusiness Incubators (R-ABI) under RKVY-RAFTAAR Scheme	02Yrs	DACFW	233.00	Prof. P.K.Mishra
39	Regional characterization of atmospheric aerosols at Varanasi Region	INITIALLY FOR 03 YRS	ISRO	28.63	Dr. RS Singh
40	Design and development of a Membrane reformer protype for production of ultra pure hydrogen from methanol for fuel cell based vehicle and power generators	04months at IIT(BHU)	DST	114.36	Dr. RK Upadhyaya
41	NOx Removal from Diesel Exhaust by combined NOx storage Reduction and NH3 SCR System	3 Years	SERB	27.35	Dr. Sweta
42	Development & Evaluation of Infrared Nanoparticles for Cellular-wide sensitive E-field Mapping	3 Years	DST Nano Mission	51.52	Dr. Manoj Kumar
43	Pyrolysis of Biomass for the Production of Bio-oil: Experimental and Computational Study	3 Years	DST	23.50	Dr. J.P. Chakraborty
44	Fabrication of low-cost High-through out Flow Cytometer using tunablenanolenses.	3 Years	DST, New Delhi	52.09	Dr. Ankur Verma
45	TIFAC-MSME Program	01 Year	TIFAC	20.00	Dr. BhawanaVerma
46	Effects of ceria support morphology for the synthesis of bimetallic catalysts for Nox reduction through H2-SCR	03 Years	SERB	52.47	Dr. Sweta
47	Crack modulation in dried colloidal films by soft additives	03 Years	SERB	46.86	Dr. Udita Uday Ghosh
48	Design and development of kinetically stable electrolytes for next-gen Li-ion batteries (ElectroLilon)	02 Yrs	SERB	29.40	Dr. Abir Ghosh
49	Thermo-catalytic conversion of carbon dioxide into ethanol and higher alcohols	02 Yrs	SERB	33.09	Dr. Sanjay Katheria
50	Catalyst development for reforming of biomass tar model compounds for hydrogen and syngas production	02 Yrs	SERB	30.44	Dr. Rohit Kumar
51	Production, characterization and combustion studies on sustainable aviation fuel	03 Yrs	SERB	32.34	Dr. J.P. Chakraborty
Department of Chemistry					
52	Evaluation and Optimisation of Biodiesel Production from Microalgae	3 Years	DST	51.92	Prof. Yogesh Chandra Sharma
53	Development of portable electrochemical sensor hydrogen peroxide	3 Yrs	BRNS Mumbai	34.92	Prof. P.C.Pandey
54	Detailed lecture based curriculum development for science subjects as part of Induction Programme in AICTE COLLEGES	2 YRS	AICTE	11.52	Dr. Indrajit Sinha
55	Metal hexacyanoferrate modified screen printed electrodes for the removal of radio nuclides	03 Yrs	DRDO	41.71	Prof. P.C. Pandey
56	Development of photoactivated transfer hydrogenration in catalysis for heat generation cancer transfer	05 Years	DST	35.00	Dr. Samya Banerjee
57	Towards alkaline aqueous battery and fuel cell application: Synthesis, kinetics and Operando spectroelectrochemical studies of mixed metal selenide and polypyrrole composites as potential oxygen electrocatalysts	3 Years	SERB	32.06	Dr. Manisha Malviya
58	Development of magnetically recyclable visible light photocatalysts for H2O2 Production	03Yrs	BRNS	34.05	Dr. Indrajit Sinha

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59	Development of transition metal based nanocatalysts for bioinspired water oxidation	03 Yrs	CSIR	16.00	Dr. Arindam Indra
60	Developing Superior Noble Metal free Oxygen Evolution Catalyst for electrochemical Water oxidation and Metal -Air Battery	02 Yrs	SERB	24.64	Dr. Asha Gupta
61	Promoting water Oxidation Reaction with Electrochemically Synthesized ultrathin Layered double Hydroxide Nanosheets	02 Yrs	SERB	26.51	Dr. Arindam Indra
62	Noble multi metallics/ZnOphotocatalyst for hydrogen production from green sources	1.5 years	NPIU	13.23	Dr. Indrajit Sinha
63	IKS at IIT(BHU) Varanasi	2 Years	IKS Cell, AICTE @ GoI	40.00	Dr. V. Ramanathan
64	Mineral Acids in India prior to 15th CE: A Revisit Exploring Arthasastra and other 15th CE Rasa Sastra texts	2 Years	IKS Cell, AICTE @ GoI	10.00	Dr. V. Ramanathan
65	Development of stable and tethered Os(II)-based catalysts for reductive stress mediated photo-catalytic anticancer activity	2 Years	SERB	29.39	Dr. Samya Banerjee
66	Proof of concept of developing in-cell reductive stress by Ir(III) transfer hydrogenation catalysts	3 Years	BRNS	21.82	Dr. Samya Banerjee
Central Instrument Facility					
67	Table Top Sem for CIF (One Time Support Grant)	One time grant	Advanced Materials Pvt.LTd	17.31	Prof. Rajiv Prakash
Department of Civil Engineering					
68	Propagation & Mitigation model of mixed road traffic noise for planning od mid- sized Indian Cities	3 Years	MHRD-IMPRINT	373.00	Dr. Brind Kumar
69	Studying few aspects of soil behaviour and In-corporation them in Limit Analysis	5 Years	DST	35.00	Dr. Manash Chakraboratory
70	Smart & Integrated Pedestrian System Design	3 Years	MHRD, MoUD, GMR Airport Devp (Ltd), Vikram Solar Pvt.LTd (Uchchatar Avishkar Yojana)	212.77	Dr. Ankit Gupta
71	Investigation on dynamic response analysis of shallow foundation resting on pond ash deposits	3 years	SERB- ECRA	36.14	Dr. Supriya Mohanty
72	Development and assessment of asphalt mastic from typical Indian and Austrian filler materials with a new test method	2 years	DST	9.50	Dr. Nikhil Saboo Now Dr. Ankit Gupta
73	River Aquifer exchanges & hydrogeological study for watershed management of betwa river basin	2 years	NRDMS	24.51	Dr. Shishir Gaur
74	Assessing the Suitability of warm mix asphalt (WMA) Technology Using Tribological and Performance Characteristics	3 years	SERB, ECRA	36.70	Dr. Nikhil Saboo
75	Rheophysics of semi-rigid road building materials and optimization of their composites for the perception of heavy transport load	2 years	DST	10.40	Dr. Nikhil Saboo now Dr. Ankit Gupta
76	Safer Roads: Development of Mix Design Methodology for OGFC Mixes	3 years	CST-UP	11.92	Dr. Nikhil Saboo now Dr. Ankit Gupta
77	Life cycle and performance of Waste Plastic roads	1.5 Years	NRIDA	20.50	Dr. Nikhil Saboo
78	Life Cycle and performance assessment of cold mix roads	1.5 Years	NRIDA	20.50	Dr. Nikhil Saboo now Dr. Abhisek Mudgal
79	Understanding the engineering behaviour of unsaturated geomaterials and implementing it in limit analysis for solving geotechnical problems	2 years	SERB	27.28	Dr. Manash Chakraborty

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80	Development of Performance based mix design process: A re-look at the Marshall Mix design process for the production of strong and durable	3 years	NHAI	92.21	Dr. Nikhil Saboo now Dr. Ankit Gupta
81	Factor affecting exhaust emissions of motorized two wheeler in an Indian Tier-II city: A case study of Varanasi	2 years	SERB	17.44	Dr. Abhisek Mudgal
82	Improvement of delamination fracture toughness in nao-graphene particles reinforced polymer composite laminates: An experimental- numerical approach	3 years	SERB	18.30	Dr. Rosalin Sahoo
83	Experimental and Numerical Investigation on Strength Behaviour of FRP Retrofitted Beam	1 years	Dhirendra Group of Company	5.00	Dr. Pratibha Ranjan Maiti
84	A System for Quality Control and Certification of Geospatial Data for NSDI	1 years	DST	18.44	Dr. Anurag Ohri
85	Utilization of Industrial Wastes in Dense and Gap Graded Asphalt Mixes as Fillers	1.5 Years	DST	60.04	Dr. Ankit Gupta
86	Development of algorithms for water quality monitoring using ground instrumentation and optical sensors onboard unmanned airborne vehicle and satellite data	3 years	ISRO	25.18	Dr. Shishir Gaur
87	Development of an inexpensixe high-fidelity technique for the prediction of failure capacity of thin shell structures	02 years	SERB	24.17	Dr. Kshitij Kumar Yadav
88	Design and analysis of adaptive tow-steered laminates	02 years	SERB	32.86	Dr. AyanHaldar
89	A data driven toolkit for enabling multimodal freight transportation in India and Austria	02 yrs	DST	7.12	Dr. Agnivesh Pani
Department of Computer Science & Engineering					
90	A Robust medical image forensics system for smart healthcare	02 Yrs	SERB	14.07	Dr. Tanima Dutta
91	Research & Experiment in the area of advanced data structures and methodologies to represent and process large terrain datasets for efficient rendering	07 MONTHS	DRDO	9.95	Prof Rajiv Srivastav
92	Intelligent system for computer assisted diagnosis (CAD) OF CANINE MAMMARY TUMORS	02 Yrs	DBT	29.44	Prof Sanjay Kumar Singh
93	Multilingual document summarization in quasi stationary environment	02 Yrs	DRDO	55.56	Dr. A.K. Singh
94	Resource-optimized fog computing for smart healthcare application in IoT-enable heterogeneous networks	02 Yrs	SERB	29.06	Dr. Ajay Pratap
95	Investigation risk factors and predicting complications in COVID-19 patients with Machine Learning Algorithms	08 Month	ICSSR	4.50	Dr. Prasenjit Chanak
96	Optimal transport derivations in regularized wasserstein space for non-linear & linear transformations of deep neural networks	03 Yrs	SERB	6.60	Dr. Tanima Dutta
97	Incorporating Intelligence in Email System	2 Years	BRNS	13.68	Dr. Ruchir Gupta
98	Development of text based matching algorithms for bartering software	01 Yrs	ASCONSOFTECH	11.62	Dr. Sukomal Pal
99	Development of an energy –efficient wireless sensor networks for precision agriculture	3 Years	DST	34.17	Dr. H.P. Gupta
100	Developing novel therapeutic strategies for mitigating antimocrobial resistance	03 Yrs	ICAR	153.89	Prof. Sanjay Kumar Singh
101	Design and development of machine learning based methods for plant disease detection	03 Yrs	UPCST	10.44	Dr. Ravi Shankar Singh

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102	Development of an Intelligent Internet of Things (IIoT)-enabled Portable Device for Early Diagnosis of Foot and Mouth disease of Dairy Cows	03 Years	SERB	48.38	Dr. Prasenjit Chanak
103	Algorithms with provable guarantees for dynamic social networks	03 Yrs	SERB	6.60	Dr. Lakshmanan Kailasam
104	Artificial intelligence &IoT based smart vet ecosystem for animal health patient care & precision livestock farming	03 Yrs	ICAR	59.44	Prof. Sanjay Kumar Singh
105	Revisiting traditional Indian agriculture practices against climate change vulnerabilities using machine learning techniques	02 Yrs	DST	25.25	Dr. Ruchir Gupta
106	Development of disaster response system for collecting & disseminating information through social media test processing	03 Years	UPCST	8.94	Dr. Sukomal Pal
107	Development of a ligtweight Android mobile software powered by Deep Learning for identification of plant leaf disease	02 Yrs	DST	35.90	Dr. Pratik Chattopadhyay
Department of Electrical Engineering					
108	Mix energy Source Electric Vehicle Charging System Design and its Impact on Indian Smart –distribution - grid	3 Yrs	DST	94.49	Dr. R.K.Singh
109	Design Modelling and simulation of linear Induction Drive for Propulsion Applications	02 Yrs	CARS, DRDO	10.00	Prof. R.K.Srivastava
110	Construction of Non-monotonic Lyapunov Function for the Dynamical Systems governed by differential inclusions	03Yrs	SERB	6.60	Dr. Shyam Kamal
111	Virtual synchronous generator for microgrid applications	03 Years	SERB	45.54	Dr. N.Krishna Swami Naidu
112	Output feedback controller design for linear parameter varying systems	03Yrs	SERB	57.32	Dr. Sandip Ghosh
113	Design and analysis of linear induction motor drive for electromagnetic aircraft launching system	2.5 YRS	DRDO	30.00	Dr. RK Srivastav
114	Development of a standalone solar electric drive system for boats	01 yrs	Ornate Agencies Pvt. Ltd.	5.00	Dr. SandipGhosh
115	Design, development and demonstration of solar-IV integrated on board and off board electric rickshaw charging Infrastructure	03 Yrs	DST	87.51	Dr. V.N. Lal
116	Demonstrable Prototype of IoT enable DC/AC smart grid at Library Building, IIT(BHU), Varanasi with solar photovoltaic Integration	02 Yrs	I-DAPT, IIT(BHU)	19.75	Dr. Rajeev Kr Singh
117	Data-driven battery sizing for standalone solar electric drive system for river boats	01 Yr	I-DAPT, IIT(BHU)	6.60	Dr. SandipGhosh
118	Design and development of Cybersecured Smart Power interface for Energy-Local Area Network (ELAN)	03 Yrs	IHUB-NTIHAC Foundation, IIT Kanpur	14.64	Dr. Santosh Kumar Singh
119	Development of a real-time cyber-attack detection module and its hardware-in-loop testing for an integrated power network	01 Yr	CPRI	49.92	Dr. S.R. Mohanty
120	Development of energy efficient and compact electric drive train for fuel cell electric vehicle	03 Yrs	SERB	49.17	Dr. Kalpana Chaudhary
121	Reliability evaluation and performance enhancement of grid integrated wind-solar-EV hybrid renewable energy systems	03 Yrs	SERB	41.36	Prof. R.K. Saket
122	Li-ion based inverter for household appliances	6 month	Ornate Agencies Pvt. Ltd.	5.95	Dr. R.K. Singh

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123	Design and development of next generation cost effective reconfigurable on-board battery charger with health and fault monitoring	02 Yrs	MeitY	198.29	Dr. R.K. Singh
124	Electrolytic capacitor less six pulse DC ling photovoltaic system connected to grid	02 Yrs	CPRI	45.44	Dr. V.N. Lal
125	Smart DC charging with integrated digital platform for CPOs and Power distribution companies	21 Month	MEITY	35.52	Dr. Santosh Kumar Singh
126	Silicon carbide devices based high voltage gain converter with novel current-source gate driver for electric vehicle powertrain	03 Yrs	SERB	49.99	Dr. Santosh Kumar Singh
127	Centre for development of drone related technologies	02 Yrs	I-DAPT, IIT(BHU)	130.00	Dr. Shyam Kamal
Department of Electronics Engineering					
128	Design Investigations of High Power MM Wave W Band Gyratron	2 Years	DRDO, CARS, Begalooru	9.90	Prof. P.K. Jain
129	"Design and development of miniaturized pattern/ frequency reconfigurable MIMO antennas and its performance improvement using artificial electromagnetic material"	3 Years	SERB, New Delhi	42.52	Dr. Manoj Kr. Meshram
130	Development of Polymer and Quantum Dots Blended Tandem Solar Cells Using Low Cost Solution Processed Method	3 Years	SERB	44.86	Prof. Satyabrata Jit
131	Physical Layer Security for LTE based Wireless Networks to increase Jamming Margins	1 year	CRL- BEL	33.60	Dr. K.V. Srinivas
132	Electromagnetic Analysis, Design and Simulation of Dual Frequency (S- and C-band) Relativistic Backward wave Oscillator – A HPM Source	3 years	DRDO	46.85	Dr. M. Thottappan
133	Development of Simulation Software for Spintronic Device & Circuit Simulation	2 years	SERB	16.13	Dr. Shivam Verma
134	Design development and characterization of Low loss frequency selective metamaterial waveguide coupler and antenna for 5 G Applications	3 years	SERB	6.60	Dr. Smrity Dwivedi
135	Analysis and design of sub-millimetre wave tuneable gyrotron for DNP- NMR Spectroscopy application	3 years	SERB	50.16	Dr. M. Thottappan
136	Development of Hand Telerehabilitation Platform for Diagnostic and Therapeutic Purposes in Physiotherapy	3 years	SERB	21.28	Dr. KishorSarawadekar
137	Metasurface-based Sensor devices for mm-wave and sub-terahertz Applications	3 years	SERB	56.21	Dr. Somak Bhattacharyya
138	Design and Development of High Gain, Wide Bandwidth Beam Steered Reconfigurable Reflectarrray Antennas for 5Gmm Wave Applications	3 Years	SERB	51.26	Dr. Manoj Kumar Meshram
139	Design and Development of Composition engineered toxic free organic inorganic Perovskite Quantum Dots Based Flexible Spectrum TunablePhotodetectors	03 Years	SERB	42.90	Prof. Satyabrata Jit
140	Electromagnetic Analysis, Design and simulation of an X-band Gyro-Twystron Amplifier	3 Years	SERB	29.10	Dr. M. Thottappan Prof. P.K. Jain
141	Development of Variable data rate CCSDS complaint direct digital demodulator	2 years	ISRO	24.52	Dr. Kishor P. Sarawadekar
142	Development of wearable internet of medical things for continuous health monitoring of astronauts	3 years	ISRO	26.09	Dr. Priya Ranjan Muduli
143	Development of graphene/CNT FET based sensors for space applications	2 years	ISRO	29.62	Dr. Shivam Verma

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144	Metasurface-based various components for applications in microwave and beyond	3 years	ISRO	25.33	Dr. Somak Bhattacharyya
145	Design and development of reconfigurable reflect array antenna at X-band	2 years	ISRO	27.77	Prof. Manoj Meshram
146	Design and development of implantable and ingestible antennas for biomedical applications	3 years	SERB	24.87	Prof. Manoj Kumar Meshram
Department of Humanistic Studies					
147	Cognitive Linguistic study of perception verbs in Hindi and English: In the context of machine translation	2 Years	DST (CSRI)	13.64	Dr. Swasti Mishra
148	Integrative Environment View (IEV) for Sustainable Hyper Local Temporal & Spatial Environmental Pollution Monitoring : Case of Air Quality in Varanasi City	5 Month (One Time Support Grant)	Google Asia Pacific Pvt. Ltd	14.67	Dr. Puneet Kumar Bindlish Now Dr. N.S. Rajput
149	Analytical study of sansad adarsh gram yojana of Jayapur and Nagapur in Varanasi District	05 months	Mahatma Gandhi National Council of Rural Education	2.00	Dr. Manhar Charan
150	Language Communicator Tool for End Users	3 Years	MeitY	172.24	Dr. Sukhada
151	NeetiShastras and Modernity : Understanding the reflective equilibrium between Hermeneutics of Normative Texts and Practice	2 Years	IKS, AICTE	10.00	Dr. Sukhada
IPR					
152	NRDC Innovation Facilitation Centre	3 years	National Research Development Centre	6.00	Prof. Rajiv Prakash
Department of Mathematical Sciences					
153	Schwarz waveform relaxation methods for singularly Perturbed Parabolic Problems	03 Years	SERB	6.60	Dr. Sunil Kumar
154	Study and analysis of Mathematical Models of Moving Boundary Problems	03 Yrs	SERB	22.44	Dr. Rajeev
155	Approximation methods for problems in fractional calculus of variations	03Yrs	SERB	21.56	Dr. Rajesh Kr. Pandey
156	Existence and Stability analysis of periodic solution of variable time impulsive neural network	03 Yrs	SERB	6.60	Prof. Subir Das
157	Study and analysis of interfacial cracks in composite media	03 Yrs	DAE	2.30	Prof. Subir Das
158	Pseudo-differential operators in partial differential equations, distribution and machine learning?	03 Yrs	SERB	6.60	Dr. Santosh Kumar Updadhyay
159	Wavelets Adaptive Schemes for Singular Integral Equations	3 Years	SERB	6.60	Dr. Vineet Kumar Singh
160	On Developing Polynomial-time Interior-Point Methods for Robust Multiobjective Convex Optimization Problems	3 Years	SERB	6.60	Dr. Debadas Ghosh
161	Robust Adaptive Mesh Methods for Singularly Perturbed Problems in Ordinary and Partial Differential Equations	03 Yrs	SERB	29.95	Dr. Sunil Kumar
162	Development of solution methods for Abel's integral equations and generalized Abel's integral equation	3 Years	DAE, Mumbai	3.32	Dr.Rajesh Kr. Pandey
163	On characterizing and Obtaining the Complete Efficient Solution Set of an Interval Optimization Problem under a D-Dominance and a variable Dominance Structure	3 Years	SERB, New Delhi	15.02	Dr. DebdasGhosh
164	Applications of Spectral graph theory in analysing the structural properties of large scale networks	03 Yrs	SERB	6.60	Dr. Lavanya Silveganeshan

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165	Development of Cryptographically efficient lightweight MDS matrices and its extension to code-based PQC	03 Years	DRDO	23.10	Dr. Ashok Ji Gupta
166	Study of some Two dimensional fractional order nonlinear transport phenomena problems in porous media	03 Yrs	BRNS	14.84	Prof. Subir Das
167	L-functions associated to modular forms and non-vanishing of poincare series	02 Yrs	SERB	14.71	Dr. Abhash Kumar Jha
168	Nanlocal elliptic equations with critical growth nonlinearities	02 Yrs	SERB	14.71	Dr. Divya Goel
169	A numerical study of some non-classical diffusion/ heat equations with free boundaries	03 Yrs	SERB	6.60	Dr. Rajeev
170	Investigation of size effects on vibration and thermoelastic damping in nano-electro-mechanical systems of piezoelectric materials	03 Yrs	SERB	6.60	Prof. Santwana Mukhopadhyay
171	Adaptive computational approach for riesz fractional advection dispersion wave equations	03 Yrs	SERB	21.67	Dr. Vineet Kumar Singh
172	Isoperimetiric bounds and obstacle placement problems for mixed steklov-Dirichleteigencalues in Riemannian manifolds	02 Yrs	SERB	14.71	Dr. Sheela Verma
173	Certain space of cusp forms spanned by eat quotients and application	03 Yrs	SERB	6.60	Dr. Abhash Kumar Jha
Department of Mechanical Engineering					
174	Design & Development of Combined Cooling and Power Generation system	2 Years	CST-UP	9.60	Prof. S.K. Shukla
175	Development of an intelligent evaporative cooler for composite climate	2 years	DST	8.92	Dr. Jahar Sarkar
176	Development of Ti alloy based composites by mechanical alloying and stirrer casting route for dental applications	3 YEARS	SERB	50.21	Dr. Rakesh Kumar Gautam
177	Photonic radative cooler for passive sub-ambient cooling	3 years	SERB- IMPRINT	41.88	Dr. Jahar Sarkar
178	Development of complex Aluminium Shell Part High pressure die-casting	1 year	DRDL Hyderabad	28.85	Prof. Santosh Kumar
179	Development of ORC technology for waste heat utilization for the generation of electricity	3 years	BRNS	29.97	Dr. Jahar Sarkar
180	Assessment of Structural Vulnerability through Characterisation of Tornado for a NPP Site	3 years	BRNS	30.32	Dr. Arnab Sarkar
181	Pathology on a Spinning Disc	3 years	MHRD - STARS	94.10	Dr. Arnab Sarkar
182	Impact of a microspray on a bio-mimicking surface	2 years	SERB	31.73	Dr. Binita Pathak
183	Effect of Jet Pulsation on Reacting Jet in Crossflow	2 years	SERB	32.01	Dr. Anubhav Sinha
184	Assessment of Vulnerability of structures in Regard to Cyclonic Wind loads	2 years	Bureau of Indian Standards	10.76	Dr. Arnab Sarkar
185	3D Computational and experimental study on layer dynamics and prediction of critical power law scales in double-diffusive finger convection	03 Yrs	SERB	49.30	Dr. Om Prakash Singh
186	Development of a Rubber based sheet Hydro forming setup	2 Years	DRDL, CARS Hyderabad	9.84	Prof. Santosh Kumar
187	Development of a multiplex portable spinning disc for effective monitoring of women's health during different stages of pregnancy	3 years	DST	72.94	Dr. Arnab Sarkar
188	Development of Sheet Hydro-forming Process for missile Components	2 Years	Defence Research & Development Lab (DRDL), Hyderbad	9.80	Prof. Santosh Kumar

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
189	Technology and Fabrication of Tabletop CNC Machine for Micro-Tubular Hydroforming Setup	Extended till 31.12.2020	BARC, Mumbai	49.32	Prof. Santosh Kumar
190	Assessment of residual stress upon friction stir welding of steel	3 Years	SERB	45.00	Dr. Mohd. Zaheer Khan Yusufzai
191	Characterization and validation of Schlieren Technique for Capturing Shock Wave	2 Years 9 months	DRDO. New Delhi	17.84	Dr. Amitesh Kumar
192	Study of tool wear in Diamond turn Machining & Micro Machining Process	2 years	BARC Mumbai	24.05	Prof. Sandeep Kumar
193	On the augmentation of heat transfer from external downward facing Convex surface of Calendric	3 years	BRNS	36.49	Prof. Pradyumna Ghosh
194	Modelling of advanced polycrystalline materials for crystal plasticity simulations of machining processes	2 years	SERB	9.43	Dr. Srihari Dodla
195	Blowoff Dynamics of Afterburner Flame	3 years	DRDO (AR&DB)	98.90	Dr. Anubhav Sinha
196	Experimental investigation of stability limits, NOx emissions and blowout phenomenon of ammonia - hydrogen-nitrogen air mixtures in a non-premixed swirl combustor	02 years	SERB	31.72	Dr. Santhosh R
197	Graphite Aerosol studies in High Temperature Aerosol Facility for nuclear reactor applications	03 years	BRNS	40.50	Prof. Prashant Shukla
198	Hybrid Solar Wind Driven Combined Heat and Power System using Organic Rankine Cycle. (P.I.D.-1747)	3 Years	CST-UP	9.42	Dr. Arnab Sarkar
199	Manufacturing of complex titanium assembly part for missile using fabrication, simulation, testing & prototyping studies	2.5 years	DRDO	47.57	Prof. Santosh Kumar
Department of Metallurgical Engineering					
200	Art, science and technology of traditional "Koftgari" metal work in India	01 Yr	INSA, New Delhi	2.85	Dr. K.K. Singh
201	Study on effect of temperature and mean stress on fatigue strength of turbine aerofoil alloy	04 Yrs	CARS, DRDO	281.90	Dr. G.S. Mahobia
202	Development of industrial waste as mold material for sustainable development of developing countries	3 Years	SERB	27.19	Dr. Jayant Kumar Singh
203	DST-INSPIRE Fellow	5 Years	DST	67.16	Breatindranath Mukherji
204	Development and structural characterization of Bi2-xMx3+(y-3)/2 coating for protection against coolant & sensors	3 yrs	UGC DAE-CSR	2.95	Dr. Joysurya Basu
205	Development of Electropulsing Facility for Synthesis of Bulk Nanostructured Materials	2 Years	B.R.N.S.	26.48	Dr. Rampada Manna Prof. G.V.S. Sastry/ Prof. R.K. Pandey/ Prof. S.N. Ojha
206	In situ electron microscopy at atomic scale for understanding nucleation growth and interfaces of omega phase	3 Yrs	SERB	65.84	Dr. Joysurya Basu
207	Role of short range ordering in designing high entropy alloys	03 YRS	SERB	41.36	Dr. Vikash Jindal
208	Cyclic thermochemical fuel generation	03Yrs	SERB	52.63	Dr. Randhir Singh
209	Development of a unified physical model for hot deformation and creep to support the development of high temperature materials	05 Yrs	DST	35.00	Dr. Suryadeo Yadav
210	Wearer corrosion and biocompatibility of Tantalum (Ta) coated 316 L, Stainless steel for Orthopaedic Applications	03 Yrs	SERB	44.93	Dr. CK Behera

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
211	Development of Functionally Graded Armour Composites (FGACs) Materials	03Yrs	DRDO	91.66	Dr. Vikas Jindal
212	Mechanical behaviour of advanced high strength steel processed by additive manufacturing	03 Yrs	SERB	39.83	Dr. NC Santhi Srinivas
213	Tunable surface plasmon optical sensing behaviour of M-MoS2 (M=Cu, Ag, Au) Alloy Nanostructures	03 Yrs	SERB	44.65	Dr. Bratindranath Mukherjee
214	Creep and corrosion behaviour of Novel MRI2300 Magnesium Alloy with Nanoparticles Addition	03 Yrs	CSIR	17.22	Dr. A.K. Mondal
215	In -situ microscopy study of age hardening in dispersion strengthened cast magnesium alloys and its ex-situ correlation with mechanical properties	03Yrs	SERB	37.36	Dr. Ashok Kumar Mondal
216	High performance rare earth free nanocomposites permanent magnet for advanced motor and alternative energy applications	04 Yrs	SERB	56.90	Dr. N.K. Prasad
217	Stability of Nanostructured and Residual Stress Developed through Ultrasonic Shot Peening in Superalloy IN718 at Elevated Temp.	02 Yrs	DRDO	28.86	Dr. Kaushik Chattopadhyay
218	Emergent phases in 2D quantum materials and Heterostructures	05 Yrs	DST	24.50	Dr. Joysurya Basu
219	Designing metallic glass composites with immiscribe elements as alloying elements for improved plasticity	02 Yrs	SERB	33.10	Dr. Sree Harsha Nandam
220	Electronics repairing and E-waste collection system	06 Months	UBA	0.50	Prof. K.K. Singh
221	Development and processing of magnetocaloric this sheets for enhanced thermomagnetic energy harvesting applications	02 Yrs	SERB	31.99	Dr. Deepak K
222	Development of high-strength vanadium microalloyed steels for heavy gauge plate	03 Yrs	Vanitec Limited, U.K.	92.96	Dr. Sudipta Patra (PI), Dr. Joysurya Basu (CoPI)
223	Design, development and microstructural engineering of ultra-strong managing medium entropy alloys	03 Yrs	SERB	41.58	Dr. Praveen Sathiyamoorthi (PI)
Department of Mining Engineering					
224	Meter Scale Granite block Smectic clay barriers experiment and associated TMH modeling for Indian Pit mode reference geological Disposal System	3 Years	BRNS	30.88	Dr. A.K. Verma
225	Development and validation of coupled Themo-Hydro-Mechanical (THM) models for radioactive waste repositories in fractured rocks	6 years	DST- INSPIRE	35.00	Dr. A.K. Verma
226	Landslide stability analysis in subzero environment around Kinnaur district of Himachal Pradesh, India	3 years	DST	49.73	Dr. A.K. Verma
227	Design and development of Micro Seismic based technique for monitoring and prediction of slope failure in Pandoh, Himachal Pradesh, India	3 years	SERB	49.77	Dr. A.K. Verma
228	National Geotechnical Conclave on "Development of Early warning system (EAWS) for Landslide Hazard Mitigation on 21-22 March, 2019	One time grant	DST	5.50	Dr. A.K. Verma
229	Stability Evaluation of Dump Slopes and Developing Slope Stability Models for Design of Long Term Stable Sump Slopes through Proper Benching and Vegetation – Part B	3 years	NCL	141.13	Dr. G.S.P. Singh
230	Slope stability monitoring and analysis using hyperspectral imaging	3 years	SERB	47.10	Dr. Tarun Verma

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
231	Forewarning System for Landslide Prediction along Mangan and Chungthang road, Sikkim India	3 years	DST	43.78	Dr. A.K. Verma
232	Development of Laboratory Scale Bio-Grout Technology for Landslide Mitigation	3 Years	SERB	32.95	Dr. A.K. Verma
233	Development of prototype of early warning systems on impending goaf for underground coal mining.	3 Years	SERB	36.91	Dr. Ashok Jaiswal
234	Inverse estimation of uncertainty in intact rocks properties at meso-scale using full-field strain measurements	2 Years	SERB	32.46	Dr. Bhardwaj Pandit
235	Assessment of Safe Parting Thickness and Optimum Goaf Edge Support Requirement for Extraction of Pillars under Soft Cover	2 Years	CMPDI	182.29	Prof. Sanjay Kumar Sharma
236	Assessment of Work Posture of Mine Equipment Operators in Relation to Whole-Body Vibration Exposure-Using RULA, REBA and Human Modelling Approach	3 Years	SERB	38.29	Dr. Sanjay Kumar Palei
Department of Pharmaceutical Engineering & Technology					
237	Pharmacological evaluation of anti-diabetic effects of some natural drugs	2 years	Natreon	28.87	Dr. Sairam Krishnamurthy
238	Exploring Anti-ineffective potential of Panchagavya : Metabolomics and Proteomics Approaches	3 years	DST	65.43	Dr. Shreyans Kumar Jain
239	Design and development of Molecular hybrids on a multifunctional framework for regulating Cholinesterases, β- secretase 1, Amyloid- β, and Oxidative Stress Against Alzheimer's Disease	3 years	ICMR	80.42	Prof. Sushant Kumar Shrivastava
240	Development of toolkit for prediction of blood brain-barrier permeability using deep learning to expedite CNS drug discovery	3 years	SERB- Matrics	6.60	Dr. Rajnish
241	Safety & Efficacy of the "PL05" capsule/tablet in Animal in the treatment of gastric acidity	1 Year	Purobien Life Sciences Private Ltd.	19.75	Dr. Sunil Kumar Mishra
242	Pharmacology of Natural drugs in obesity and eating disorders	2 yrs	Natreon Inc.	26.54	Dr. Sairam Krishnamurthy
243	Novel Milk Exosomes for the combination therapy by using selected natural medicine (Paclitaxel & Colchicine) for the efficient management of breast cancer	2 years	SERB	31.38	Dr. Ashish Kumar Agrawal
244	Bioluminescence based monitoring of tumor progression and treatment by apoptotic pathway	5 Years	DBT	42.50	Dr. Deepak Kumar
245	AMWATCH: Defining the AMR Burden of Antimicorbial Manufacturing Waste in Puducherry and Chennai	3 years	DBT	106.50	Dr. M.S. Muthu
246	Development & evaluation of nanocarrier for enhanced anti-microbai activity of anacrdic acid against human and plant pathogens	3 Years	DST	58.66	Dr. Sanjay Singh
247	Evaluation of some compounds in experimental Alzherimer Disease	2 years	Natreon Inc., U.S.A.	29.40	Dr. Sairam Krishnamurthy
248	Pharmacological Effect of novel formulation in experimental allergic encephalomyelitis rodent model	1 Years	DISTO Pharmaceuticals	5.04	Dr. Sairam Krishnamurthy
249	Dissecting brain reward circuitry and CNS comorbidities in chronic neuropathic pain	3 years	SERB-ECRA	49.09	Dr. Vinod Tiwari
250	Phytochemical and pharmacological evaluations of bioactivity guided fractions of medicinal plants of Tripura	3 years	DBT	26.55	Dr. A.N. Sahu

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
251	Natural Template Based Novel Neuroprotective Molecules for the management of Alzheimer's Disease	3 years	SERB- CRG	37.20	Dr. Gyan Prakash Modi
252	Development of novel near infrared fluroscence imaging probes for detecting amyloid beta species in eyes of Alzheimer's disease animal model	3 years	ICMR	37.00	Dr. Gyan Prakash Modi
253	Design and development of potential multifunctional molecular hybrid for the treatment of Alzheimer's disease	03 Yrs	SERB	28.80	Prof. S.K. Shrivastava
254	Study on therapeutic and preventive efficacies of linoleic acid in hamster model of visceral leishmaniasis	2 years	ICMR	8.36	Dr. Vinod Tiwari
255	Development of peripherally acting Nanoformulation of opioids for the treatment of neuropathic pain	02 years	CST-UP	7.80	Dr. Vinod Tiwari
256	Preparation & characterization of natural products derived self-surface functionalized carbon dots for oral cancer theranostics	03 yrs	CST-UP	11.94	Dr. Alakh N. Sahu
257	Animal studies to establish the efficacy of surface polarized sodium potassium niobates for orthopaedic implant application	03 yrs	CST-UP	10.92	Dr. S. K. Mishra
	Department of Physics				
258	DST/INSPIRE Faculty Award (IFA-12-PH-21)	5 Years	DST	95.00	Dr. S.K. Singh
259	IFA-12-Ph-22 DST/INSPIRE FACULTY Award/2012 INSPIRE FACULTY AWARD	5 Years	DST	76.00	Shri Sunil Kumar Mishra
260	Study of Magnetospheric Wave-Particle interaction, Aurora, Airglow and Conductivities on Planets and their Satellites	3 Years	ISRO	38.03	Dr. D. Giri/ R.P. Singhal/ O.N. Singh
261	Observations and Modelling of solar transients & space weather candidates	3 Years	SERB	17.76	Dr. Abhishek Kr. Srivastava
262	Electronic Structure evolution across quantum critical point in Li(Ti1-xVx)2O4 Li1-x Znx)V2O4	03 Yrs	SERB	55.00	Dr. Swapnil Patil
263	Collection of self-propelled particles in inhomogeneous environment : numerical & analytical Studies	03 Yrs	SERB	24.59	Dr. Shradha Mishra
264	The sun under the microscope – An integrated research activity to maximize the science return from a new generation of missions to study the sun	2 Yrs	UGC	19.28	Dr. Abhishek Kr. Srivastava
265	Modelling self assembly and phase separation kinetics in the complex soft materials	03 Yrs	SERB	46.54	Dr. Awaneesh Kumar Singh
266	Ramanujan Fellowship	05 Yrs	SERB	38.00	Dr. Bidya Binay Karak
267	Investigations of new lead free perovskite materials for solar cells	03 Yrs	SERB	38.09	Prof. Prabhakar Singh
268	Tuning self assembly of fluoresent Protein Nanodots for Melanoma Skin Cancer	03 Yrs	SERB	36.68	Dr. Avanish Singh Parmar
269	On understanding the solar activity and preparing for space weather prediction using a state of the art dynamo model	03 YRS	ISRO	30.99	Dr. Bidya Binay Karak
270	Multiple reversals of the Sun's polar- field and their physical causes	02 yrs	DBT	10.34	Dr. Bidya Binay Karak
271	Spatially resolved digital holography polarization microscope for diagnosis applications	03 Yrs	DBT	41.44	Dr. Rakesh Kumar Singh
272	Tailoring correlations of light using plasmonic and nano structure	03 Yrs	BRNS	36.96	Dr. Rakesh Kumar Singh

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
273	Development of perovskite oxides SrCeO3 and SrCeO4 as high temperature thermal barrier coating (TBC) material for aerospace application	03 Yrs	DRDO	29.79	Dr. Shail Upadhyay
274	Analytical study of hydrodynamic theory of wet active fluid	03 Yrs	SERB	6.60	Dr. Shradha Mishra
275	Experimental study of anisotropy in nuclear charge and current distribution that results in interplay of electric and magnetic rotation in Xe nuclei	03 Yrs	SERB	16.74	Dr. Somnath Nag
276	Active polar flock in quasi two-dimensional geometry: role of confinement and boundary condition	03 Yrs	SERB	28.49	Dr. Shradha Mishra
277	Study of quantum chaos and multipartite entanglement using quantum circuits	03 Yrs	SERB	21.55	Dr. Sunil Kumar Mishra
278	Tailoring properties by altering long and short-range structures in eco-friendly, Pb-free ferroelectric perovskite oxides for energy harvesting	03 Yrs	SERB	18.53	Dr. Saurabh Tripathi
279	DST-INSPIRE Faculty Award (IFA-13 PH 54) understanding structure and dynamics of the Interstellar medium	5 Years	DST, New Delhi	35.00	Dr. Prasun Duttta
280	Novel observations and modelling of the heating and dynamical plasma processes in the localized solar atmosphere	03 Yrs	ISRO	28.03	Dr. Abhishek Kumar Srivastava
281	Development of microwave scattering algorithms for retrieval of crop biophysical parameters and soil moisture using polarimetric SAR satellite data	03 Yrs	ISRO	30.72	Dr. Rajendra Prasad
282	Novel and efficient hybrid material of CsPbBr3, Nanocrystals and organic complexes for multi-stimuli and dynamic optical encryption and decryption	03 Yrs	SERB	21.01	Dr. Sunil Kumar Singh
283	Development of rare-earth-free metal vanadate phosphors for latent fingerprint detection	03 Yrs	SERB	23.31	Dr. Praveen Chandra Pandey
284	A new paradigm for flavour problems	03 Yrs	UPCST	10.44	Dr. Gauhar Abbas
285	Enhancement of detection capability of Pyroelectric detectors in Infrared (IR) and Terahertz (THz) region	03 Yrs	DRDO	94.00	Dr. Saurabh Tripathi
School of Materials Science & Technology					
286	J.C. Bose Fellowship	5 Years	SERB	68.00	Prof. Dhananjay Pandey
287	Polymeric Nano Biohybrids for Tissue Engineering and Drug Delivery	3 Years	SERB	23.11	Prof. Pralay Maiti
288	Development of low voltage, low power, colloidal quantum dot light-emitting transistors for next generation display technology	3 Years	SERB	55.52	Dr. BholaNath Pal
289	Development of low cost sodium ion battery: Fabrication and application of NASICON based electrodes	3 Years	DST	82.89	Prof. Rajiv Prakash
290	Understanding the mechanism of action through cell biology and upgradation of herbal drug in solution and biodegradable patch for the treatment of diabetic foot ulcer	16 months	BIRAC	28.60	Prof. Pralay Maiti
291	Elastocaloric effect measurement setup to study caloric effect in shape memory alloys	3 Years	UGC-DAE	10.41	Dr. Sanjay Singh
292	Development of anti corrosive paints	1 Years	Harind Chem. & Pharmaceutics Pvt. Ltd.	1.20	Prof. Pralay Maiti

Sl. No	Title of Project	Period	Funding agency	Amount (in Lakh)	Name of the PI
293	Mott transistors based Neuromorphic memory device	3 years	DST	100.98	Dr. Shrawan Kumar Mishra
294	Minimizing hysteresis in magnetic shape memory Heusler alloys for reversible magnetocaloric effect	3 years	SERB	48.39	Dr. Sanjay Singh
295	Low cost ammonia gas sensor based on polymer/ polymer nanocomposite device formed by novel floating film transfer (FTM) technique	2 years	IMPRINT- SERB	35.69	Prof. Rajiv Prakash
296	Nanoscale interfacial magnetic skyrmions and its applications in memory devices	3 years	DST	103.50	Dr. Shrawan Kumar Mishra
297	Chemical modification of Guar Gum to improve its properties	1 year	Hindustan Gum Pvt. Ltd	7.70	Prof. Pralay Maiti
298	Aging studies and estimation of thermal properties of Liner Materials	2 years	DRDO	175.14	Prof. Pralay Maiti
299	Impact of Carbon Nanomaterial based Photocatalyst on Microalgae Growth and Lipid for improved Biodiesel	3 years	DBT	7.30	Prof. Rajiv Prakash
300	3 D Bio Stereolithography for Engineering functional Tissues	5 Years	SERB	37.24	Prof. Pralay Maiti
301	Development of nanoink for anti-counterfeit products and solution	2 years	Industry Kantas Track Pack India Ltd.	1.00	Prof. Rajiv Prakash nor Dr. Chandana Rath w.e.f. 21.09.22
302	Defence analyses of Compound Semi-Conductor Wafer	1 year	Applied Materials India Pvt	10.20	Dr. Chandan Upadhyay & Prof. Rajiv Prakash
303	Fabrication of low power consuming inverted near-infrared AMOLED	3 years	DST	47.82	Dr. Bhola Nath Pal
304	Multifunctional Nanostructured Mn/Fe doped CeCro3 for Photocatalyst and Magnetic Switching	03 Years	SERB	48.56	Dr. Chandana Rath
305	Investigation of Anomalous Nernst Effect in Shape Memory Heusler Alloys	3 Years	SERB	68.42	Dr. Sanjay Singh
306	Demonstration and reproduction with scientific validation of some Ceramic Materials Knowledge System of Ancient India	2 Years	IKS, AICTE	14.22	Prof. Rajiv Prakash
307	Development of advanced Medical Textiles	5 years	Farmanex International Pvt. Ltd.	3.00	Prof. Rajiv Prakash now Dr. Chandan Upadhyay w.e.f. 21.09.22
308	Correlation studies of copper artifacts (2500-200 BCE) from Varanasi region and copper mining and smelting in tribal areas of Singhbhum	2 years	AICTE, IKS	15.24	Dr. Chandan Upadhyay
309	Effect of composition and microstructural alteration on constant and dynamic loading response of Al-Mg-Si alloys for electric vehicle application	2 years	SERB	33.05	Dr. Nikhil Kumar
310	Investigation of processing techniques for the development of PPEK and Thermoplastic prepreg technologies	2.5 years	DRDO	88.74	Prof. Pralay Maiti
311	Study of composition and thermo-mechanical processing of 4-8% Cu Al alloy for fabricating the fuselage skins and frames for aerospace application	03 years	CST-UP	10.92	Dr. Nikhil Kumar
312	DNN- Derived Innovative Flexible Frequency Selective Surfaces for Stealth and 5G Electromagnetic Shielding Applications	03 years	SERB	32.56	Dr. Ravi Panwar
313	Nano-ion Chromatograph in Action - Sustainable and scalable quantum dots paves a Facile route for Rare Earth Ions Separation Through Advanced Hydrometallurgy	2 years	Ministry of Mines	11.05	Prof. Pralay Maiti

Major Consultancy Project (FY 2023-24)

Sl. No.	Department	Challan Number	Title	Funding Agency	Name of Consultants	Amount
1	Civil Engg	6103	Vetting of design and drawing	Ashok Kumar, ARCH-EN Design, Lucknow-226010	Prof. K K Pathak	10,25,832.00
2	Civil Engg	6114	Vetting of the structural design & drawing of training institute	PIU, PWD Badrinath, Uttarakhand	Prof. K K Pathak	29,64,000.00
3	Civil Engg	6176	Vetting of basic Engineering Package , Vetting of Hydrology and water Crop requirement	M/s JWIL Infra Ltd. plot no -400, Ground , First and Second Floor Babupara, Sikatia -814133	Dr. K.K. Pandey	11,07,000.00
4	Civil Engg	6178	Proof Checking of Design & Drawing of tunnels in connection	M/s Cemosa-Introsoft (JV) Ist Floor , Ishram Signature Pocket B-10 Sector-13 dwarka new Delhi 110078	Prof. K.K Pathak	11,93,400.00
5	Civil Engg	6252	Vetting Of Structural Design Of Proposed Govt. Medical College, Dhemaji Assam	M/s Badri Rai & Company Near Radha Krishna Mandir Station Road, Duliajan Dibrugarh Assam-486602	Prof. K.k. Pathak	10,80,000.00
6	Civil Engg	6870	Vetting of Structural Design & Drawing	IVPS Infra Pvt Ltd., Rewa , MP	Dr. P.R. Maiti	19,84,760.00
7	Civil Engg	6292	Vetting Of Structural Design and Drawing	Ductile Design Consultancy Pvt. Ltd., Gurugram Harayana	Prof R. Kumar	11,55,600.00
8	Civil Engg	5899	Design & Drawings, Stability analysis & Health test of Ash Pond	Hindalco Industries Limited, Sonebhadra UP	Prof. Arun Prasad	17,28,000.00
9	Civil Engg	6961	Geo Enviro Study	Prayagraj Power Generation Company Ltd., Prayagraj UP	Dr. Anurag Ohri	14,16,000.00
10	Civil Engg	6998	Vetting Structural design and drawing	Uttarakhand Peyjal Sansadhan Vikas Evam Nirman Nigam Dehradun	Prof. K.k. Pathak	10,00,000.00
11	Civil Engg	7009	Proof Checking	Agrawal Global Infratech Pvt. Ltd., Jharkhand	Prof. K.k. Pathak	11,60,000.00
12	Civil Engg	7412	Vetting Of Design & Drawings	Dilip Buildcon Ltd., Jharkhand	Prof. Rajesh Kumar	29,58,000.00
13	Civil Engg	1186	Design a dividing fund of the existing ponds ash	Hindalco Industries Limited, Mahan Aluminium Singrauli Sidhi Road Bargawan- 486886	Prof. Arun Prasad	10,69,200.00
14	Civil Engg	5884	7-Days Training Program for Engineers and officers of tribal development (T-Bill)	Commissioner Tribal Development, M.P Bhopal	Dr. Mahendra Kumar Pal & Vishwit Anand	11,94,160.00
15	Civil Engg	1190	Vetting of structural design and drawing	Executive Engineer ATPS, Thermal Power project Sonbhadra UP India	Prof. P.K.S. Dikshit	36,04,000.00
16	Civil Engg	7464	Proof Checking of Structural Design & Drawing	Bihar Medical Services & Infrastructure Corporation Ltd.,Patna Bihar	Prof. K.K Pathak	47,52,000.00
17	Civil Engg	AABS/TE/23-24/223 dt. 03.01.2024	Forensic Investigation of Road Failures	HG Infrastrastructure Pvt. Ltd.	Dr Ankit Gupta	19,44,000.00
18	Civil Engg	5424	Third Party Quality Control of Materials of PSCL	Prayagraj Smart City Ltd., Civil Lines, Prayagraj(Allahabad)	Prof. Brind Kumar	11,83,490.00
19	Civil Engg	434631	Proof Checking	Ajay Realcon India Pvt Ltd., Noida	Dr. M.K. Pal	10,80,000.00

Sl. No.	Department	Challan Number	Title	Funding Agency	Name of Consultants	Amount
20	Civil Engg	434640	Proof Checking	Kaluwala Construction Pvt Ltd., Dhemaji, Assam	Prof. K.K Pathak	17,28,000.00
21	Civil Engg	434645	Vetting of structural design and drawing	Privue Builders Pvt Ltd., New Delhi	Dr. M.K. Pal	10,80,000.00
22	Civil Engg	434670	Vetting of structural design and drawing	Bharat Vanijya Eastern Pvt Ltd., Ranchi Jharkhand	Prof. R. Kumar	10,62,000.00
23	Civil Engg	434705	Proof Checking	Design Tech Structural Consultant, Dehradun	Prof. K.K. Pathak	11,80,000.00
24	Civil Engg	434777	Vetting of structural design and drawing	Nilaya Infra Pvt Ltd., Ghaziabad	Dr. M.K. Pal	10,80,000.00
25	Civil Engg	434729	Vetting of structural design and drawing	RSVS Consulting & Research Pvt Ltd., Prayagraj UP	Dr. V. Anand	10,80,000.00
26	Civil Engg	434732	Evaluation of report	Sasan Power Ltd., Singrauli M.P	Prof. Arun Prasad & Prof. P.K. Singh	10,80,000.00
27	Civil Engg	7499	Consultancy for the construction of new ASH	Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited	Prof. P.K.S. Dikshit	41,30,000.00
28	Civil Engg	434818	Proof Checking of Highway Project	Kaluwala Construction Pvt Ltd., Dhemaji, Assam	Dr. Ankit Gupta	23,41,440.00
29	Civil Engg.	434854	Vetting of Following Components for design, drawings of Naugarh Group	East India Udyog Ltd., Noida UP	Dr. K.K. Pandey	11,88,000.00
30	Civil Engg.	434874	Review distress cause analysis and remedial measures	Adani Track Management Services Ltd., Surguja, Chattissgarh	Dr. S.Kumar & Dr. V. Anand	14,58,000.00
31	Chemical Engg.	431772	Testing	M/s Clean Cabon Technology Corp. USA	Prof. R.K Upadhyay	10,42,623.00
32	Chemical Engg.	433511	Testing	Sun Petrochemicals Pvt Ltd., Ahmedabad Gujarat	Prof. R.K Upadhyay	12,00,000.00
33	Chemical Engg.	433512	1.Production of Methanol from Natural gas by Direct Method from Standard Gas by GTL 2. Production of Blue Hydrogen From Heavy Oil at Surface	Sun Petrochemicals Pvt Ltd., Ahmedabad Gujarat	Prof. R.K Upadhyay	49,00,000.00
34	Chemical Engg.	433513	Testing	Sun Petrochemicals Pvt Ltd., Ahmedabad Gujarat	Prof. R.K Upadhyay	10,98,000.00
35	Mining	614	Thermal Hydraulic and Mechanical	M/s Bhabha Atomic Research Centre Mumbai-400085	Dr. C.S. Singh	11,10,776.00
36	Metallurgical Engg.	402921	Consultancy	Visakhapatnam steel plant, RINL(Rashtriya ispat Nigam Ltd), Raebareli	Dr. Sudipta Patra	12,97,296.00
37	Metallurgical Engg.	TE23-24/32/1938	Micro Characterization and Mechanical	M/s Raytheon Intelligence & Space, USA	Prof. N.K. Mukhopadhyay	20,69,763.00
38	Architecture Planning & Design	408306	GPR Survey, trenching, and excavation, preparation of HIA report for redevelopment of Kashi Station	CPM VARANASI	Dr. H.Kaur	36,99,180.00
39	Architecture Planning & Design	408321	Heritage Impact Assessment (HIA) report to NMA	Ashirbad Eng & Construction Pvt Ltd., Chandrasekharpur, Bhubaneswar -751016	Dr. H.Kaur	13,03,900.00
40	Pharmaceutical Engg.	TE-R&D/2023-24/17	Consultancy	KI Pharmaceutical, LLC 400 Crossing Blv 7th Bridgewater NJ 08807	Dr Vinod Tiwari	11,08,463.00

List of Patents filed in the F.Y. 2023-24

Sl. No.	Title	Application No.	Filing Date	Inventor's Name	Department
1.	A system and method for efficient rounding off binary floating point numbers to nearest integers	202311026634	10-04-2023	Dr. Mahendra Rathore, Vishesh Mishra, Dr. Urbi Chatterjee	Jay Chaudhary Chair Faculty, Software Innovation Centre, IIT(BHU) and IITK
2.	System for performing crowd analysis and a method thereof	202311026897	11-04-2023	Prof. Rajeev Srivastava, Mr. Santosh Kumar Tripathy	Computer Science Engg
3.	A secured vision-based smart surveillance system and method thereof	202311030847	29-04-2023	Dr. Tanima Dutta, Ms. Nitika Nigam (PhD Student)	Computer Science & Engineering
4.	A stability analysis and hazard rating system for mine overburden dump slope structure	202311033474	12-05-2023	Mr. Gagan Gupta, Prof. Sanjay Kumar Sharma, Dr. GSP Singh	Mining Engg.
5.	Ferroelectric thin film transistor and method of preparation thereof	202311034676	17-05-2023	Dr. Bhola Nath Pal, Nila Pal, Rajarshi Chakraborty	SMST
6.	An optical fiber cable coloring machine	202311036387	25-05-2023	Dr. Debashis Khan, Dr. Ashwarya shed wali, Prof. Sandeep Kumar	Mechanical Engg
7.	A multi-mode electric vehicle	202311037683	31-05-2023	Dr. Kalpana Chaudhary, Mr. Mitanshu Meena	Electrical Engg.
8.	A polymeric nano-hydrogel composition and a method of preparation thereof	202311038604	05-06-2023	Dr. Pradip Paik, Gurmeet Singh, Divya Parek, Sukanya Patra, Prem Shankar Gupta, Desh Deepak Yadav, Kirti Wasnik	Bio Medical Engg
9.	A polymeric nanoparticle formulation and a method of preparation thereof	202311041625	19-06-2023	Dr. Pradip Paik, Divya Parek, Sukanya Patra, Prem Shankar Gupta, Kirti Wasnik, Gurmeet Singh	Bio Medical Engg
10.	An integrated photobioreactor-microbial fuel cell system	202311041624	19-06-2023	Dr. Vishal Mishra, Ms. Manisha Verma	Bio Chemical Engg
11.	A copolymeric formulation and a method of preparation thereof	202311044454	03-07-2023	Prof. Pralay Maiti, Amita Santra	SMST
12.	A device for detection of an analyte and a method of fabrication thereof	202311045644	07-07-2023	Pranjal Chandra, Akanksha Singh, Indrani Nandi	Bio Chemical Engg
13	A superconductive mesoscopic film and a method of fabrication thereof	202311046399	10-07-2023	Dr. Bhola Nath Pal, Sobhan Hazra	SMST
14	A laser-directed multi-functional electrochemical paper-based sensor and a method of fabrication thereof	202311047380	13-07-2023	Pranjal Chandra, Supratim Mahapatra, Rohini Kumari	Bio Chemical Engg
15	A system and method for assessing hydro-mechanical performance of water barrier pillars for coal mines	202311048779	20-07-2023	Dr. GSP Singh, Mr. Ankush Galav, Prof. Sanjay Kumar Sharma	Mining Engg.
16	Air interface for integrated sensing and communication for 6G	2021100528	26-07-2023	Dr. Atul Kumar, Dr. Daljeet Singh, Dr. Hem Dutt Joshi, Dr. Ashutosh Kumar Singh, Dr Teemu Myllyla, Dr. Sonam Jain	Electronics Engg. IIT (BHU) University of Oulu, Thapar Institute of Engg. and Technology
17	A nano-formulation and a method of preparation thereof	202311051276	31-07-2023	Dr. Pradip Paik, Prem Shankar Gupta	Bio Medical Engg
18	A system to detect and classify severity of face damage in longwall mining	202311055546	18-08-2023	Mr. Bhaskara Behera, Dr. GSP Singh, Prof. Sanjay Kumar Sharma	Mining Engg.
19	A trimetallic catalyst for generation of hydrogen and a method of preparation thereof	202311057308	26-08-2023	Dr. Rajesh Kumar Upadhyay, Anjali Baudh, Dr Sweta, Rahul Sharma	Chemical Engg & GAIL
20	A method of three dimensional bioprinting of chitosan bio-ink to prepare printed structures	202311057796	29-08-2023	Sanjeev Kumar Mahto, Parul Chaurasia	Biomedical Engg.

Sl. No.	Title	Application No.	Filing Date	Inventor's Name	Department
21	A composition for treating breast cancer and a method for preparation thereof	202311061352	12-09-2023	Dr. Manoj Kumar, Rinki Verma	Chemical Engg. & Biomedical Engg.
22	A six switch single-phase five level rectifier	202311061145	11-09-2023	Dr. Naveen Yalla, Dr. Rajeev Kumar Singh, Dr. Vivek Nandan Lal	Electrical Engg.
23	An ultra-sparse matrix converter with auxiliary shoot-through switches	202311061308	12-09-2023	Vulavakayala Siva, Dr. santosh Kumar Singh	Electrical Engg.
24	A dual-phase non-equiatomic high entropy alloy and a method of preparation thereof	202311061309	12-09-2023	Prof. N. K. Mukhopadhyay, Mr. Harsh Jain, Dr. Yagnesh Shadangi, Dr. Ashutosh Kumar Dubey	Mettalurgy and Ceramic
25	A method of preparation of biodegradable packaging material from rice straws	202311061691	13-09-2023	Dr. Prodyut Dhar, Rahul Ranjan, Rohit	Bio Chemical Engg
26	A bio-composite material and a method of preparation thereof	202311063585	21-09-2023	Prof. Pralay Maiti, Hans Raj, Swikriti Tripathi, Avishek Mallick Choudhary	SMST
27	A biomaterial-based composition and a method of preparation thereof	202311065055	27-09-2023	Dr. Pradip Paik, Monika Singh, Shilpa Jaiswal, Sukanya Patra, Niru Mishra	Bio Medical Engg
28	An ultrasonic vibration assisted minimum quantity lubrication grinding system	202311066181	03-10-2023	Abhimanyu Chaudhari, Ashwani Sharma, Vikas Diwakar, Dr. Meghanshu Vashista, Dr. Md. Zaheer Khan Yusufzai	Mechanical Engg
29	A 3d Nanodendritic Electrochemical Sensor And A Method Of Preparation Thereof	202311067600	09-10-2023	Pranjal Chandra, Daphika S Dkhar, Rohini Kumari	Bio Chemical Engg
30	A biosensing device and a method of fabrication thereof	202311067950	10-10-2023	Pranjal Chandra, Darshana, Daphika s Dkhar, Pradeep Srivastava	Bio Chemical Engg
31	A Method Of Preparation Of 2d Bioceramic Nanoplates	202311068646	12-10-2023	Dr. Ashutosh Kumar Dubey, Urvashi Kesarwani	Ceramic Engg
32	A nanoparticle-based composition and a method of preparation thereof	202311074704	02-11-2023	Dr. Ruchi Chawla, Mohini Mishra	Pharmaceutical Engg. & Tech.
33	A biosensor for detection of a biochemical analyte and a method of fabrication thereof	202311076099	09-11-2023	Dr. Ashish Kumar Mishra, Ankita Singh	SMST
34	A film for daylight radiative cooling and a method of preparation thereof	202311079464	22-11-2023	Prof. Jahar Sarkar, Swikriti Tripathi, Prof Pralay Maiti, Jay Prakash Bijarniya, Sudepta Bauri	Mechanical Engg & SMST
35	A heterocyclic substituted dicarbonyl compound and a method of synthesis thereof	202311080715	28-11-2023	Dr. Rajnish, Mr. Bhanuranjan Das	Pharmaceutical Engg. & Tech.
36	A nano-formulation for management of lung cancer and a method of preparation thereof	202311081092	29-11-2023	Dr. Ruchi Chawla, Krishan Kumar	Pharmaceutical Engg. & Tech.
37	A portable curb-drowning monitoring system	202311089178	27-12-2023	Dr. Prasenjit Chanak, Mr. Nuthan Chingcetham, Prof. Pramod Kumar Jain	Computer Science & Engineering
38	A composting system for waste management	202311089682	29-12-2023	Dr. Abhishek S. Dhoble, Jeetesh Kushwaha	Bio Chemical Engg
39	A method of preparation of a biodegradable packaging material from sugarcane bagasse	202411001028	05-01-2024	Dr. Prodyut Dhar, Rahul Ranjan, Rohit	Bio Chemical Engg

Sl. No.	Title	Application No.	Filing Date	Inventor's Name	Department
40	A bio-recognition element-based nano-sensor and a method of fabrication thereof	202411001410	08-01-2024	Pranjal Chandra, Prof. Arvind Mohan Kayastha	Bio Chemical Engg IIT(BHU) & Biotechnology Institute of Science BHU
41	An electrolyzer for electrochemical water splitting	202411005013	24-01-2024	Dr. Ashish Kumar Mishra, Prince Kumar Maurya	SMST
42	Pharmaceutical composition of folic acid conjugated docetaxel/ erlotinib-loaded solid lipid nanoparticles	202411010322	14-02-2024	Dr. Ashish Kumar Agrawal, Aiswarya Chaudhari	Pharmaceutical Engg. & Tech.
43	A method of preparing A 3d printing metallic ink and a product thereof	202411015063	29-02-2024	Prof. Rajnesh Tyagi, Dr. Pawan Sharma, Mr. Vivek Mani Tripathi	Mechanical
44	A direct borohydride fuel cell and a method of preparation thereof	202411015064	29-02-2024	Dr. Hiralal Pramanik, Mr. Neeraj Kumar Yadav	Chemical Engg
45	Scaffold for tissue engineering and method of preparation thereof	202411016711	08-03-2024	Dr. Pradeep Srivastava	Bio Chemical Engg
46	A bioactive glass nanocomposite and a method of preparation thereof	202411021185	20-03-2024	Mr. Akhilesh Kumar Yadav, Dr. Chandana Rath	SMST

Patents Granted (Till now)

Sl. No.	Title	Application No.	Inventor's Name/ Patentee	Date of Filing	Granting Date	Patent No.
1.	A strontium based rare earth free high energy permanent magnet for dc motor application and a method of synthesis thereof	201811048780	IIT (BHU)	22-12-2018	12/04/2023	428773
2.	A direct broadcast system using cdma technolog	201911019579	IIT (BHU)	17-05-2019	17/04/2023	428998
3.	Solar air heater	201911021293	IIT (BHU)	29-05-2019	25/04/2023	429893
4.	Janus shaped silver-magnetite nanoparticles and a method of preparation thereof	201911020251	IIT (BHU)	22-05-2019	02/05/2023	430955
5.	A novel formulation of dabigatran solid dispersion formulation and a method of preparation thereof	201811029316	IIT (BHU)	03-08-2018	30/05/2023	433205
6.	Friction reducing coating on orthodontic wires	201911013104	IIT (BHU)	04-02-2019	09/06/2023	434385
7.	Topical composition for treatment of burns with enhanced penetration and method of formulating the same	201611020044	1.Aparajita Dutta 2.Gyanendra Singh	11-06-2016	15/06/2023	434825
8.	A device for modelling software clone evolution across different versions and a method thereof	201811016656	IIT (BHU)	02-05-2018	03/07/2023	436906
9.	A novel barium bioactive glass (babg) formulation and a method thereof	201811033966	IIT (BHU)	10-09-2018	01/08/2023	442094
10.	A polymer or 2d nano-composite film and a method of production thereof	201811013068	IIT (BHU)	05-04-2018	02/08/2023	442524
11.	An oral bioactive glass formulation containing aqueous micronized barium oxide for treating gastro-duodenal ulcers	201711031854	IIT (BHU)	08-09-2017	08/08/2023	443707
12.	Solar air heater	201811045795	IIT (BHU)	04-12-2018	21/08/2023	445973
13.	A method to enhance thermal stability and efficiency in porous fluoropolymer hybrid membrane	201711027183	IIT (BHU)	31-07-2017	18/09/2023	452271
14.	A novel anti-coagulant formulation and a method of preparation thereof	201911012094	IIT (BHU)	27-03-2019	28/09/2023	455533
15.	A dual-mode evaporative cooler for composite climate	202111057640	IIT (BHU)	10-12-2021	03/10/2023	456357
16.	A method of preparing titanium dioxide based transparent and thin films and a product thereof	201911008546	IIT (BHU)	05-03-2019	09/10/2023	457610

Sl. No.	Title	Application No.	Inventor's Name/ Patentee	Date of Filing	Granting Date	Patent No.
17.	A method for controlled biodegradation of biopolymer using inorganic salt and product thereof.	201611029959	IIT (BHU)	01-09-2016	17/10/2023	459909
18.	A method for preparing tiles and composition thereof	201631039979	IIT (BHU)	23-11-2016	26/10/2023	462510
19.	Aluminium foam with high porosity and open-celled microstructure using powder metallurgy route and a process there of	201911010216	IIT (BHU)	15-03-2019	31/10/2023	464559
20.	High temperature applicable binder from egg shell and a method of synthesis thereof	201711035361	IIT (BHU)	05-10-2017	01/11/2023	464853
21.	A fermenter for enhanced bio-hydrogen production through fermentative route	201611011909	IIT (BHU)	04-04-2016	09/11/2023	467440
22.	Green synthesis process of upconverting nayf4:yb3+, tm3+ nanomaterials and products thereof	201711018827	IIT (BHU)	29-05-2017	09/11/2023	467456
23.	A device with improved modulation cavity for high pulse microwave signal generation and method thereof	201611032924	IIT (BHU)	27-09-2016	10/11/2023	467947
24.	An improved solar still assembly for purification of raw water	202111000980	IIT (BHU)	08-01-2021	16/11/2023	469575
25.	A thermally efficient over-expansion stroke based engine	201911050006	IIT (BHU)	04-12-2019	28/11/2023	473845
26.	A medicated biodegradable patch for treating wounds and a method thereof	201711003060	IIT (BHU)	08-02-2017	30/11/2023	475272
27.	A bioactive glass based formulation for treating cerebral ischemic reperfusion injury and method thereof	201711032099	IIT (BHU)	11-09-2017	07/12/2023	478737
28.	Method of manufacturing of ceramics by utilizing waste materials	201711038451	IIT (BHU)	30-10-2017	08/12/2023	479509
29.	A novel polymer blend utilizing waste plastics and process of preparation thereof	201911031635	IIT (BHU)	05-08-2019	14/12/2023	482955
30.	A bioactive glass scaffold and a method of preparation thereof	201711035474	IIT (BHU)	06-10-2017	18/12/2023	484408
31.	A dc/dc converter with both current and voltage source property for optimal battery charging system	202111039649	IIT (BHU)	01-09-2021	19/12/2023	485742
32.	Adaptive optimal power management technique for renewable based mix energy system	202111031286	IIT (BHU)	12-07-2021	22/12/2023	487414
33.	A micro-fluidic platform for low density culture of cells and a method for controlling the same	201811024410	IIT (BHU)	29-06-2018	01/01/2024	492562
34.	A method of manufacturing synthetic wollastonite by utilizing waste materials	201811002872	IIT (BHU)	24-01-2018	11/01/2024	497844
35.	A system to reduce errors for digital image forgery detection and method thereof	202211038984	IIT (BHU)	07-07-2022	23/01/2024	502283
36.	In-situ –so3h functionalized two-dimensional mos2 nanosheets and method of preparation thereof	202211033786	IIT (BHU)	13-06-2022	23/01/2024	504599
37.	Quaternary antibiotic composition and method of preparation thereof	202211015313	IIT (BHU)	21-03-2022	29/01/2024	503970
38.	A foaming agent for porous ceramics and a method of preparation thereof	201911025592	IIT (BHU)	27-06-2019	07/02/2024	508260
39.	A composition of austenitic stainless steel for medical implants	202011015355	IIT (BHU)	07-04-2020	09/02/2024	509030
40.	A self-expanding shape-memory polymer nanohybrid and a method of preparing the same	201711030194	IIT (BHU)	25-08-2017	15/02/2024	510936

Sl. No.	Title	Application No.	Inventor's Name/ Patentee	Date of Filing	Granting Date	Patent No.
41.	A glass matrix composition for conversion of a barren land into a fertile land	202111011563	IIT (BHU)	18-03-2021	16/02/2024	511740
42.	System for electro-osmotic soil consolidation and a method thereof	202011038430	IIT (BHU)	05-09-2020	19/02/2024	512427
43.	A system and method for inrush and fault detection for differential protection of transformer	2630/ DEL/2015	IIT (BHU)	25-08-2015	20/02/2024	512619
44.	A nanoherbicidal composition and a method for its preparation and uses thereof	202111002570	IIT (BHU)	19-01-2021	20/02/2024	512924
45.	Polyvinylene difluoride(pvdf)/nitrogen-doped carbon dots nanocomposite film based capacitive energy storage device	202211048961	IIT (BHU)	26-08-2022	26/02/2024	514958
46.	Synthesis of n-benzylpiperidine and 5-(2,4-dichlorophenyl)-1,3,4-oxadiazole hybrid with multifunctional activities against alzheimer's disease	201911034164	IIT (BHU)	24-08-2019	28/02/2024	516512
47.	A highly porous lightweight ceramic foam and a process of preparation thereof	201911038240	IIT (BHU)	23-09-2019	04-03-2024	519175
48.	An integrated continuously operated wastewater treatment system with microalgal biomass production	201911031783	IIT (BHU)	06-08-2019	03-03-2024	520076
49.	A two dimensional photosensitive metal oxide semiconductor (mos) capacitor	202011017140	IIT (BHU)	21-04-2020	07-03-2024	521723
50.	Macroporous ceramic foam with high porosity and a process thereof	201911030657	IIT (BHU)	30-07-2019	07-03-2024	521291
51.	A portable colorimetry sensing device for point of care diagnostics	202111046586	IIT (BHU)	12-10-2021	07-03-2024	521579
52.	An arsenic resistant bacterium strain	202011005113	IIT (BHU)	27-01-2020	07-03-2024	523182
53.	Synthesis of 2-(4-bromophenyl)-5-(4-(pyridin-2-yl) piperazin-1-yl)-1,3,4-oxadiazole for treating alzheimer's disease and method of preparation thereof	201911034931	IIT (BHU)	29-08-2019	12-03-2024	523547
54.	Solar air heater with trombe wall	202011003336	IIT (BHU)	24-01-2020	12-03-2024	523789
55.	Extended larger area heterojunction based bio-sensing device	202011014307	IIT (BHU)	31-03-2020	12-03-2024	523737
56.	A device for deposition of fluid for chromatography	202111005760	IIT (BHU)	11-02-2021	12-03-2024	523998
57.	A chiral hollow polymeric nanocapsule with defined opening and a process for its preparation	202111007198	IIT (BHU)	20-02-2021	13-03-2024	524234
58.	Fluorescent film and spreadable ink for security applications and method of preparation thereof	202211009206	IIT (BHU)	21-02-2022	14-03-2024	526512
59.	A system and method for determination of crack progression	201711012057	IIT (BHU)	03-04-2017	15-03-2024	527489
60.	Ceramic matrix composite of ferrite and ferroelectric compound and a method of synthesis thereof	201711029705	IIT (BHU)	22-08-2017	15-03-2024	527723
61.	Multitarget-directed triazole bridged cycloaryl analogues for treatment of alzheimer's disease	202011047641	IIT (BHU)	31-10-2020	15-03-2024	527730
62.	Electrochemical device for hydrogen production	202011018312	IIT (BHU)	29-04-2020	15-03-2024	527984
63.	A metal ceramic joint adhesive	201911002765	IIT (BHU)	23-01-2019	15-03-2024	528134
64.	Carbon nanotube filter for toxin removal from cigarette smoke	201911028445	Prashant Shukla	15-07-2019	11-03-2024	523446
65.	A novel compound for treating alzheimer's disease and a method of preparation thereof	201911034300	IIT (BHU)	26-08-2019	26-03-2024	530067
66.	A molybdenum diselenide nanostructured cathode based rechargeable zinc air battery	20221102 0589	IIT (BHU)	05-04-2022	31-03-2024	531211

National MoU (FY 2023-24)

SI. No.	Particular	Name of MoU Coordinator	Area of Interest	Year	Duration
1	Union Bank of India	Dean (R&D), IIT(BHU)	For establishment of Joint Incubation Centre (JIC) at Indian Institute of Technology (BHU) Varanasi	16.06.2023	10 yrs
2	Reinventbio Pvt. Ltd	Dr. Prateek Chattopadhyay, Computer Science & Engineering, IIT(BHU)	To promote interation between IIT(BHU) and Reinventbio Pvt. Ltd., in mutually beneficial areas and writing joint project proposals to funding agencies to receive grants, do collaborative research work, file patents etc.	10.10.2023	03 yrs
3	NIT Jalandhar	Dean (R&D), IIT(BHU)	IIT(BHU) may undertake the Ph.D. course work of NIT Jalandhar Ph.D. , Joint Research and Development activities in the area of mutual interest. Impart training to staff, students and technical personnel within the areas of co-operation.	28.11.2023	05 yrs
4	CSIR - Central Raod Research Institute	Dean (R&D), IIT(BHU)	To promote cooperative research and to facilitate the exchange of ideas, the development of new knowledge and to enhance high quality research acuen. The major thrust of the research is Transportation Engineering and associated Civil Engineering areas.	12.01.2024	05 yrs
5	Indian Institute of Technology, Delhi Unnat Bharat Abhiyan and Regional Coordinating Institution	Dr Shishir Gaur, Department of Civil Engg., IIT(BHU)	To Develop the necessary mechanism and proper networking among higher educational institutions (HEIs) and selected villages (through community engagement, Panchayati Raj Institutions, and grass root voluntary organizations to enable effective intervention at the field level to enable the faculty and students in understanding rural realities	07.12.2023	31.03.2026 (Closure of the scheme, on an annual basis)

Foreign MoU (F.Y. 2023-24)

SI. No.	Particular	MoU Coordinator	Area of Interest	Year	Duration
1	Deutscher Akademischer Austauschdienst German Academic Exchange Service (DAAD)	Dean (R&D), IIT(BHU)	Recognizing the reciprocal benefit of Academic and Scientific Cooperation between Scientists of both Countries in areas of mutual scientific interests and are aiming to promote friendly relations between the two parties.	30.06.2023	03 yrs
2	Australian and the Indian Partners in the Australia India Water Centre	Prof. P.K. Singh, Civil Engg., IIT(BHU)	To establish an understanding of mutual cooperation for the Australia India Water Centre (AIWC) between the parties. The Australia India Water Centre will enable Australian and Indian partners to explore opportunities and create synergy for a longer term collaboration in research and education between the two countries.	18.09.2023	05 yrs

31. Ideation Innovation and Incubation (I-3) Foundation

Introduction:

Ideation Innovation & Incubation (I-3) Foundation is an umbrella organization located at IIT (BHU) Varanasi to cultivate an entrepreneurship environment and support the growth of start-up companies in the Eastern Uttar Pradesh region. The primary expertise of the I-3 Foundation lies in the process of bringing technology to market in several industries such as agriculture, cleantech, food tech, ICT/IoT, Biotechnology, etc.

The I-3 Foundation provides a range of services including mentoring, counseling, training, financial links, seed money, lab facilities, office space, and networking support. Simply put, the I-3 Foundation oversees multiple divisions that offer comprehensive assistance for entrepreneurship from the initial stages to expansion, while also facilitating the transformation of research activities into profitable business initiatives.

The I-3 Foundation encompasses various units-

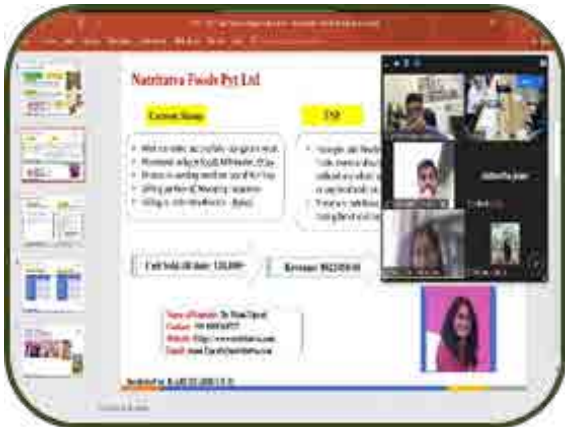
1. RKVY-RAFTAAR Agri-Business Incubator (R-ABI):

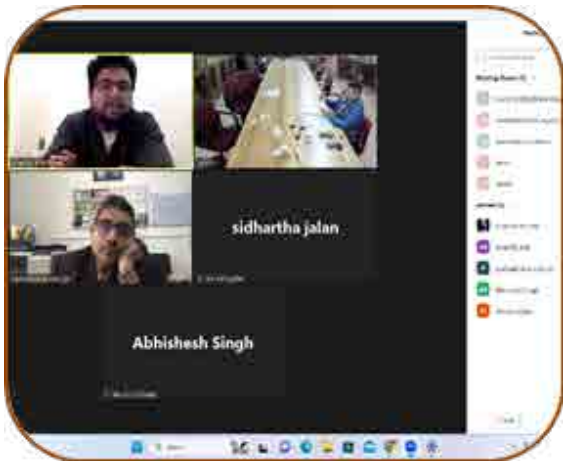
R-ABI is a programme supported by the Ministry of Agriculture and Farmers' Welfare (MoA & FW) that operates in close partnership with other incubators. This initiative seeks to enhance the infrastructure in agriculture and related sectors to foster agripreneurship and agri-business. It tries to achieve this by offering financial assistance and cultivating the incubation ecosystem in and around Uttar Pradesh. Since March 2018, a total of 153 start-ups have been trained through orientation sessions, out of which 53, including 17 women entrepreneurs, have been incubated under R-ABI. The incubation programme has been granted a total amount of Rs. 597 Lakhs. A total amount of Rs. 396.8 Lakhs has been distributed in tranches. The following are the key activities carried out under R-ABI, IIT (BHU) Varanasi during 2023-24:

Key Activities:

- COHORT-6 was launched on we successfully launched on 17th May 2023, encompassing applications from promising agricultural startups.
- Healventure Biosciences LLP and Exflair Trade Private Limited participated in Fisheries Startup Grand Challenge organized on 10th & 11th July 2023 at Mahabalipuram, Tamil Nadu. M/s Healventure Biosciences LLP received the prestigious "Fisheries Grand Challenge Award" by Hon'ble Union Minister, Shri Parshottam Rupala, Ministry of Fisheries, Animal Husbandry & Dairying. Dr. Sanjeev K Balyan Hon'ble Minister of State, Ministry of Fisheries, Dr L. Murugan, Hon'ble Minister of State, Ministry of Fisheries & Fisherman Welfare & Animals Husbandry, Govt of Tamil Nadu and Dr. Abhilaksh Likhi, Principal Secretary were present at the event.
- Prof. Rajnesh Tyagi, Principal Investigator of R-ABI at IIT (BHU) attended the meeting convened by Ministry of Agriculture & Farmer's Welfare, Government of India on August 3rd 2023. The meeting aimed to review the advancements made by various stakeholders and also to revise the guidelines of the scheme. During the meeting, the Secretary and Joint Secretary addressed the challenges encountered by KPs and R-ABIs in implementing this scheme and also discussed about the points to be considered in drafting new guidelines of the scheme.
- The 1st RIC meeting for COHORT-6 was organized in the month of October 2023. A total of 34 startups pitched their idea virtually in front of the RIC members. After due deliberation, the RIC members endorsed 13 startups under pre-seed stage (ANKURAN) to proceed for the two-month Agripreneurship Orientation Program (AOP). For seed stage program (PRASFUTAN), the RIC members recommended 10 startups for the two-month incubation phase.
- The 3rd and 4th RIC Meeting of previous Cohorts was held in the month of October 2023. Startups shared their progress with the committee and were recommended for next tranche.
- An Intellectual Property Rights session was held on October 3rd, 2023 at E-Hall, I3F, IIT (BHU) Varanasi. Mrs. Pooja Kumar, an IP professional and facilitator of Govt. of India for IPR elucidated the fundamental concepts of IPR. The startups and students of IIT(BHU) attended the session.
- Dr. Abhishek Singh, Business Manager, R-ABI, IIT(BHU), delivered a lecture and sensitization on the topic of "Innovation & Agri-preneurship" at Shatabdi Bhawan, Institute of Agricultural Science (IAS), BHU on 25th November 2023. More than 150 students were attended the for the event. The said lecture was organized under the program entitled 'Student Leadership & Life Skills Development Initiative' for the students of IAS-BHU.

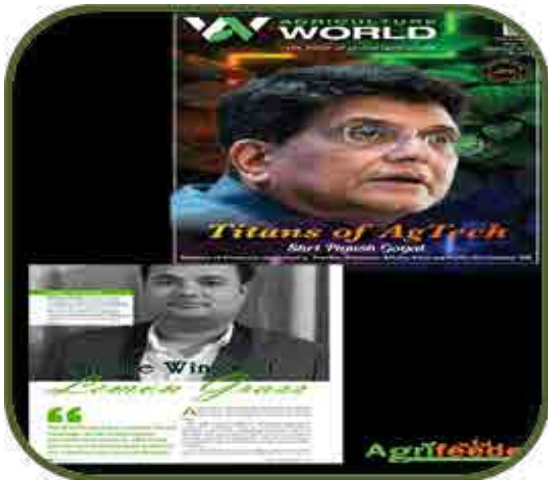
- The Agripreneurship Orientation Program took place from 4th December 2023. This two-month program, constituting sixty hours, included sessions covering business, technical, and legal aspects was conducted virtually by various experts from industry and academia. These sessions aimed to offer participants essential insights and knowledge for the initiation of their agricultural startups.
- The second RIC meeting for Cohort-6 was held on January 23, 2024. During an online session, 21 startups presented their ideas. After a thorough evaluation, 17 start-ups were recommended for grant-in-aid for the CIC meeting to be held by IARI, PUSA, New Delhi.
- The Center of Excellence Incubation Committee (CIC) Evaluation Meeting was organized on 6th February 2024 for the 17 startups recommended by 2nd RIC members. The meeting was organized by Pusa Krishi, ZTM & BPD Unit, ICAR-IARI virtually, in which all the 17 start-ups (11 Prasfutan and 6 Ankuran) pitched their idea and 9 promising start-ups were selected for grant-in-aid out constituting 6 under Prasfutan and 3 under Ankuran program.
- One of our startups, M/s Manwani's Innovative Pearl Culture LLP provided 5-day hands-on training program to the students of Mahila Mahavidyalaya, BHU, Varanasi in the month of August 2023. Students also visited the pond of Pearl farming at BHU Farm and were provided with insights of Pearl farming.
- **Ms Nisha Niranjan founder of VN Organics Private Limited** was recipient of the Women Entrepreneurship Award 2023. The event entitled '*Fostering Relationships: Linking Concepts at the Agri Connect Industry Conclave*' was held at Rajmata Vijayaraje Scindia Krishi Vishvavidyalaya, Gwalior, CEAE & IDP-NAHEP for commemorating excellence and innovation. She was honoured by the MSME, which emphasized her excellent achievements and efforts in the sector.
- **Agrifeeder Agricultural Services Pvt. Ltd.**, a company known for its innovative work in agriculture technology (Agtech), has been recognized as a "Titan of Agtech" by The Agriculture World. The Agriculture World Awards acknowledge influential leaders and professionals in the Agtech industry. Agrifeeder's recognition reflects the significant changes happening in India's agricultural sector.




sidhartha jalan
Abhishesh Singh


R-ABI, IIT (BHU) Varanasi
AGRIPRENEURSHIP
ORIENTATION
PROGRAMME
(AOP)


NAHEP
CAIE
Welcome
Agri Connect -2023
Conclave cum Brain
Session
and CAIE


WORLD
Titans of AgTech

भूमि की उर्वरता बचाये रखने के लिए जैविक खेती को दें बढ़ावा

NCL-IIT (BHU) Incubation Centre:

The NCL-IIT (BHU) Incubation Centre (NIIC), a joint initiative of the Indian Institute of Technology (Banaras Hindu University) Varanasi and Northern Coalfields Limited. It serves as a Technology Business Incubator, supporting the growth of entrepreneurial ventures and the development of technical start-ups affiliated with IIT (BHU) Varanasi. This partnership has produced encouraging outcomes and offered numerous opportunities for new businesses.

Key Activities:

- One of our startups, M/s Freshnic Agribusiness Pvt. Ltd. founded by Mr. Hemant Singh organized a training program for 25 farmers covering various aspects of organic farming and sustainable agriculture in Singrauli, Madhya Pradesh. He is working from the Birkuniya Satellite Center of NCL-IIT (BHU) Incubation Centre, IIT (BHU).
- Delegates of Coal India Limited (CIL) and Northern Coalfields Limited (NCL) visited the I-3 Foundation on 24th Feb 2023 and interacted with startups.
- Startups of I-3 Foundation presented their developed prototype models to Shri Prabhat Kumar, DGM, Dhanbad, and NCL's officials in an event of mine annual safety week organized by the Nigahi project of NCL on 5th March 2023. In this event, startups presented the developed VR-based model of a dumper for experiential-based training of dumper operators, mine traffic management, and seed balls broadcasting drones.
- Sircle the Smart Education Pvt. Ltd., a Start-up of I-3 Foundation organized the "Student Growth Symposium" program on 23rd April 2023 at ABLT-4, IIT (BHU) Varanasi. This program aimed to identify the gaps in our education system and comeup with ways to fulfill and ensure the holistic development of a student.
- One of our incubated start-ups, M/s Aryo Green Tech Pvt. Ltd. participated at an event held at Dr. APJ Abdul Kalam Technical University (AKTU), Lucknow on World Environment Day 5th June 2023. Founder of Aryo Green Mr. Shubhankar Pandey, pitched his idea on Aluminum-ion batteries which was well received and appreciated. Aluminum-ion batteries have the potential to revolutionize the energy storage sector with their high energy density, fast charging capabilities, and low cost of production. The officials present at the event assured him of constant support for the development and deployment of the product.

- Two of our startups M/s Experience Zone Pvt Ltd and M/s Sedax Data Solutions Pvt. Ltd., had the privilege of participating in the prestigious India Mobile Congress 2023 (IMC) on 27th October 2023. This event was organized by the Department of Telecommunications (DoT) and the Cellular Operators Association of India (COAL), stands as the largest telecom, media, and technology forum in Asia. At the IMC 2023, the startup had the opportunity to showcase its cutting-edge AR/VR product, which has been specifically designed to enhance operations in coal mining. Shri Amit Lal Meena, Secretary of the Ministry of Coal, Government of India, visited the exhibition stall explored the AR/VR device and e-KYC idea, and expressed his appreciation for the exceptional work undergoing at IIT(BHU) Varanasi.
- A start-up of NCL-IIT (BHU) Incubation Centre (NIIC), Freshnic Agribusiness Pvt. Ltd. started a production unit of sanitary pads with the help of NCL, Singrauli. This initiative is taken to strengthen women's empowerment, women's safety, and health. Shri Bhola Singh, CMD, NCL Singrauli visited the production unit on 28th December and appreciated the work done by the startup.
- Naman Mishra, the founder of Sedax Data Solutions Pvt. Ltd. was sanctioned Seed Fund of 7.5 Lakhs from the StartIn UP Programme of UP Governments He was honored by the Hon'ble Chief Secretary.

CISCO "thingQbator" Makerspace Program:

Cisco Systems, in collaboration with the NASSCOM Foundation, has set up a makerspace called "thingQbator" at IIT (BHU) as part of its corporate social responsibility (CSR) effort. thingQbator is a collaborative network of makerspaces located in partner Universities, providing students with opportunities to acquire knowledge and skills in the field of digital technology.

Key Activities:





महिला सशक्तिकरण एवं स्वास्थ्य, स्वच्छता की ओर एनसीएल का बड़ा कदम



- COHORT-6 of thingQbator program was announced in the month of May 2023.
- Total 22 students of IIT (BHU) applied in the program.
- The following teams were successfully qualified in the Cohort 6 Prototyping Stage:
    - Connecting Talent Spark Minds Globally (Team Member: Amisha Prajapati)
    - CUTSPay (Team Member: Korada Vishal)
    - The Fashion Brand (Team Member: Akshat Shrivastava)
- Connecting Talent Spark Minds Globally (Team Member: Amisha Prajapati) was one of the finalist but unfortunately, the team was unable to qualify for the grant of Rs. 5.0 Lakhs.

2. E-Cell:

The Entrepreneurship Cell at IIT (BHU) Varanasi is a student-run institute that fosters a symbiotic relationship between entrepreneurs and the existing startup ecosystem. Serving as a hub for startups to meet, collaborate, and innovate, it aims to create a thriving startup ecosystem and cultivate connections to promote entrepreneurship and startup culture at IIT (BHU) Varanasi.

Key Activities:

- Startup Concurso - a B-Plan competition in collaboration with BizThon, was held in July, and there were over 100+ teams across various domains.
- Startup Weekend Varanasi - a three-day program was held in collaboration with 'Techstars' in August, and aspiring entrepreneurs got to experience life in a startup. It was a 54-hour-long hackathon where 115+ participants joined teams and built a startup idea.
- The IIT BHU Post Graduate Entrepreneurship Program (IPEP) was launched in September to help M-Tech and PhD students foster and develop the idea of commercialization of research via industry collaboration and deep tech startups.
- Novice Fiesta - a freshers-only entrepreneurship event, was held in September with 5+ competitions. 400+ students participated and dived into entrepreneurship for the first time.
- A 3-day professional masterclass was held from 10th-12th October 2024. The masterclass featured Mr. BV Jagdeesh, a famous Silicon Valley entrepreneurship educator, as the presenter and tutor for the students of IIT BHU.
- The first Venture Capital Bootcamp was conducted online in December by partnering with four leading VC firms in India and showed a response of 860+ registrations.
- Startup Junction - the pre-event of the E-Summit 2024 was held in December in two cities - Bangalore and Delhi. It became a vital platform for 20+ early-stage startups to pitch their ideas and network with investors.
- E-Summit '24: Nexus of Novelties - the annual entrepreneurship festival of IIT (BHU) Varanasi was organized from February 2nd to 4th, 2024. The event witnessed substantial participation from institutes across India, featuring over 10 VC Firms & Angel investors, 30+ startups, 55+ sponsors, and over 5,000 students.
- E-Cell IIT BHU partnered with StartinUp to organize the Startup Expo 2024 during the E-Summit 2024. 35+ startups set up their stalls for two days and networked with a dynamic crowd of investors, professors, and participants.
- The "Build With Us" cohort - an initiative that aims to provide a structured pathway to students with ideas was launched in March and saw 100+ submissions.
- The Big Brand Theory - a Go-To-Market Strategy competition was conducted in April, with over 430 registrations online competing in a three-round format.

Pitching Events

Alumni Meetups

Incubators

Entrepreneurship Lectures

32. Institute Works Department (IWD)

Introduction:

Ever since its inception in the year 2014, Institute Works Department (IWD) in IIT (BHU) shoulders the onus of major/ minor repairs, maintenance, retrofitting, renovation and development of infrastructure along with proper operation and sustenance of existing utility lines. The upkeep and functioning of water distribution system, sewerage network, electrical overhead/underground cable lines, distribution sub-stations (DSSs), power sub-stations (PSSs) and SCADA system also pertain to the prime responsibility of IWD.

In addition to repair and maintenance of the hostels, guest house, faculty apartments/quarters and academic buildings, road side development and maintenance of the pavements/bituminous roads are duly undertaken by IWD. Depending upon the extent and quantum of work, IWD floats online tenders to award work-contracts to various vendors/contractors to execute maintenance/development related works of IIT (BHU) under compliance of GFR and standard practices of Civil/Electrical Engineering.

Major construction work completed by NBCC (India) Ltd. under HEFA-2nd loan scheme during the period from 01st April' 2023 to 31st March' 2024:

Sl. No.	Name of work	AA&ES amount (Rs. in Crores)
1.	Construction of Faculty Apartments (S+10) (Two Blocks) near Vishwakarma Hostel at IIT(BHU), Varanasi	50.00
	Total	**50.00**

Major construction work in progress by NBCC (India) Ltd. under HEFA-2nd loan scheme during the period from 01st April' 2023 to 31st March' 2024:

Sl. No.	Name of work	AA&ES amount (Rs. in Crores)
1.	Construction of Morvi Hostel-II (S+10) and Dining block (2nd, 3rd& 4th Floor) at IIT(BHU), Varanasi	97.00
	Total	**97.00**

Major construction works in progress by CPWD during the period from 01st April' 2023 to 31st March' 2024:

Sl. No.	Name of work	AA&ES amount (Rs. in Crores)
1.	Construction of Guest Room Block (G+4) (extension of GTAC) at IIT(BHU), Varanasi	14.50
2.	Construction of Redevelopment of Dhanrajgiri Hostel (Wing-1) at IIT(BHU), Varanasi	28.04
3.	Construction of Lecture Hall Complex (G+2) at IIT(BHU), Varanasi	22.28
4.	Construction of Academic Building for Department of Architecture, Planning & Design and Naresh C. Jain School of Decision Science & Engineering (G+5) at IIT(BHU), Varanasi	31.33
	Total	**96.15**

List of works completed/carried out by IWD during the period from 01st April' 2023 to 31st March' 2024:

Sl. No.	Name of work
1.	Repair and renovation works of various Department, Administrative building and LT-1, IIT(BHU), Varanasi
2.	Repairing to patches and overlay of bituminous road from main road gate (Middle road of Electronics & Civil Department) to Mechanical to Architecture Department and road left side of NCC Building, IIT(BHU), Varanasi
3.	Providing and Fixing of rubber flooring in Gym Hall in I.I.T. Girls Hostel, IIT(BHU), Varanasi
4.	Increase the height of boundary wall, P/F of 3 nos. gate, pathway work and access from G+6 in Gandhi Smriti Chhatravas (old), IIT(BHU), Varanasi
5.	Electrical installation, illuminations and wiring work for ground & Mezzanine Floor Structure for Centre of Excellence (CoE) in Machine Tools Design center at IIT(BHU), Varanasi
6.	Construction of Mezzanine Floor structure for Centre of Excellence (CoE) on Machine Tools Design at IIT(BHU), Varanasi
7.	Repair to patches and brick edging overlay of bituminous carpet and P/L seal coat from Department of Civil Engg. to Electrical Engg. (both side), Department of Chemistry to Academic Building, Production Engg. to Cafeteria, Main workshop to Department of Chemistry, EWSS to Main Workshop and Department of Mechanical Engg. to Electrical Engg. in IIT(BHU), Varanasi

Sl. No.	Name of work
8.	P/F aluminium partition, false ceiling, epoxy flooring, RCC platform, construction of corrugated roof panel 60/50 mm. thick shade and painting work of CIF in Precision Engineering Hub, IIT(BHU), Varanasi
9.	Electrical installation, illuminations and wiring work for Gleeble Instrument (Thermal Mechanical Physical Simulator and Testing equipment) at IIT(BHU), Varanasi
10.	Construction of 2 nos. Tube wells and pipeline connectivity with pump house for hostels, Guest House and Faculty Apartment, IIT(BHU), Varanasi
11.	Water proofing treatment of roof and repairing of patch plaster work of School of Biochemical Engineering and Painting of Foundry Shop in Main Workshop, IIT(BHU), Varanasi
12.	Renovation of four nos. rooms and toilet for allotted space to student counselling service on the first floor of Faculty forum office in IIT(BHU), Varanasi
13.	Repair to patch plaster and distempering works of common and passage area in school of Material Science and Technology, IIT(BHU), Varanasi
14.	Providing and fixing of faculty chamber in Department of Architecture Engineering, Renovation of laboratory (Saravana Kumar Elongovan) in Department of Chemistry and P/L vitrified tiles work in Biomedical Engineering, IIT(BHU), Varanasi
15.	Construction of 20 nos. Dustbins in front of the hostels and residential complexes of the Institute, IIT(BHU), Varanasi
16.	Renovation work in Microbiology and Biotechnology Lab and Pharmaceutics Chemistry lab Room No.- 1, P/F aluminium shutter and Painting of shutter and painting work of laboratory Room no.16 PG Pharmacognosy lab on GF and painting of Room No.- 43 PG Pharmaceutics lab on FF, Special repair of Slab and beam (gunitting work) and distempering work in (Room No. 41) and P/F false ceiling work in Nanotechnology research lab (Room No. 21) Department of Pharmaceutical Engg. & Technology at IIT(BHU), Varanasi
17.	P/L Vitrified tiles Flooring work of Corridor at Ground floor and Granite work on the stair case with painting work, Construction of Cement concrete payment road with both side paver block and P/L inter locking paver block for parking area and P/F profile sheets with truss in School of Material Science & Technology, IIT(BHU), Varanasi
18.	P/L of tiles and painting in mess area of GSC (OLD), IIT(BHU), Varanasi
19.	Repair to patch plaster and painting of exterior wall and corridor and lecture hall no. G-1, G-2, G-3, F-1, F-2 and C-1, C-2 of Department of Civil Engg., IIT(BHU), Varanasi
20.	Wall repairing with waterproofing chemical in ground floor corridor from room no. 40 to 94 and painting in study room and first floor passage in Limbdi Hostel, IIT(BHU), Varanasi
21.	Providing and laying flooring work at Department's corridor floor (ground and 1st floor) in Department of Chemical Engineering, IIT(BHU), Varanasi
22.	Supply and Laying power cable to feed the power supply from new CSS to Hostel feeder pillar & Rajputana Ground of IIT (BHU), Varanasi
23.	P/F of brick edging, construction of repair to patches, overlay of bituminous carpet and P/L seal coat form Proctor office to Bio-chemical Engg. and Physics to LT-3, Ceramic to Chemical Engg., Pharmaceutical to Chemical Engg. and main road of Chemical Engg., IIT(BHU), Varanasi
24.	Removing of old G.I. sheet & new P/F puff panel roofing and painting work of Mineral Dressing lab and Department's Workshop in Department of Mining Engineering, IIT(BHU), Varanasi
25.	Construction of security guard post near IIT crossing and c/o of toilet for head chamber in LT-1, Department of Mathematical Sciences and C/o New Toilet in Pharmaceutics, IIT(BHU), Varanasi
26.	Repair of road side interlocking including re-fixing of paver block on side bed in road pathway from NCC Crossing to GSC Extension Crossing to Vivekanand Hostel and IIT Crossing to SMST Crossing, IIT(BHU), Varanasi
27.	Repair to patch plaster, scrapping, putty, distempering (in verandah, corridors, classroom, workshop, laboratory and exterior painting (outer wall) plumbing work in Department of Metallurgical Engineering, IIT (BHU), Varanasi
28.	Renovation of the Class Room G-14, NCS-01, NCR-01, 101, 102 and CRMT Lab in Department of Electronic Engineering, IIT(BHU), Varanasi
29.	Renovation of toilet left side of room CR-108, tiles flooring and painting work in chamber of Dr. Subrata Panda, Rajputana Hostel warden Qtr no. 2, P/f of aluminium partition and painting work in Laboratory, P/F of water connection, laboratory sink in Department of Ceramic Engg. of Dr. Kundan Kumar and Renovation of G-14 Generator Room, Supercomputing Center and repair to patch plaster scrapping, putty Distempering in Proctor office , IIT(BHU), Varanasi
30.	Internal Electrification & illumination work in the committee hall and Electrical wiring, illumination, power point, light & fan point work in the Microbiology and Biotechnology lab of Pharmaceutical Engineering & Technology Department, IIT(BHU), Varanasi
31.	Scraping and painting of room, window and common area of GSC (Ext.) Hostel, IIT(BHU), Varanasi
32.	Repair to patch plaster, exterior painting and distempering works of common and passage area in Department of Electronics Engg., IIT(BHU), Varanasi
33.	Construction of girl toilet/bathroom for G+2 at Department of Mining Engineering, IIT(BHU), Varanasi

Sl. No.	Name of work
34.	Annual Maintenance Contract of 11 nos. Johnson make lifts installed in various places at IIT(BHU), Varanasi
35.	Demolishing of old wall and new c/o of vertical boundary wall of mess side, P/L interlocking block for parking area and chain link fencing work of back side of A. S. N Bose Hostel, IIT(BHU), Varanasi
36.	Supply, Installation, Testing, Fixing and Mounting of LED Flood Light on existing High Mast Lighting Pole in the Gymkhana Ground and Athletic Ground, IIT(BHU), Varanasi
37.	Providing & fixing of plastering, painting, tiles flooring and false ceiling work at Sophisticated Lab A and B, Prof. Gopal Tripathi Auditorium and uPVC windows with M.S. Grill in Laboratory of Dr. Debdip Bhandari in Department of Chemical Engineering & Technology, IIT(BHU), Varanasi
38.	P/F of M.S. Gate with R.C.C pillar and done in front of Electronics Engg. Department and P/F M.S gate in ADB ground and repair to patch plaster, exterior painting and distempering work of outer walls common and passage area in Chemical Engineering Department, IIT (BHU), Varanasi
39.	Providing and laying inter locking paver block for parking area and P/F profile sheets with truss (behind hydraulic and Environmental Lab) in Department of Civil Engineering, IIT(BHU), Varanasi
40.	Annual Operation & Maintenance Contract for round the clock routine services, Preventive/Breakdown maintenance of 1 no. 33/11kV PSS (with GIS Panels & AIS), 07 nos. 11kV/433V DSS, all allied substation systems (SCADA, Battery etc.) and HT/LT service Line at IIT(BHU), Varanasi
41.	Construction of boundary wall of galvanized iron profile sheet outside of Limbdi Hostel, IIT(BHU), Varanasi
42.	P/F aluminium partition, false ceiling and Laboratory sink with complete water connection fitting work on First Floor (left side) of the Department of Physics, P/L Vitrified tiles flooring & false ceiling and painting work in Faculty chamber and P/F false ceiling, tile and painting work in lab and Chamber of Dr. Rajesh Upadhyay of Chemical Engineering, P/F false ceiling, repair patch plaster, change to be 1 no. door frame and painting work in (CR-114 and lab CR-113) of Ceramic Engineering, P/F aluminium partition & false ceiling work in the Extractive Metallurgy division in Department of Metallurgical Engineering, Construction of a concrete working table for installation of a machine in chamber no. 2 in Department of Pharmaceutical Engineering and Technology and Construction of 8 nos. sewer chamber in Rajputana Hostel, IIT(BHU), Varanasi
43.	Electrical wiring, illumination, power point, light & fan point works in the PG Pharmacognosy Lab at First Floor and Electrical Work in Lab no.-1 of Pharmaceutical Engineering & Technology Department, IIT(BHU), Varanasi
44.	Electrical Supply and laying of power cable for underground of overhead line and Feed the power supply in various office/lab/ workshop with Supply, Installation, Testing & Commissioning (SITC) of outdoor CPRI certified cubical Feeder pillar in the front of IWD office, IIT(BHU), Varanasi
45.	Repair to patch plaster, mosquito net, false ceiling, painting and 3 nos. toilet work of NCC Lab in Department of Electronic Engineering, IIT (BHU), Varanasi
46.	Repair and laying bituminous carpet in road from SMST to IIT Crossing, IIT(BHU), Varanasi
47.	Construction of Girl's toilet rooms G+1 in Department of Electrical Engineering, IIT(BHU), Varanasi
48.	Renovation of common toilet & sewer line in middle of Main Workshop near foundry workshop, IIT(BHU), Varanasi
49.	Renovation and modification of 2 nos. toilet at the Ground Floor and First Floor and girls toilet/Bathroom in the Department of Electronic Engineering, IIT(BHU), Varanasi
50.	Repair and laying of bituminous road between Limbdi and Rajputana Hostel, IIT(BHU), Varanasi
51.	Repair and painting work of various workshops in the Main Workshop, Replace of Damage door on the roof of Control system lab and power electronics lab in Department of Electrical Engineering, P/F of flush door in room and bathroom of hostel and GRTA, construction of 25 nos. foundation for drill machine and planer machine and plumbing work of Carpentry shop at Main Workshop, Providing and fixing aluminium work for Main Gate in GRTA, Construction of 2 nos. ramp (LT-11, LT-12) with S.S. hand railing, granite flooring and 2 nos. aluminium door in partition wall at ground floor Lab in Department of Mathematical Science, IIT(BHU), Varanasi
52.	Comprehensive Annual Maintenance Contract of passenger lift installed at LT-1 (Lift No. 52NY5204), LT-2 (Lift No. 52NY5206) and LT-3 (Lift No. 52NY5202), GRTA Lift no. 52NY5203 & Mechanical Engg. Department Lift no. 52NT0098 in IIT(BHU), Varanasi
53.	Construction of the Central Animal House Facility and Electrical wiring, illumination, power point, light & fan point and ducting works at the Department of Pharmaceutical Engineering & Technology, IIT(BHU), Varanasi
54.	Replacement of the electrical main panel/board outside the class lab room no. 207 and 208 in Department of Ceramic Engineering & Technology, Electrical installation, illumination and wiring for newly joined Assistant Professor at room no. CR-107 in Department of Ceramic Engineering for Dr. Kaushik Sarkar, Electrical power, light point and ceiling light at Chamber of Dr. Sanjay Katheria in Department of Chemical Engineering, Electrical installation, illumination and wiring for additional electrical points and MCB for furnaces in the Department of Chemistry, Electrical work after renovation of civil work in Department of Mining Engineering for Dr. S.P. Singh, Electrical wiring, illumination, power point, light and fan in various work shop of IIT(BHU), Electrical wiring work, power, light at Hyderabad Colony G-17, Electrical installation, illumination and wiring in School of Bio-medical Engineering (Dr. Brijesh Kumar), Electrical installation, Illumination and wiring in school of Bio-medical Engineering (Gauri Manohar Balachander) at IIT(BHU), Varanasi

33. Central Instrument Facility (CIF)

1. Overview: The central instrument facility (CIF) is equipped with sophisticated instruments to carry out characterization and analytical needs under one roof for both external and internal users from academia and industry. Our facilities are dedicated to preserving and improving the research efficiency of global standards. This facility is well-versed in exploring structural, morphological, thermal, surface and molecular properties for a wide range of nano or microscopic materials like metals, ceramic, polymers, biomaterials and composites etc. Apart from these, centre is also extending facilities for trace analysis of metallic or non-metallic contaminants.

CIF provides research scholars with a variety of characterization techniques that support their academic endeavors.

Structural Characterization: ❖ XRD ❖ XPS ❖ FT-IR ❖ NMR	**Morphological Characterization:** ❖ Confocal ❖ SEM ❖ TEM ❖ AFM/SPM
Quantification of Toxicants: ❖ FT-IR ❖ NMR	**Thermal Characterization:** ❖ TGA ❖ DSC
Electrical Characterization: VNA	**Surface Area Characterization** ❖ BET
Magnetic Characterization ❖ Magnetic Properties Measurement System (MPMS)	**Simulator** ❖ Thermal Mechanical Physical Simulation and Testing Machine (Gleeble)

Herein, each instrument is operating under expert faculty members of this institute. With these views-

"Our mission is to provide futuristic research infrastructure and quality education services in support of advanced instrumentation."

The CIF is providing the services to the users *via* an easy-to-use online booking system that requires minimal human participation.

Dr. Kamalesh Kumar Singh, Professor of Metallurgical Engineering, leads the CIF with full-time professionals and scientific staff having their specific areas of expertise. In addition, Doctoral and PG students are also giving their expertise for the smooth operation of the instrument.

2. Approximate number of internal students/ users of CIF facilities: **11,675 samples**

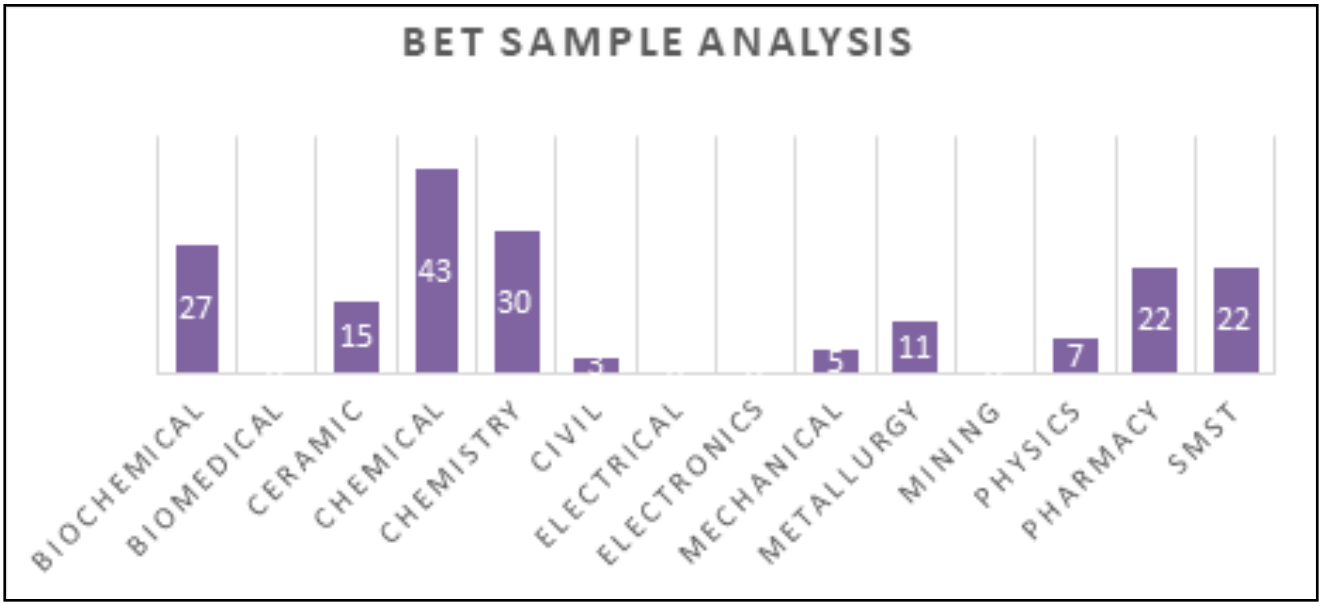
3. Number of Institute Department/School user of CIF facilities: **15 Departments/Schools**

4. Usage : Department wise for FY :2023-24

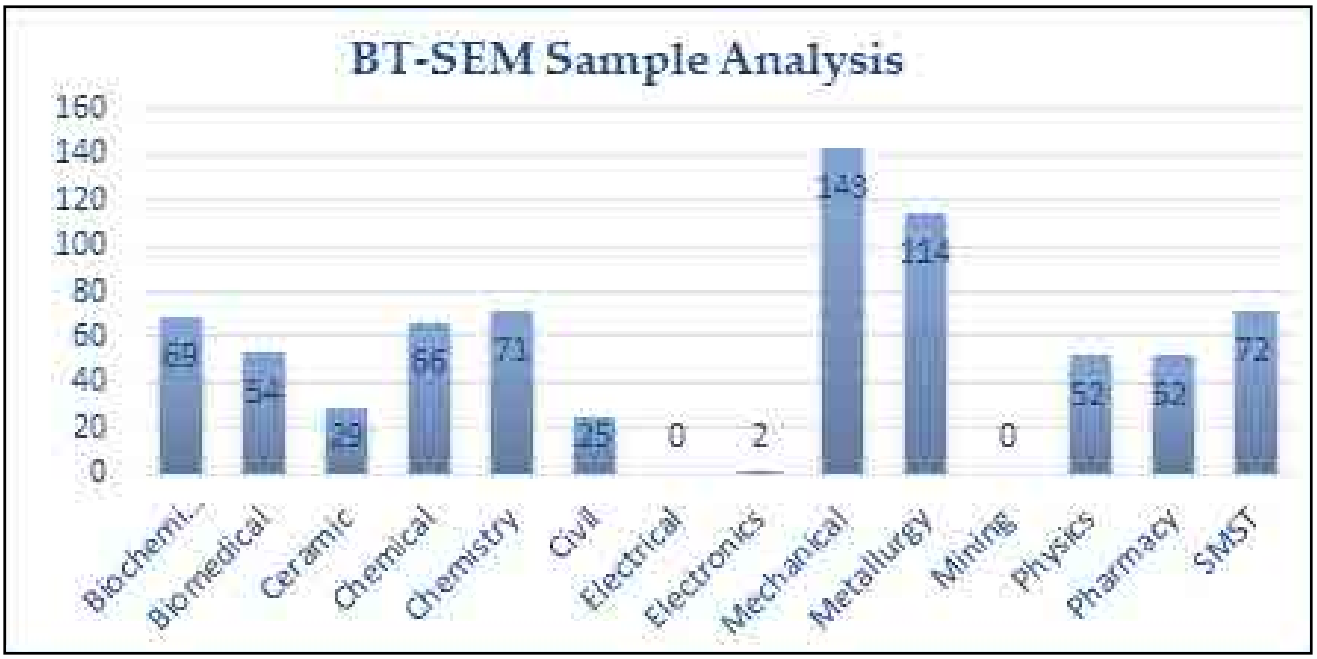
Sl. No.	Instrument Name	BCE	BME	CER	CHE	CHY	Civil	Electrical	Electronics	MEC	MET	Mining	PHY	PHA	SMST	Total
1	**BET**	27	0	15	43	30	3	0	0	5	11	0	7	22	22	**185**
2	**BT-SEM**	69	54	29	66	71	25	0	2	143	114	0	52	52	72	**749**
3	**BT-XRD**	76	16	422	42	540	34	0	12	142	227	7	340	260	51	**2169**
4	**Confocal**	0	0	0	0	0	0	0	0	0	0	0	0	9	0	**9**
5	**DSC**	6	17	0	4	7	5	0	0	9	56	0	20	190	16	**330**
6	**FE-SEM**	19	12	60	21	62	23	0	6	51	17	9	29	61	107	**477**
7	**FTIR**	96	109	108	166	256	87	3	0	21	13	0	120	315	200	**1494**
8	**HR-XRD**	1	2	17	21	10	4	0	4	17	6	0	53	11	0	**146**
9	**IC**	26	0	39	5	134	136	0	0	0	0	83	0	0	2	**425**
10	**ICP-MS**	6	47	6	5	8	82	0	0	0	11	55	0	2	0	**222**
11	**MFT**	0	0	11	0	0	0	0	0	10	15	0	8	0	0	**44**
12	**MPMS**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**

Sl. No.	Instrument Name	BCE	BME	CER	CHE	CHY	Civil	Electrical	Electronics	MEC	MET	Mining	PHY	PHA	SMST	Total
13	**NMR**	3	31	0	10	715	0	0	0	0	0	0	5	1081	44	**1889**
14	**SEM**	46	20	152	15	46	4	0	1	144	148	0	40	84	48	**748**
15	**SPM**	74	66	38	45	63	14	0	18	17	30	0	42	182	76	**665**
16	**TEM**	34	38	25	38	65	0	0	14	4	43	0	59	113	83	**516**
17	**TGA**	69	5	13	44	1	14	0	0	25	3	0	17	108	34	**333**
18	**XPS**	69	9	35	42	88	5	0	0	25	26	0	43	25	77	**444**
Total Sample		**621**	**426**	**970**	**567**	**2096**	**436**	**3**	**57**	**613**	**720**	**154**	**835**	**2515**	**832**	**10845**

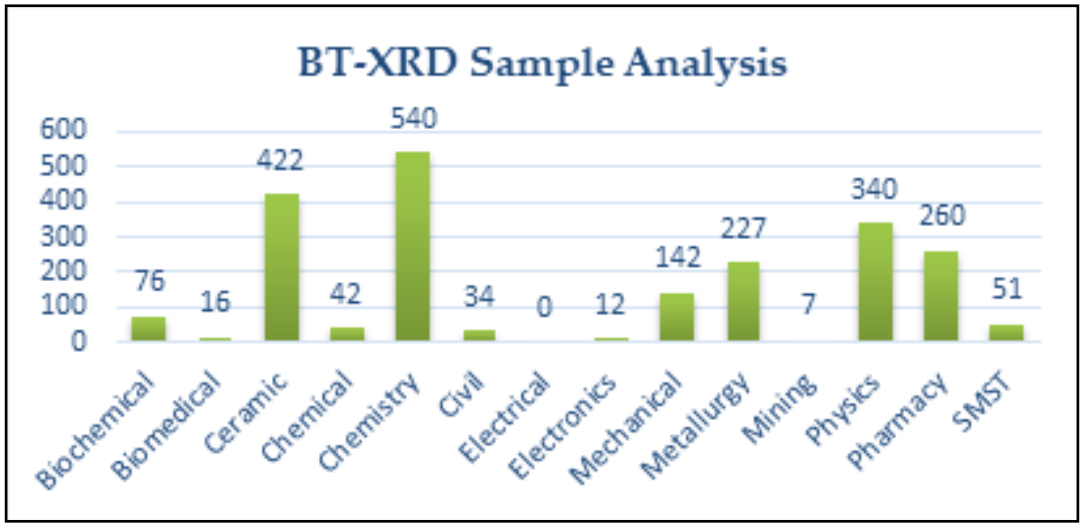
BET: Total 185 samples



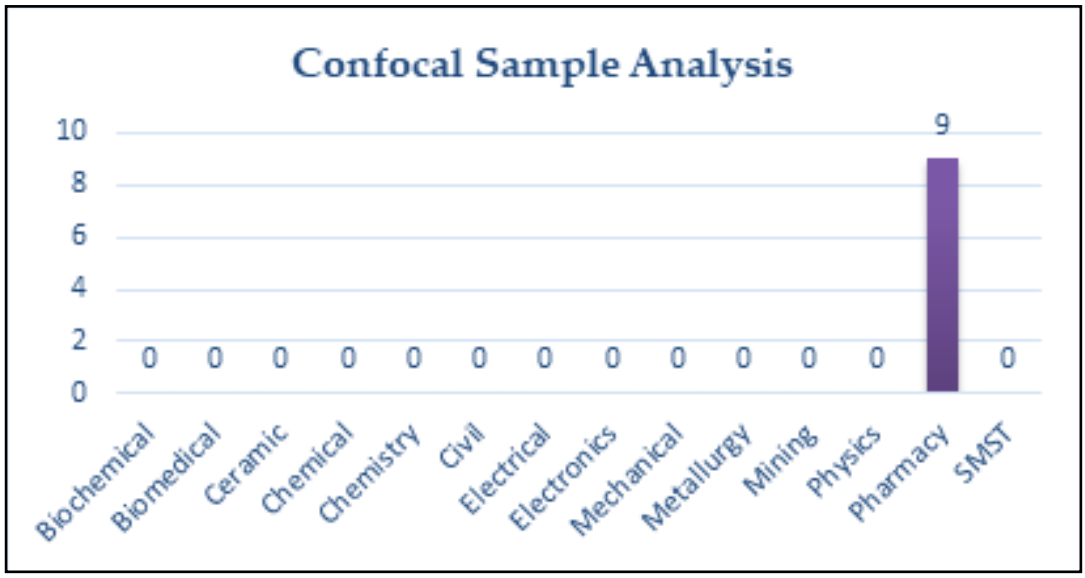
Bench Top SEM: Total 749 samples



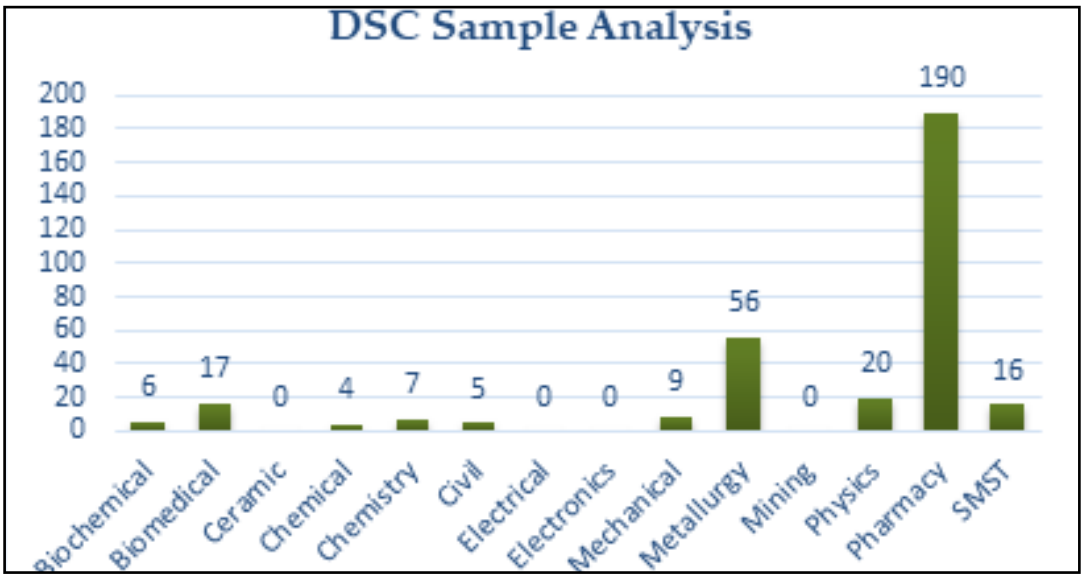
BT XRD: Total Number of Sample = 2169



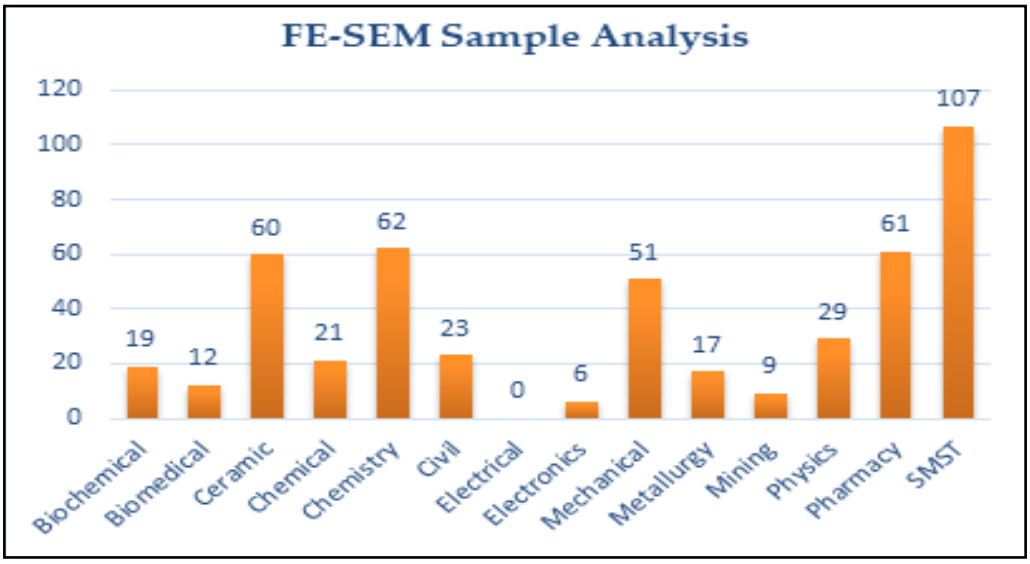
Confocal Microscopy: Total 9 samples



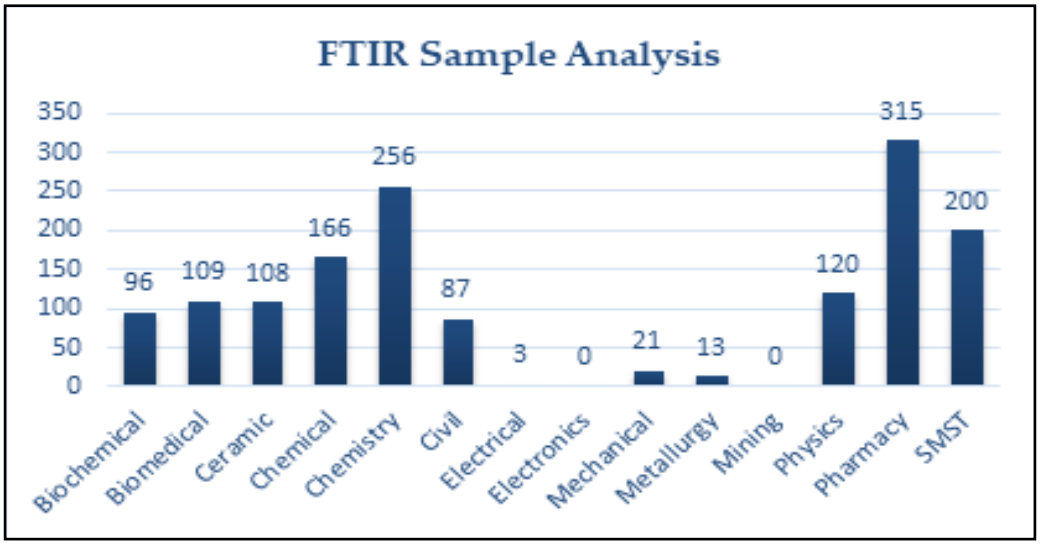
DSC: Total Number of Sample = 330



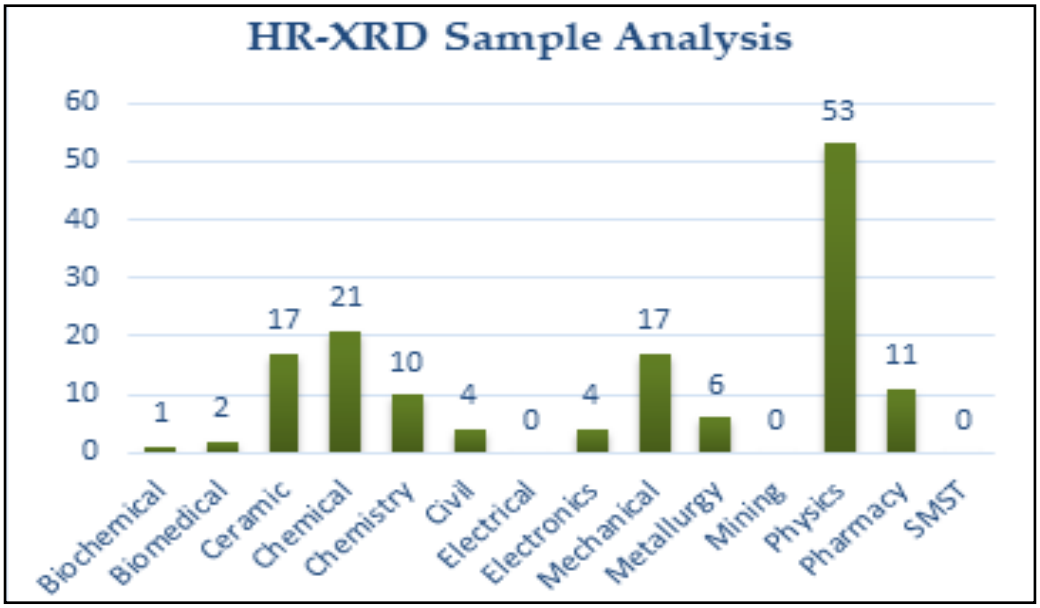
FE-SEM: Total Number of Sample = 477



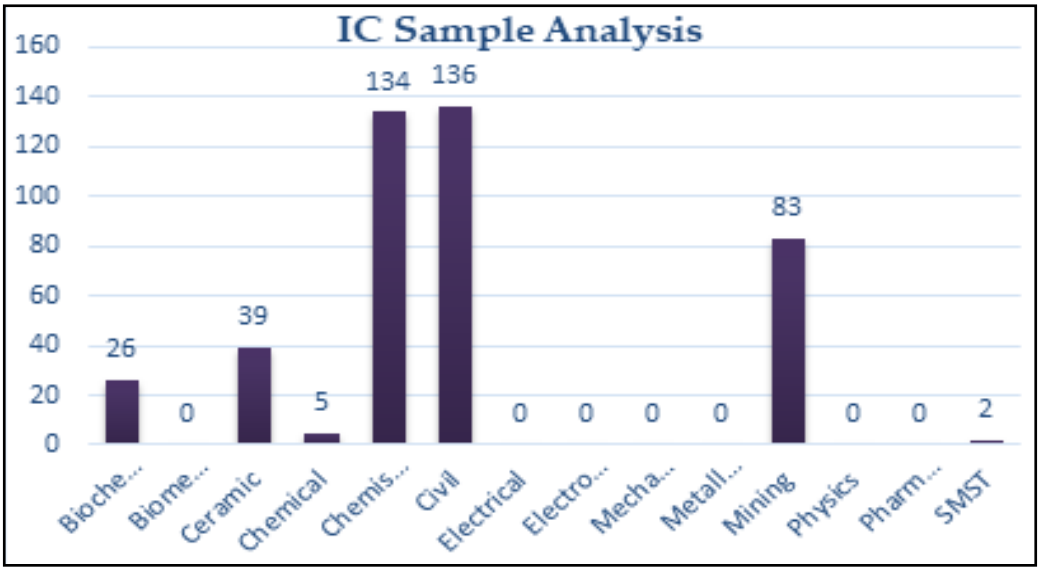
FTIR: Total Number of Sample = 1494



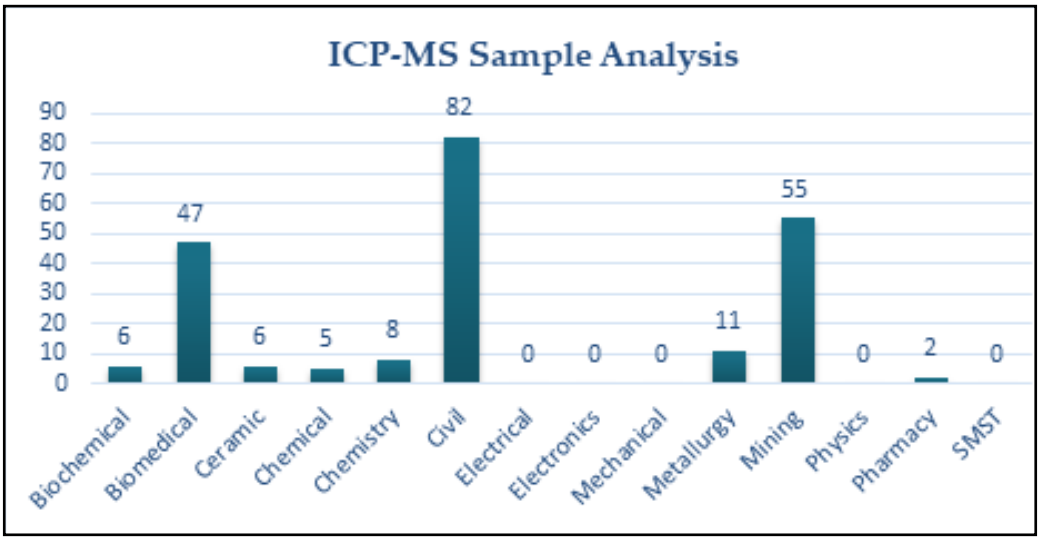
HR-XRD: Total Number of Sample = 146



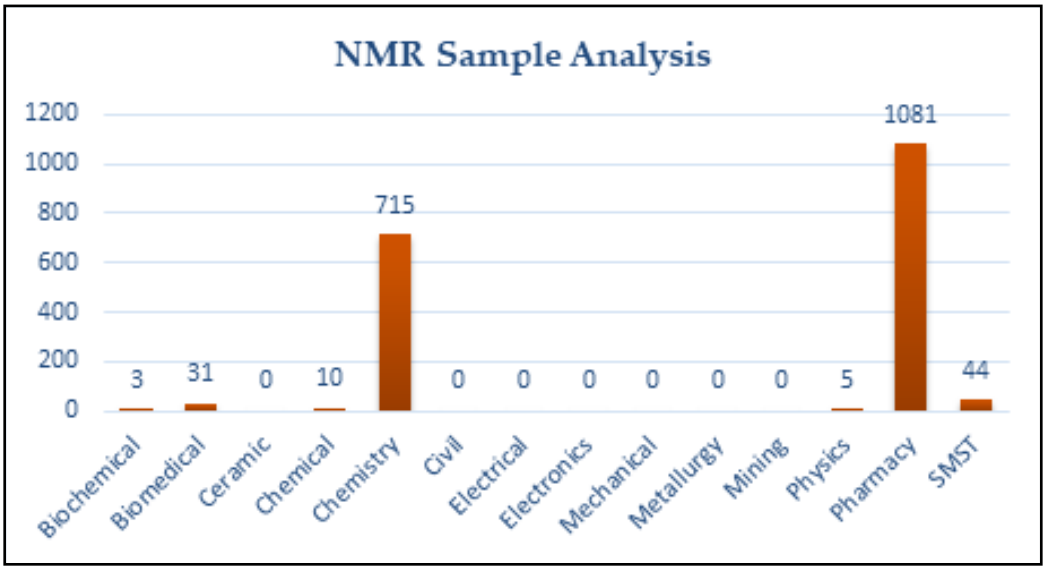
Ion Chromatography: Total Number of Sample = 425



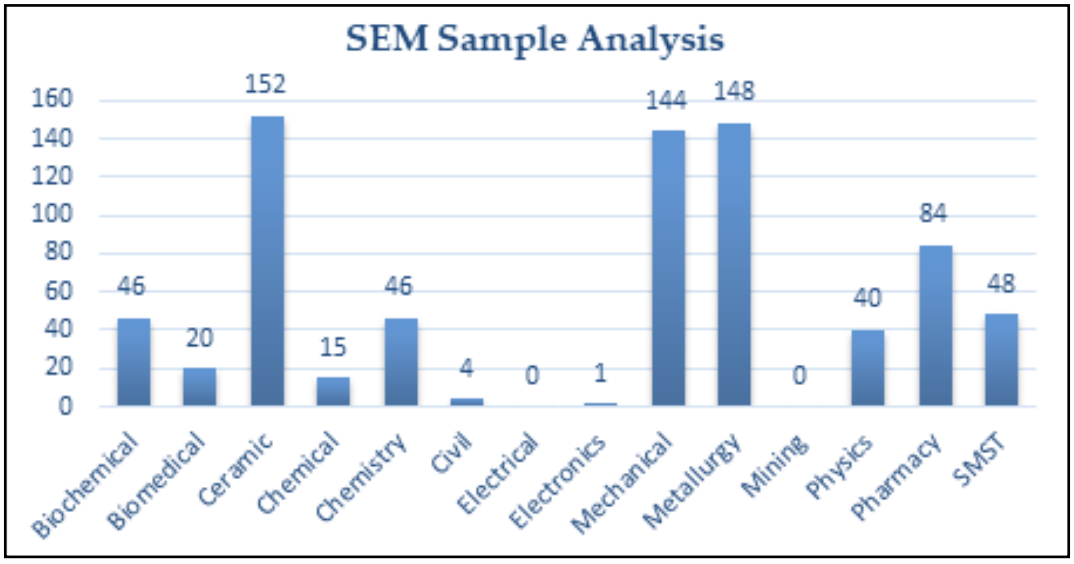
ICP-MS: Total Number of Sample = 222



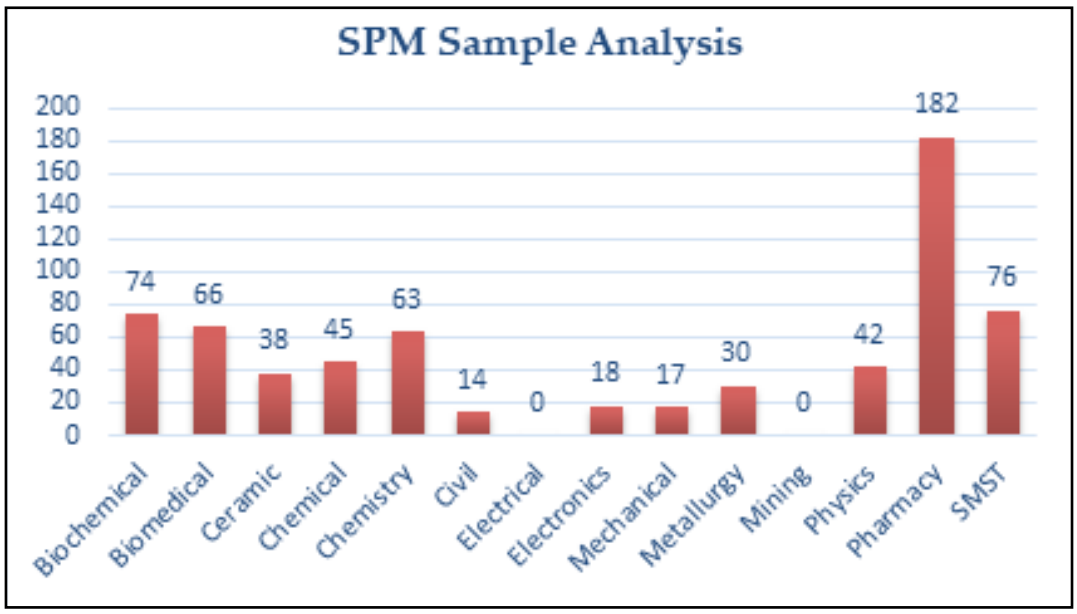
NMR: Total Number of Sample = 1889



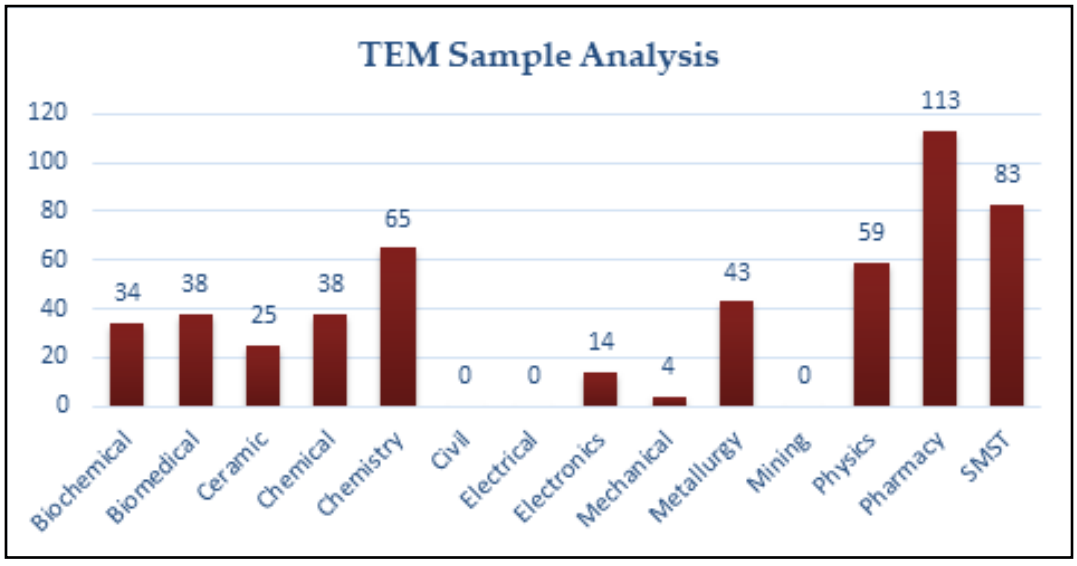
SEM: Total Number of Sample = 748



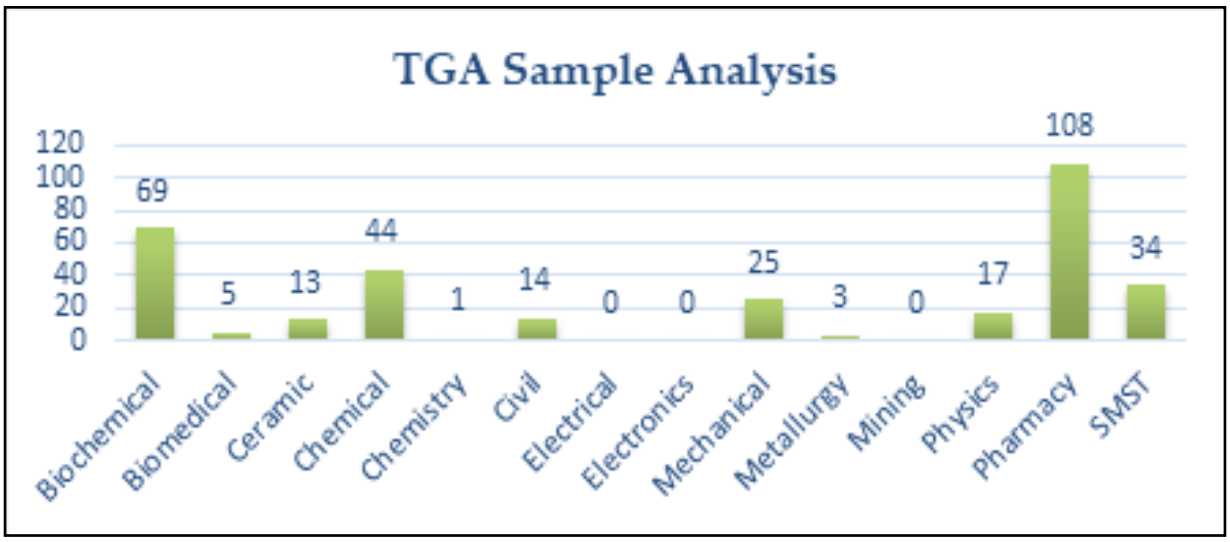
SPM: Total Number of Sample = 665



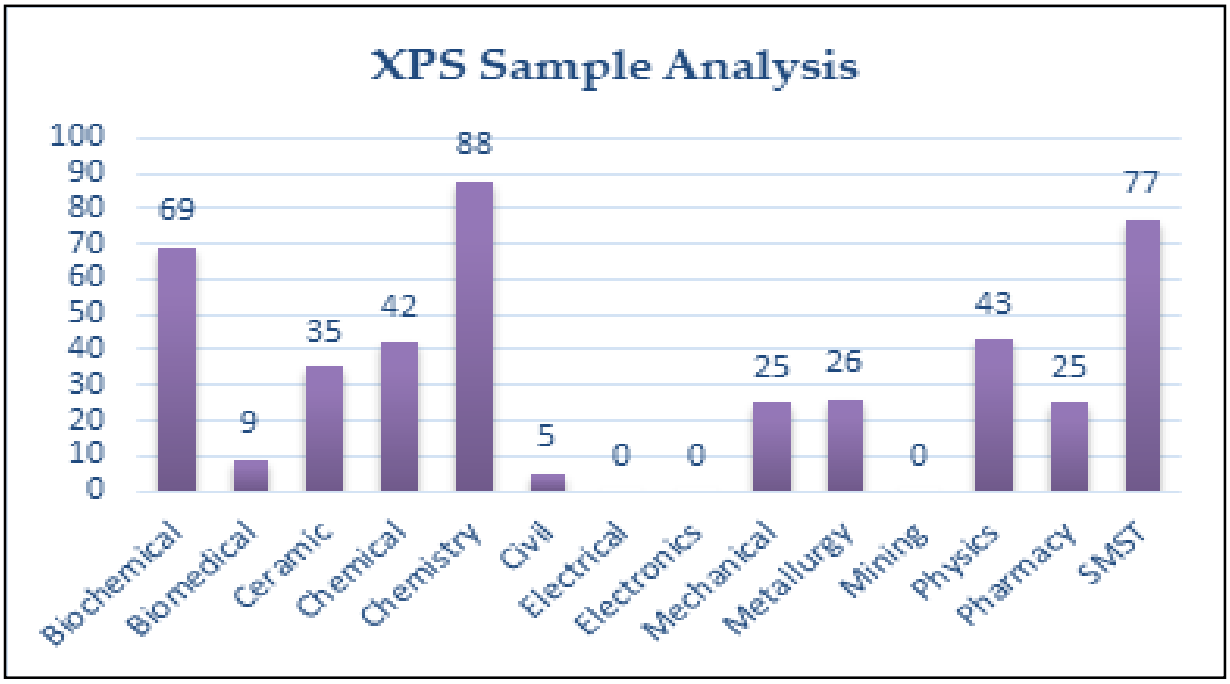
TEM: Total Number of Sample = 516



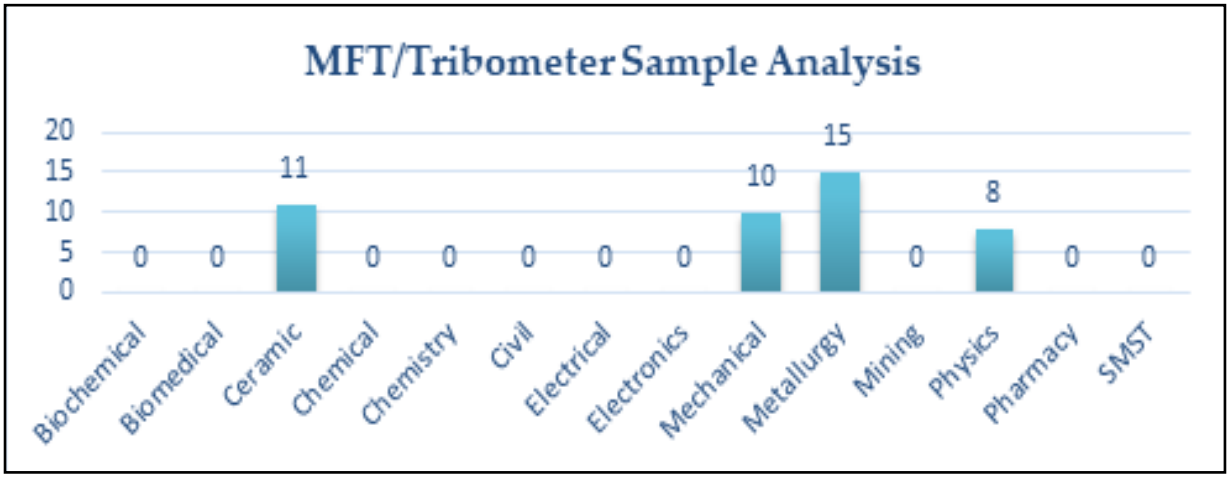
TGA: Total Number of Sample = 333



XPS: Total Number of Sample = 444



MFT/Tribometer Sample Analysis: Total Number of Sample = 44



5. Approximate number of students/researchers/Industries from outside the institute who have used the CIF facilities: 1**86 samples**

6. List of facilities in CIF: CIF offers an extensive array of facilities, featuring 21 state-of-the-art instruments. These tools enable comprehensive material characterization across multiple disciplines.

S. No.	Instruments	S. No.	Instruments
1	HR-TEM with EDS	2	FTIR
3	HR-SEM with EBSD	4	DSC
5	SEM with EDS	6	TGA
7	Bench Top XRD	8	NMR
9	High Resolution XRD	10	XPS with UPS
11	MPMS	12	ICP-MS
13	SPM	14	BET (Surface area measurement)
15	Ion Chromatography	16	Table top SEM
17	Multi-function Tribometer	18	Confocal Laser Scanning Microscope
19	PCB Prototyping	20	Thermal- Mechanical Physical Simulator and Testing Equipment
21	Vector Network Analyzer		

These include morphological imaging of materials' surface resolution up to 5nm magnification range with elemental analysis. It covers a range of macro-to-micro materials of biological or non-biological types with the help of SEM, HR-SEM, HR-TEM and SPM. Room temperature or high temperature-based structural and thermal characterization is possible by XRD and TGA/DSC analyzer respectively. The functional and bonding environments of nearly all elements are possible to analyze by the combination of measurements based on FTIR, NMR and XPS system. Magnetic properties of all type of magnetic materials are possible by MPMS. Wear properties of all materials are able to perform on multi-function tribometer based on both ball-on-disk and pin-on-disk method. Surface active area with pore volume and its distribution of porous materials is also possible to analyze by BET measurement system. Complete ranges of trace analysis of WHO recommended contaminants are able to perform on ICP-MS and Ion chromatography. In addition, recently Confocallaser Scanning Microscope is introduced in order to observe the location of fluorescent moieties present in biological or any matrix system. Thus, instrumental facilities present herein are able to elaborate on any properties of concerned materials. Additionally, a Vector Network Analyzer is used for measuring network parameters in RF engineering.

A recent addition to our simulation capabilities is the Thermal-Mechanical Physical Simulator and Testing Equipment (TMPST), known as the Gleeble system. It performs regulated laboratory-based simulations of multi-stage metal forming processes at high temperatures and high deformation rates, similar to those in rolling mills and large-scale metal production.

Other activities: CIF Lab visit of the Guest and Visitor

Sl. No	Name & Address	Date of Visit
1	A team of professors from Norway, initiative by the Indian Embassy in Norway and facilitated by the ICCR-Lucknow	21/10/2023
2	Delegates from G-20/Y-20 Summit	17/08/2023
3	Dr. D. K. Aswal, Bhabha Atomic Research Centre	17/06/2023
4	Prof. Truls Norby, Department of Chemistry, University of Oslo	02/06/2023
5	Prof. Smagul Karazhanov, Institute for Energy Technology	02/06/2023

Workshop & Seminar (Instrument demonstration)

Sl. No	Name & Address	Date of Visit
1	2-days Exposure Visit Program organized by CBSE in collaboration with IIT (BHU) Varanasi	17/06/2024
2	SERB-sponsored Karyashala on Laboratory Testing and Characterization of Construction Materials by Department of Civil Engineering	29/05/2023

CIF Lab visit for the college students

Sl. No	Name & Address	Date of Visit
1	Pt. Deen Dayal Upadhyay Rajkiya Kanya Inter College Farah, Mathura.	13/03/2024
2	B.Sc. students, K.N. Govt. PG College under aegis of DBT-STAR College scheme	18/12/2023
3	Students from Seth M. R. Jaipuria Schools, Banaras (Parao)	1/12/2023

34. Supercomputing Center (SCC): Param Shivay

Year of Establishment: 19th February, 2019

Coordinator: Dr. Hari Prabhat Gupta w.e.f. 01 January 2023

Introduction:

Param Shivay is a high-performance supercomputer installed at the Indian Institute of Technology (IIT) (BHU) Varanasi. It is part of the National Supercomputing Mission (NSM), which aims to enhance the research capabilities of India's educational and research institutions by providing them with advanced computational resources. The first HPC system to be deployed at IIT (BHU) Varanasi under the NSM build approach which was inaugurated by the Honorable Prime Minister of India, Shri Narendra Modi. As the first system under NSM, it boasts the highest number of external users, including an approved project under NSM Apps. Currently, the total number of successful jobs submitted using this system is 841891. The total number of users on the PARAM Shivay facility is 1186 users, including 1006 host institute users, 78 external users, and 102 NSM-APP users. In the year 2024, a total of 1572 technical support tickets were successfully resolved through the online ticketing support system.

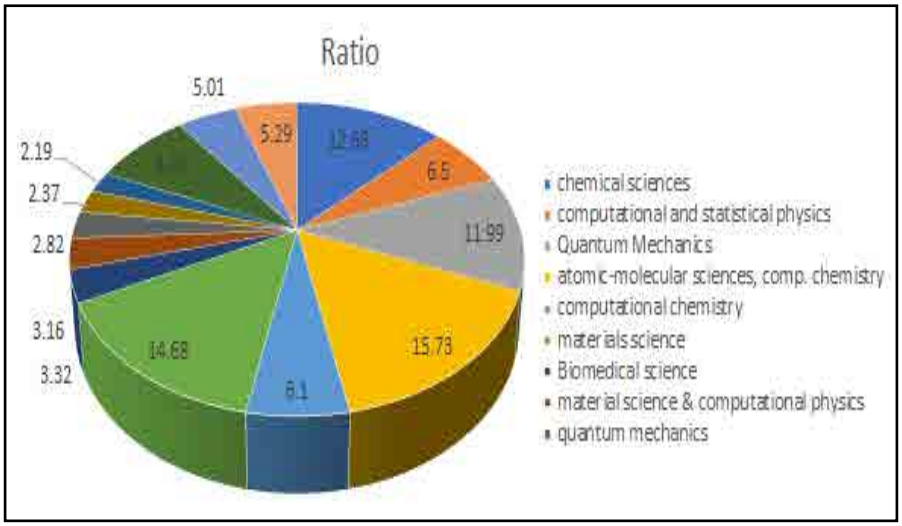
Architecture:

The server is equipped with a high-end platform based on cutting-edge technologies in terms of processing power and storage. The computation parts (CPU, GPU nodes) are based on high-performance processors ranging from Intel Xeon to NVIDIA. The storage is built on the DDN collaborating with ATOS for the high-end Bull Sequana platform specifically customized for HPC on AI and research computations. The PCI interconnects are Mellanox InfiniBand interconnects. The PARAM Shivay supercomputer is designed with a heterogeneous and hybrid configuration that combines Intel Xeon Skylake processors and NVIDIA Tesla V100. The HPC Technologies team at the Centre for Development of Advanced Computing (C-DAC) designed and implemented the system, which includes 2 Master nodes, 4 Login nodes, 4 Service nodes, and 223 (CPU+GPU) nodes with a total peak computing capacity of 838 (CPU+GPU) TFLOPS performance. The cluster is made up of compute nodes connected with Mellanox (ERD) InfiniBand interconnect network, and it uses the Lustre parallel file system.

System Specifications	
Theoretical Peak Floating-Point Performance Total (Rpeak)	838 TFLOPS
Sustained Performance (Rmax)	425 TFLOPS (CPU only Nodes) + 100 TFLOPS (GPU Nodes)
Base Specifications (Compute Nodes)	2 X Intel Xeon Skylake 6148, 20 Cores, 2.4 GHz, Processors per nodes, 192 GB Memory, 480 GB SSD
Master/Service/Login Nodes	10 nos.
CPU only Compute Nodes (Memory)	192 nos. (192 GB)
High Memory Nodes	20 nos. (768 GB)
GPU Compute Nodes	11 nos. (22 Nvidia V100 PCIe)
Total Memory	54.3 TB
Interconnect	Primary: 100Gbps Mellanox InfiniBand Interconnect network 100% non-blocking, fat tree topology Secondary: 10G/1G Ethernet Network Management network: 1G Ethernet
Primary Storage	Lustre based Primary Storage 750 TiB usable with 25 GB/sec write throughput
Archival Storage	Archival Storage 250 TiB usable capacity DDN Gridscaler (GPFS) with 1GB/sec write throughput

Applications and Domains:

We cater to a wide range of applications and target domains, as our facilities are utilized by researchers and faculty from various disciplines across different institutions for their computationally intensive tasks. The research conducted on the server spans several domains, notably including Molecular Dynamics for Chemical Science, Biomedical Science, Pharmaceutics, and Material Science; Computational Fluid Dynamics for Computational Physics, Mechanical, and Chemical domains; and Artificial Intelligence, Machine Learning, and Deep Learning. The chart presented here shows the domain involvement on the server. The system has proven invaluable for research needs across diverse scientific areas, including Computational Fluid Dynamics, Computational Chemistry, Artificial Intelligence, Computational Physics, Manufacturing Process Modeling, Computational Biology, Data Science, Weather & Climate, Oil & Gas, Seismic, Life, and Material Sciences.



Below is a list of applications available on our server:

1. PaDEL-Descriptor
2. gromacs/cpu
3. namd
4. openbabel
5. anaconda
6. gromacs/gpu
7. qbmg
8. conda
9. mgltools
10. ncbi-blast
11. yank
12. Columbus
13. openbls
14. ImageMagick
15. openfoam
16. KSHELL
17. OpenMolcas
18. R
19. openmpi
20. ShengBTE
21. Xmds_v3
22. abinit/OpenMolca
23. orca
24. gurobi
25. amber
26. hdf5
27. antoine
28. pnetcdf
29. atat
30. bigstick/intel
31. bison
32. intel-qs
33. quest
34. cmake
35. intelliJ_Idea
36. libxml
37. scilab
38. crest
39. miniconda
40. sharc
41. esmf
42. sharc-master
43. fftw3
44. molcas
45. tcl
46. mpfr
47. tdep
48. mpich
49. vampire
50. netcdf
51. wannier_tools
52. wrf
53. gerris
54. git
55. new_amber
56. xtb
57. gmp
58. nwchem
59. zlib
60. EasyBuild
61. mordred
62. mpiblast
63. Mummer
64. athena
65. autodocksuit
66. nektar
67. autotools
68. bowtie
69. charliecloud
70. Nvhpc
71. clustalw
72. ohpc
73. clustershell
74. cp2k
75. cuDNN/cuda
76. Papi
77. cuda
78. parallel_hdf5
79. deap
80. pgi
81. elk
82. fds
83. gdl
84. gnu8
85. gnuplot
86. Pmix
87. grads
88. prun
89. python
90. hmmer
91. horovod_env
92. hwloc
93. intel
94. Quantum-espresso
95. Regcm
96. intelpython
97. roms
98. keras
99. singularity
100. spparks
101. tensorflow
102. lammps
103. theano
104. llvm5
105. Valgrind
106. meep
107. vmd
108. meme
109. xcrysden.
110. mom_6
111. PrgEnv-pgi
112. pgi-llvm
113. pgi-nollvm
114. sp

Major Outcomes

1.1 Publications and acknowledgments: Over 200 publications across various fields have acknowledged the computational support providedby the Param Shivay facility. These publications span different domains and from different Institutions. All external institutions benefitted from our facility and acknowledged Param Shivay in theirpublications.

1.2 Institutions benefitted from Param Shivay: Along with IIT (BHU) Varanasi and BHU Varanasi, around 37 other research institutes are using the Param Shivay server.

1.3 Cluster Utilization statistics: The current server usage is highly efficient, with a utilization ratio exceeding 90% for CPU/GPU nodes. This high usage results in some larger jobs experiencing wait times, with the average waiting time for GPU access being 1 to 2 days. To manage this load, we have requested an expansion of the facility.

1.4 Young Women Scientist proposal: In January 2024, we launched a proposal for Young Women empowerment in High-Performance computing with the objective of allocating free computation hours to deserving young women researchers from external institutes and enhancingthe incorporation of other institutes in the facility.

1.5 Events and Visits: In the month of August 2023, the Y20 (Youth 20) program had student representatives from 16 countries who visited the facility and appreciated its significance. There was a distinguished authority visit of Shri Rajesh Singh, Joint Secretary & Financial Adviser, MeiTy. We have hosted numerous visits from various schools, colleges, and institutions to educate young students about the importance and capabilities of supercomputers. Some of them are Seth M. R. Jaipuria Schools Banaras (Parao), a visit of 100 meritorious students of class 9 & 12, selected fromdifferent schools of Sonbhadra District under "विज्ञानलोकप्रियकरणएवंसंचारकार्यक्रम", 40 students of Pt. Deen Dayal Upadhyay Rajkiya Kanya Inter College Farah, Mathura, 160 students (Class VI to XII) of PM Shri Kendriya Vidyalaya Chero-Salempur, District-Deoria-274808 (UP).

People at the Supercomputing Centre

Sl. No.	Name	Designation
1.	Dr. Hari Prabhat Gupta	Coordinator, SCC
2.	Nisha Singh	System Analyst

Conclusion:

The utilization statistics and deliverables, such as publications and collaborations with external institutes, demonstrate that users are effectively leveraging the Param Shivay services. The facility has benefited researchers from various domains and institutions, establishing itself as a crucial component in high-end computational research. We plan to upgrade the system with additional computational power and storage to reduce response times. Our goal is to enhance the robustness and popularity of the facility while raising awareness about its importance.

35. Main Workshop

Complete Name of the Unit: Main Workshop, IIT (BHU)

Year of Establishment: 1919

Head of the Workshop: Prof. Sandeep Kumar, Professor In-Charge, Main Workshop, IIT (BHU). w.e.f. 01.07.2023

Brief Introduction:

IIT (BHU) Main Workshop aims to advance and diffuse such scientific, technical and professional knowledge combined with necessary practical training at the best calculated to help in promoting indigenous industries and in developing the material resources of the country**.** IIT (BHU) workshop was used to produce every engineering items for producing machine tools – such as, Lathe and other product like electric fans, etc. This unit provides technical assistance for the maintenance and fabrication of their needed items. It may kindly be noted that, this unit is still supported by teaching department, i.e., the Mechanical Engineering Department, in terms of machines and manpower, providing technical and on job training to less privileged section of the society. This would be making extra manpower available to the IIT for producing useful products and taking various kinds of maintenance work, thereby saving enormous amount of money of the IIT. For example, new challenges of manufacturing and innovation is maintained by this workshop.The Precision Engineering Hub (PEH) services at IIT (BHU) is a central facility working for concept design and product realization available for Faculties & Industries to develop new products. The processes of design, simulation and manufacturing are integrated in a digital environment through spaces like: Makers space, Designer space, Tool room & product Design and development spaces. The PEH facility also serves the professional course requirements of industries & MSME employees of various streams. It also provides infrastructure for sponsored research and industrial consultancy. The PEH houses state of the art CAD and CAM tools with latest capabilities in shape acquisition, modeling and prototyping. The facility is chargeable to have helping hand in radically expanding the domain of geometric shapes that can be realized for any product.

Major areas of Research/Work:

1. Training to B.Tech. Part-I students of all branches and B.Tech. Part-II Mech. Engg. Students to expose them to various manufacturing practice and processes.
2. Providing facilities for fabrication involved in project work to all the engineering students.
3. Helping students by way of fabricating the models and equipments for research.
4. Helping students by way of fabricating the models for Institutional Tech. Fest & Department fest like: Technex, Comet, etc.
5. Helping students in shaping the product that comes out of their creative & innovative thinking.
6. There are many new initiatives in recent time ago Precision Engineering Hub, Tinker Lab. startup etc.
7. Precision Engineering Hub facility.

Area of the Workshop (in square meters): 3245.33 m^2

Infrastructure

S. No.	Particulars	Number
1	No. of Laboratory / Workshop	8 Nos.+ 1 (PEH)

Unique Achievement: Established a New Precision Engineering Hub.

New Courses Introduced

S. No.	Course Code	Course name	Course credit
1	ME-105	Manufacturing Practice (Offered by Dept. of Mechanical Engineering and conducting by Main Workshop).	03
2	ME-106	Manufacturing Practice (Offered by Dept. of Mechanical Engineering and conducting by Main Workshop).	03

Students on Roll: *1600 (Approx.)*

Technical and Non-Teaching Staff (Main Workshop)

Sl. No.	Name	Qualification	Designation	Emp. No.	Date of appointment in Dept.
1	Shri Basudeb Rajak	M. Tech. (Production Engineering)	Senior Technical Officer	18836	23.09.2009
2	Shri Lakhmi Chand	B.A., Diploma in Mechanical Engg.	Senior Technical Superintendent	18031	07.02.2007
3	Shri Shri Kumar	B.A., One year Diploma in Carpentry	Senior Technical Superintendent	13628	08.01.1997
4	Shri Chandra Mohan Singh	High School, Diploma in Mechanical Engg.	Senior Technical Superintendent	19627	22.02.2011
5	Shri Ravi Shankar Singh	Intermediate, Diploma in Mechanical Engg.	Senior Technical Superintendent	19268	23.02.2011
6	Shri Mahendra Kumar	Intermediate, Two year Diploma in Carpentry & Pattern Making	Senior Technical Superintendent	13626	08.01.1997
7	Shri Vikarama Prasad	High School, One year Diploma in Carpentry	Technical Superintendent	13633	12.10.1988
8	Shri Jagdish Prasad	High School, One year Diploma in Carpentry	Technical Superintendent	13632	12.10.1988
9	Shri Lal Prakash Singh	B.Com., One year Diploma in Moulder	Technical Superintendent	13631	12.10.1988
10	Shri Tej Bahadur Singh	Intermediate, ITI Wireman	Technical Superintendent	13634	12.10.1988
11	Shri Dilip Kumar Sharma	M.A., ITI Welder, ITI Wireman, Diploma in Mechanical Engg.	Technical Superintendent	18502	20.02.2007
12	Shri Sunil Kumar	B.A., ITI Machinist	Technical Superintendent	18032	20.02.2007
13	Shri Chandra Bhusan	M.Com., ITI Electronics	Technical Superintendent	18070	26.02.2007
14	Shri Vijay Kumar	Intermediate, ITI Motor Mechanic	Technical Superintendent	18051	20.02.2007
15	Shri Santosh Kumar Maurya	Intermediate, ITI Electrician	Technical Superintendent	18044	20.02.2007
16	Shri Vijay Kumar Singh	Intermediate, ITI Welder, Diploma in Mechanical Engg.	Technical Superintendent	18040	20.02.2007
17	Shri Jagdish	High School, ITI Carpentry	Junior Technical Superintendent	18675	06.08.2008
18	Shri Gopal Kumar Kharwar	Intermediate, ITI Electronics	Junior Technical Superintendent	18646	06.08.2008
19	Shri Brijesh Kumar Sharma	Intermediate, ITI Fitter	Junior Technical Superintendent	18664	06.08.2008
20	Shri Kunwar Bhadur	High School, ITI Wireman	Junior Technical Superintendent	18670	06.08.2008
21	Shri Rajendra P. Vishwakarma	Intermediate, ITI Foundry	Junior Technical Superintendent	18606	06.08.2008
22	Shri Anil Vishwakarma	M.A., ITI Welder, ITI in Electroplating	Junior Technical Superintendent	18604	06.08.2008
23	Shri Bipin Kumar Rai	Intermediate, ITI Fitter	Junior Technical Superintendent	18665	14.08.2008
24	Shri Banarasi Rao	Intermediate, ITI Refrigeration & AC	Junior Technical Superintendent	18667	08.08.2008
25	Shri Karun Vishwakarma	Intermediate, ITI Machinist & Grinder	Junior Technical Superintendent	18607	05.08.2008
26	Shri Jitendra Kumar	High School, ITI Turner	Junior Technical Superintendent	18663	07.08.2008
27	Shri Ravindra Kumar	Intermediate, ITI in Motor Mechanic	Junior Technical Superintendent	18602	06.08.2008
28	Shri Ajay Kumar Yadav	Intermediate, ITI Turner	Junior Technical Superintendent	18605	11.08.2008

Sl. No.	Name	Qualification	Designation	Emp. No.	Date of appointment in Dept.
29	Shri Gopal Krishna Shukla	B.Sc.-IT, M.Sc.-CS, ITI Instrumentation	Junior Technical Superintendent	18668	14.08.2008
30	Shri Bilu Guria	High School, ITI Welder	Junior Technical Superintendent	18666	06.08.2008
31	Shri Vijay Kumar Singh	Intermediate, ITI Automobile	Junior Technical Superintendent	18603	06.08.2008
32	Shri Shivendra Tiwari	Intermediate, Diploma in Mechanical Engg. & Apprenticeship from DLW	Junior Technical Superintendent	18615	06.08.2008
33	Shri Dheelip Kumar B.	High School, ITI Machinist & Apprenticeship	Junior Technical Superintendent	18671	13.08.2008
34	Shri Gopal Rana	Junior High School, Diploma in Electrician & Motor winding	Junior Technical Superintendent	19274	10.02.2011
35	Shri Shubham Kumar	B.Tech. in Information Technology	Junior Assistant	50380	23.11.2023
36	Shri Ramjeet Yadav	High School	Multi Tasking Staff (unskilled)		01.05.2019

Technical and Non-Teaching Staff, Precision Engineering Hub (PEH)

Sl. No.	Name	Qualification	Designation	Emp. No.	Date of appointment in Dept.
1	Dr. Santosh Kumar Mandal	Ph.D. in Mechanical Engineering	Senior Technical Officer	18838	04.11.2009
2	Shri Arvind Kumar Singh	Intermediate, Diploma in Mechanical Engg.	Senior Technical Superintendent	18669	12.08.2008
3	Shri Bed Prakash Singh	B.A., Diploma in Mechanical Engg.	Senior Technical Superintendent	19266	12.02.2011
4	Shri Vinay Kumar Singh	Intermediate, ITI Fitter, Apprenticeship, Diploma in Mechanical Engg. , Certificate course in Adv. CNC & Autocad	Junior Technical Superintendent	18672	19.08.2008
5	Shri Ashwani Kumar Tiwari	Intermediate, ITI Machinist, Apprenticeship, Diploma in Mechanical Engg.	Junior Technical Superintendent	18676	05.08.2008

New facilities added

S. No.	Details (Infrastructure, Equipments, etc.)	Value (in Lakhs of Rupees)
1	CNC Auto Cut EDM Machine	Rs. 21,77,100.00
2	Vertical Milling Machine	Rs. 9,73,146.00
3	Hot & Cold water purifier (Aquaguard)	Rs. 4,05,001.00

Foreign/Outsider Students Visits:

Educational tour under Rashtriya Avishkar Abhiyan.

1. **School Name: Uchch Praathamik Vidyalaya**

   Address: Niyamatabad, Chandauli, U.P.

   No. of Students visited : 100

   Date of visit: 15-03-2024

   Time of visit: 10:30 a.m. to 04:00 p.m.

2. **School Name: Poorv Maadhyamik Vidyalaya**

   Address: Chahaniya, Chandauli, U.P.

   No. of Students visited : 73

   Date of visit: 18-03-2024

   Time of visit: 10:00 a.m. to 04:00 p.m.

Activity at the Institute Level:

1. Inspecting the furniture supplied to the different hostels of IIT (BHU).
2. Providing facilities and also the technical know-how for development of industrial and innovative products.
3. Precision Engineering Hub (PEH) facilitates to fabricate three dimensional objects using Metal 3D Printing machine, FDM 3D printing machine, Cars Raman, PCB Prototype machine & Ceramic 3D printer.

Activity to Outsiders:

1. Training to the students of other Engineering Colleges.
2. Providing processing and production facilities to outsiders.
3. Providing Summer Training to the undergraduates of different Engineering College.
4. Precision Engineering Hub (PEH) extended the facilities of fabrication of complex objects using Metal 3D Printer, namely by M/s Uni Tritech Private Limited.

Vertical Milling MachineAutomated Wire Cut EDM Machine

(Prof. Sandeep Kumar)
Prof. In-charge

(Basudeb Rajak)
Senior Technical Officer

36. Finance and Accounts

INDIAN INSTITUTE OF TECHNOLOGY (BHU), Varanasi

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2024

Amount in Rupees

Particulars	Schedule	Current Year	Previous Year
INCOME			
Academic Receipts	9	76,78,46,456	77,77,83,806
Grants / Subsidies	10	2,66,24,83,790	2,52,04,08,834
Income from Investments	11	18,41,69,198	15,00,16,661
Interest earned	12	15,38,308	21,11,335
Other Income	13	39,08,79,617	31,58,43,325
Prior Period Income	14	1,73,87,603	2,60,56,387
TOTAL (A)		**4,02,43,04,972**	**3,79,22,20,348**
EXPENDITURE			
Staff Payments & Benefits (Establishment exp.)	15	2,11,60,15,287	2,02,97,26,642
Academic Expenses	16	38,06,18,021	37,09,18,778
Administrative and General Expenses	17	65,67,83,629	68,50,03,652
Transportation Expenses	18	8,73,897	9,51,364
Repairs & Maintenance	19	2,40,62,237	1,32,93,619
Finance Costs	20	6,54,39,708	7,00,39,231
Depreciation & Amortization	4	48,23,85,028	45,09,42,770
Other Expenses	21	-	-
Prior Period Expenses	22	16,52,630	39,65,768
TOTAL (B)		**3,72,78,30,437**	**3,62,48,41,824**
Balance being excess of Income over Expenditure (A-B) Transfer to/ from Designated fund		29,64,74,535	16,73,78,524
balance being Surplus (Deficit) **Carried to Capital Fund**		29,64,74,535	16,73,78,524

INDIAN INSTITUTE OF TECHNOLOGY (BHU), Varanasi

BALANCE SHEET AS ON 31.03.2024

Amount in Rupees

SOURCE OF FUNDS	Schedule	Current Year	Previous Year
Corpus/Capital Fund	1	10,12,92,67,626	9,13,73,06,225
Designated / Earmarked Funds/Endowment Funds	2	58,15,70,873	42,71,53,684
Current Liabilities & Provisions	3	7,30,28,53,658	6,85,72,91,950
TOTAL		**18,01,36,92,157**	**16,42,17,51,859**
APPLICATION OF FUNDS	**Schedule**	**Current Year**	**Previous Year**
FIXED ASSETS	4		
Tangible Assets		3,61,49,38,940	3,59,79,70,315
Intangible Assets		10,77,01,948	9,42,58,216
Capital Work-In-Progress		1,48,24,92,220	91,59,63,108
INVESTMENTS FROM EARMARKED/ENDOWMENT FUNDS	5		
Long Term		56,69,14,021	25,89,77,084
Short Term		-	-
INVESTMENTS – OTHERS	6	7,56,99,43,250	6,24,14,39,747
CURRENT ASSETS	7	4,25,17,66,140	4,53,94,22,495
LOANS, ADVANCES & DEPOSITS	8	47,99,35,638	82,37,20,894
TOTAL		**18,01,36,92,157**	**16,42,17,51,859**

SIGNIFICANT ACCOUNTING POLICIES	23
CONTINGENT LIABILITIES AND NOTES TO ACCOUNTS	24


12th CONVOCATION


12th CONVOCATION


12th CONVOCATION
Bharat Ratna
Mahamana Pandit
Madan Mohan Malaviya Ji
(The Founder)
12th CONVOCATION
(संस्थापक)


IIT
INDIAN INSTITUTE OF TECHNOLOGY
बारहवाँ दीक्षांत समारोह
12th CONVOCATION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DRDO Industry Academia Centre of Excellence
Dr. Samir V. Kamat, DS

Notes

Indian Institute of Technology (BHU) Varanasi