

## Tentative list of sessions

- Neuroimaging methods for neurodevelopmental disorders
- Neuromorphic tactile sensing for robotics and prosthetics applications
- Neuromorphic engineering in vision sensing
- Brain-computer interface for perception, learning, and motor control
- Artificial intelligence for speech and bio-signal processing
- Scope of virtual reality to neurorehabilitation and autism intervention
- Brain-computer interface for prosthetic control
- Artificial intelligence and machine learning algorithms for biomedical signal and image processing
- EEG-based measures and methods to infer emotional states

## Expert speakers

Experts from industry and academia (IITs, NITs, IIITs, etc.) will be delivering talks along with few hands-on training sessions.

## Contacts for queries

Email: [karyashala.aiba@iitbhu.ac.in](mailto:karyashala.aiba@iitbhu.ac.in)

Mr. Vivek Kumar: Cell No. (+91) 7987272517

## Organizing committee

### Chief patron

**Prof. Pramod Kumar Jain**

Director,  
Indian Institute of Technology  
(Banaras Hindu University),  
Varanasi 221005.

### Patron

**Prof. Vikash Kumar Dubey**

Dean (Research & Development),  
Indian Institute of Technology  
(Banaras Hindu University),  
Varanasi 221005.

**Dr. Sanjeev Kumar Mahto**

Coordinator,  
School of Biomedical Engineering,  
Indian Institute of Technology  
(Banaras Hindu University),  
Varanasi 221005.

### Who can attend?

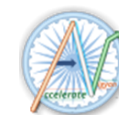
Students pursuing their Master's or Ph.D. degree in the relevant area are eligible to apply

### Venue

ABL1 Hall,  
Indian Institute of Technology,  
(Banaras Hindu University),  
Varanasi 221005.

### How to apply?

Register using the link given below:  
<https://forms.gle/JdJMrW16macMQ8CT9>



ACCELERATE  
vigyan



SERB Sponsored High-End Workshop

On

# Artificial Intelligence for Biomedical Applications



under the KARYASHALA scheme

22-28th May, 2023

Registration opens on 10-04-2023

Last date for registration: 30-04-2023

Event Coordinator

**Dr. Deepesh Kumar**

Assistant Professor  
School of Biomedical  
Engineering,  
Indian Institute of  
Technology (BHU),  
Varanasi - 221005

Event Co-coordinator

**Dr. Jac Fredo AR**

Assistant Professor  
School of Biomedical  
Engineering,  
Indian Institute of  
Technology (BHU),  
Varanasi - 221005



School of Biomedical Engineering

INDIAN INSTITUTE OF TECHNOLOGY (BANARAS HINDU UNIVERSITY) VARANASI

## About the KARYASHALA

The KARYASHALA scheme by SERB, Government of India is meant for skill development training on topics required for scientific research work. It is an effort to improve the research productivity of promising PG and Ph.D. students from universities and colleges through high-end workshops on specific themes. This program aims to provide opportunities to acquire specialized research skills.

## About the Institute



Indian Institute of Technology (BHU), Varanasi, is a top public engineering and technology institute located on the banks of the Ganga in Uttar Pradesh, India. Founded in 1919 as Banaras Engineering College, it became the Institute of Technology, Banaras Hindu University (IT-BHU), and was granted IIT status in 2012. The institute offers undergraduate, postgraduate, and doctoral programs in engineering, sciences, and humanities. With a highly qualified faculty, state-of-the-art infrastructure, and world-class research facilities, IIT(BHU) is ranked 13th by NIRF in 2022 among India's engineering colleges.

## About the School

The School of Biomedical Engineering (SBME) at IIT (BHU) was established in 1978 by UGC during Fifth Five-Year Plan. It offers undergraduate, postgraduate, and doctoral programs in Biomedical Engineering, focusing on interdisciplinary research areas like Medical Imaging, Bioinstrumentation, Biomaterials, Tissue engineering, Biomechanics, and Rehabilitation Engineering. With modern infrastructure and experienced faculty, the school aims to train skilled professionals to tackle healthcare challenges. The SBME is committed to making a significant impact through education and research.

## About the Workshop

The workshop seeks to unite postgraduate and doctoral students from diverse fields, with the goal of acquainting them with significant breakthroughs in artificial intelligence, machine learning, and bioinspired computing that have implications for biomedical applications. Attendees can expect to explore topics such as the use of AI in disease diagnosis and treatment, data-driven therapeutic interventions, AI-assisted prosthetics, and orthotic devices, and more. Hands-on training will be provided, focusing on AI-based approaches to biomedical signal and image processing using programming languages like Python and MATLAB. Additionally, through hands-on sessions, the participants will have the opportunity to work with cutting-edge technologies like physiological data acquisition systems used to record biomedical signals. Our aim is to foster collaboration and accelerate progress at the intersection of AI and biomedicine.

### Registration Guidelines

- There is **no registration fee**.
- Students selected for this workshop are eligible for **travel allowance (TA) reimbursement (3rd AC)** for their journey to and from IIT (BHU) Varanasi as per SERB and GoI norms.
- **Accommodation for the participants will be provided at IIT(BHU) hostel with catering facilities.**
- The maximum number of participants is **limited to 25** and candidates will be selected on a merit basis.
- Only selected candidates will be informed by e-mail. Therefore, candidates must provide valid e-mail IDs during registration.
- During registration, the candidate must upload their student ID card, NOC letter duly signed by the competent authority, and the latest CV.
- A certificate of participation would be issued to all participants.

### Scan here to register for the workshop



<https://forms.gle/JdJMrW16macMQ8CT9>

## Format for NOC

Date \_\_\_\_\_

To Whom It May Concern,

This letter is to certify that [Student's Full Name], a student of [School/Institution Name], has sought permission to attend a workshop titled [Workshop Name], which is scheduled to take place on [Workshop Dates] at [Workshop Venue].

We hereby confirm that we have no objection to the student attending the workshop and encourage their participation in such educational events that can further enhance their knowledge and skills.

Signature of the applicant

Date and place:

Recommended and forwarded

Signature of the Head of the Department / Head of the Institution with seal

## Acknowledgment

*Dr. Deepesh Kumar and Dr. Jac Fredo AR, workshop coordinators are thankful to SERB, Department of Science and Technology, Government of India for providing financial support to this training program through a project grant (File No. AV/KAR/2022/0450) under SERB KARYASHALA scheme*