

## WHO CAN PARTICIPATE

This workshop is specifically designed for UG/PG/PhD students, researchers, faculties and technical staffs from the branches of engineering/sciences who are interested in the primary and secondary processing of composites especially for defence applications.

## REGISTRATION

Name: \_\_\_\_\_

Designation: \_\_\_\_\_

Institute: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Email ID: \_\_\_\_\_

Contact No: \_\_\_\_\_

Undertaking:

I shall abide by rules and regulations and shall attend course. Failing which certificate may not be issued.

\_\_\_\_\_  
Signature of Participant

## CONTACT

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**Indian Institute of Technology (BHU) Varanasi**

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## ABOUT NM-ICPS

The National Mission on Cyber-Physical Systems (NM-ICPS) is identified as one such emerging field to have a significant impact on health care, urban transportation, water distribution, energy, urban air quality, manufacturing and governance. The activities envisioned under this Mission will give a impetus to Indian manufacturing via the invention of new products, services and the creation of skilled young human resource from technicians to, researchers and entrepreneurs. It will have modernisation and digitalisation of socio-technical systems and services.

## ABOUT IDAPT

The Interdisciplinary Data Analytics and Predictive Technologies (IDAPT) has been regarded as one of the most prominent fields whose progress will add significant impact on various socio-economic issues. At IIT (BHU) five verticals 1)Telecommunications, 2) Power, 3)Road Transport and Highways, 4) Defence Research and Development, and 5) Health and Family Welfare have been identified under IDAPT. The endeavour shall catalyse the creation of skilled young engineers, researchers, technicians, and entrepreneurs, together with human resource at all levels, besides becoming a key contributor to realizing the vision of “Digital India”, “Innovate in India”, and “Make in India”.

## Defence Research & Development in IDAPT

Defence Research & Development in IDAPT aims at providing appropriate solutions in crucial areas of defence like (a) border surveillance and role of drones and radars for surveillance, (b) microwave techniques for imaging, (c) stealth technique based on advanced polymer materials, (d) 5G for defence communications, (f) power systems for defence, (g) explosive detection, (h) smart sensors for soldiers and (i) and bio-sensors for safety and readiness of soldiers etc. To achieve these goals, this programme will give participants with a platform to learn about the past, present, and future of composites in defence applications.

Short Term Course on

**Composites in Defence Sector  
(Present Status and Way Forward)**

**A TECHNOLOGY INNOVATION HUB**

**ON**

**INTERDISCIPLINARY DATA ANALYTICS  
AND PREDICTIVE TECHNOLOGY**

**(IDAPT)**

**Under**

**NATIONAL MISSION ON INTERDISCIPLINARY  
CYBER PHYSICAL SYSTEM (NM-ICPS)**



**February 27-March 03, 2023**

**Coordinators**

**Dr. J P Misra**

**Dr. A S Shedbale**

**Dr. Nikhil Kumar**

## ABOUT INSTITUTE



The Indian Institute of Technology (Banaras Hindu University) owes its existence to Mahamana Pandit Madan Mohan Malviya, Bharat Ratna-the founder of

the first residential university of modern India, the Banaras Hindu University. The three of the erstwhile engineering colleges of BHU, namely BENCO, MINMET and TECHNO, were merged to form the Institute of Technology (IT-BHU) in 1968 to provide an integrated educational base. The IT-BHU has been admitting students through the JEE conducted by the IIT's since 1972, and has been consistently ranked amongst the top few engineering institutions of the country. IT-BHU became IIT (BHU) in June 29, 2012 by an Act of Parliament. The Institute has maintained high academic standard since its inception. It has turned out luminary engineers and administrators who served the nation with great distinction.

## ABOUT MECHANICAL DEPARTMENT

Welcome to the Department of Mechanical Engineering at Indian Institute of Technology (IIT BHU), where experienced faculty and highly motivated students - supported by a dedicated staff - experience a unique engineering education. The Department offers academic programmes at three levels leading to Bachelor of Technology (B.Tech.) in Mechanical Engineering, Master of Technology (M.Tech.) in Mechanical Engineering and Decision Science, and Doctor of Philosophy (Ph.D.) degrees. In addition, continuing education programmes in specialized areas are offered on a regular basis for industry professionals and academic staff from other colleges.

## EMINENT SPEAKERS (Tentative)

Prof. I Singh (IIT Roorkee)  
Prof. R K Gautam (IIT BHU)  
Prof. P Maiti (IIT BHU)  
Dr. P Pratap (DRDO)  
Dr. N Kumar (IIT BHU)  
Dr. A S Shedbale (IIT BHU)  
Dr. J P Misra (IIT BHU)  
Dr. S Dodla (IIT BHU)  
Dr. V Kukshal (NIT Uttarakhand)  
Dr. H Sharma (NIT Uttarakhand)

## COURSE CONTENTS (Tentative)

Emerging trends, which directly impact the dynamics for composites in the defence industry, include the adoption of nano-technology in ballistic protection materials and the growing focus on stealth technology for military aircraft. The future of the composite materials in the defence industry looks good with opportunities in military aircraft, naval systems, land vehicles, body armour, arms & ammunition, and military hard wall shelter. The major growth drivers for this market are the increasing use of lightweight and high-performance materials in defence programs and the growing need for lightweight materials in ballistic protection solutions.

This STC will cover:

- Introduction, Background, and Classifications of Composites
- Primary and Secondary Processing of Composites
- Green Composites
- Composites for Defence and Military Services
- Composites for Stealth Technology
- Application of AI, Modelling & Simulation

## REGISTRATION DETAILS

Registration Link  
<https://bitly.cat/viOeK>

Last Date of Registration  
February 20, 2023

Registration Fees (Non-refundable)  
UG/ PG/ PhD Students: Rs. 500 + 18%GST  
Faculties/ Scientists/ PDF: Rs. 2000/- + 18%GST  
Industry: 4000/- + 18%GST

Payment may be made by one of the following methods:

1. Demand draft in favour of  
I-DAPT-HUB-FOUNDATION 2

Payable at SBI, IT(BHU), Varanasi

2. For online payment

Name: I-DAPT-HUB-FOUNDATION 2

Account No: 40298890505

Branch: SBI, IT(BHU), Varanasi

IFSC: SBIN0011445

Course Mode: Hybrid

In case of any difficulty you can contact us at

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