

WHO CAN PARTICIPATE

This short-term course is specifically designed for UG/PG/PhD students, researchers, faculties, and technical staff from the branches of engineering/Science who are interested in the field of Computational Neuroscience and Biology, Signal Processing, Image Processing, Artificial Intelligence, Transcriptomic Data Analysis, and Drug Repurposing.

Chief Patron

Prof. Amit Patra

Director,

**Indian Institute of Technology (BHU),
Varanasi 221005**

Patron

Prof. Rajesh Kumar

**Dean (Research & Development) ,
Indian Institute of Technology (BHU),
Varanasi 221005**

Prof. Sanjay Kumar Rai

Coordinator, SBME,

**Indian Institute of Technology (BHU),
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CONTACT

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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 an 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) Defense 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".

Health & Family Welfare in IDAPT

The Health & Family Welfare vertical under IDAPT focuses on leveraging data analytics, artificial intelligence, and predictive technologies to transform India's healthcare ecosystem. This vertical aims to develop intelligent, technology-driven solutions for disease prediction, early diagnostics, personalized treatment, and public health management. This vertical addresses critical national challenges such as rising chronic diseases, mental health issues, and the need for affordable, accessible healthcare.

Short Term Course on

Introduction to Computational Neuroscience and Biology

A TECHNOLOGY INNOVATION HUB

ON

INTERDISCIPLINARY DATA ANALYTICS AND PREDICTIVE TECHNOLOGY

(IDAPT)

Under

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



February 02-06, 2026

Coordinator

Dr. Jac Fredo AR

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 BEN-CO, 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 SBME

School of Biomedical Engineering (SBME) 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 school offers Bachelor, Master, and Doctoral programs in Biomedical Engineering with the major thrust areas of Medical Devices, Bioinstrumentation, Biomechanics, Biomaterials and Cancer Biology. In addition, continuing education programmers in specialized areas are offered on a regular basis for industry professionals and academic staff.

EMINENT SPEAKERS

- Prof. Ramakrishnan S (IIT Madras)
- Prof. Srinivasa Chakravarthy (IIT Madras)
- Prof. Samarendra Dandapat (IIT Guwahati)
- Prof. Ram Bilas Pachori (IIT Indore)
- Prof. Uttama Lahiri, (IIT Gandhinagar)
- Dr. Kalaiselvan (CDAC Trivandrum)
- Prof. Venugopal G (NSS Palakkad)
- Dr. Sudalaimani (CDAC Trivandrum)
- Dr. Binu (CDAC Trivandrum)
- Dr. Maheshkumar H. Kolekar (IIT Patna)
- Dr. M Sabarimalai Manikandan (IIT Palakkad)
- Dr. Jithin Krishnan (SCTIMST Trivandrum)
- Dr. Sabitha Ramanathan (Cancer Institute Adyar)
- Dr. Nidhi Sunhare (AIIMS Patna)
- Dr. Karthick PA (NIT Trichy)
- Dr. Edward Jero (VIT University Chennai)
- Dr. Rohini Palanisamy (IIITDM Kancheepuram)
- Dr. Nagarajan G (IIT Hyderabad)
- Dr. Deepesh Kumar (IIT (BHU) Varanasi)
- Dr. Priya Ranjan Muduli (IIT (BHU) Varanasi)
- Dr. Oppili Prasad L (IIT (BHU) Varanasi)
- Dr. Deepak K. Agrawal (IIT Bombay)
- Dr. Pragathi Priyadharsini Balasubramani (IIT Kanpur)

COURSE CONTENTS (Tentative)

- **Computational Neuroscience & Systems Biology:** Brain function, seizures, sleep, emotion, and disease through multi-scale modeling
- **MRI & EEG Analysis:** Neural signal processing, brain connectivity, and cognitive state mapping
- **RNA-seq Workflows:** Preprocessing, differential expression, and functional annotation
- **AI for Brain & Behavior:** Epilepsy, emotion, and sleep decoding from multimodal data
- **Computational Drug Repurposing:** Systems-level linking of molecular signatures to therapies

REGISTRATION DETAILS

Registration Link:

<https://forms.gle/LeRqwVGc7tLSJDFQ8>

Last Date of Registration: January 15, 2026

Registration Fees:

Participation	Online (including GST)	Offline (including GST)
For UG, PG and PhD students	Rs. 750	Rs. 1,500
Staff (Technical, Administrative and Others)	Rs. 1,500	Rs. 3,000
For faculties, scientists and Post-doctoral Fellow	Rs. 2,000	Rs. 4,000
Industry Participants	Rs. 3,500	Rs. 7,000
International Participants	USD 100	NA
Food and accommodation included (for offline participants)		
** The Registration Fee & GST is non-refundable to participants.		

Payment may be made by one of the following methods:

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

Payable at SBI, IIT(BHU) Varanasi.

2. For online payment

Branch: SBI, IIT(BHU), Varanasi

IFSC: SBIN0011445

Name: I-DAPT-HUB-FOUNDATION

Account No: 40298890505

Course Mode: Offline/online

In case of any difficulty you can contact us at

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