

WHO CAN PARTICIPATE

This workshop is specifically designed for UG/PG/PhD students, researchers, faculties and technical staffs from the branches of Engineering/ Science who are interested in the AI/ML, Wireless Communication, Data Science, IoT/WSN, 5G/6G Applications, and predictive technologies.

REGISTRATION

Name: _____

Designation: _____

Institute: _____

Address: _____

Email ID: _____

Contact No: _____

Undertaking:

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

Signature of Participant

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 I-DAPT

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".

Telecommunications Research & Development in I-DAPT

Telecommunications Research & Development in IDAPT aims at providing technology development support in the area of communication systems such as time sensitive networking, multi-access edge computing (MEC), software defined networks and network function virtualization (NFV), URLLC, mMTC, M2M/ V2V/ V2I communications. Further, it focuses on low power wide area technologies (LPWA) including NB-IoT enhancements and alike, smart city and intelligent sensors and systems.

Short Term Course on

AI/ML for Next-generation
Wireless Networks

**A TECHNOLOGY INNOVATION HUB
ON
INTERDISCIPLINARY DATA ANALYTICS
AND PREDICTIVE TECHNOLOGY
(IDAPT)
Under
NATIONAL MISSION ON INTERDISCIPLINARY
CYBER PHYSICAL SYSTEM
(NM-ICPS)**



February 22-26, 2025

**Coordinator
Dr. Sanjeev Sharma and
Co- Coordinator:
Dr. Om Jee Pandey**

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 erst-while 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 ECE

Department of Electronics Engineering (ECE) 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 Bachelor, Master, and Doctoral programs in Electronics Engineering with the major thrust areas of Microelectronics, Microwave Engineering, Digital Techniques and Instrumentation and Communication Systems. In addition, continuing education programmes in specialized areas are offered on a regular basis for industry professionals and academic staff.

EMINENT SPEAKERS

(Tentative)

Prof. Rajesh M. Hegde (IIT Kanpur)
Dr. A. Rajesh (IIT Guwahati)
Dr. Brijesh Kumbhani (IIT Ropar)
Dr. Om Jee Pandey (IIT BHU, Varanasi)
Dr. Mayank Swarnkar (IIT BHU, Varanasi)
Dr. Kuntal Deka (IIT Guwahati)
Dr. Sanjeev Sharma (IIT BHU, Varanasi)

COURSE CONTENTS (Tentative)

The short-term course on **AI/ML for Next-Generation Wireless Networks** will provide participants with insights into the integration of artificial intelligence and machine learning techniques in advanced wireless communication systems. It will cover topics such as intelligent resource allocation, network optimization, and predictive analytics, enabling participants to understand and design innovative solutions for 5G, 6G, and beyond.

- Introduction of AI/ML Models and Wireless Networks
- Introduction to AI/ML in Wireless Networks
- Network Design and Optimization
- DL for Physical Layer Enhancements
- LPWAN Enabled IoT
- Applications of 5G and Beyond Networks
- AI/ML in Emerging Wireless Applications
- Network Security
- Traffic Prediction and Dynamic Load Balancing.
- DL in Quantum Communication
- Hands-on Practical Sessions
- Challenges in Integrating AI/ML into Wireless Systems
- Future Trends in AI/ML for 6G and beyond.

REGISTRATION DETAILS

Registration Link:

<https://forms.gle/jKaciHgkAceN6BRQA>

Last Date of Registration: ~~January 31, 2025~~

Registration Fees (Non-Refundable) **Feb. 10, 2025**

For faculties, scientists and post-doctoral Fellow: Rs. 3540/- (Including GST)
Industry: 5900/- (Including GST)
For UG and PG students: Rs. 1770 (Including GST)

Payment may be made by one of the following methods:

1. Demand draft in favor of I-DAPT-HUB FOUNDATION
Payable at SBI, IIT(BHU) Varanasi.
2. For online payment
Branch: SBI, IT(BHU), Varanasi
IFSC: SBIN0011445
Name: I-DAPT-HUB-FOUNDATION
Account No: 40298890505

Course Mode:

Both online and offline

In case of any difficulty, you can contact us at

sanjeev.ece@iitbhu.ac.in,
omjee.ece@iitbhu.ac.in