

About Electronics & ICT Academy at PDPM IITDM Jabalpur

The Ministry of Electronics and Information Technology (MeitY), Government of India has instituted Electronics and ICT Academies in the year 2015. In the second phase, the academy at PDPM IITDM Jabalpur aims at scalable training programmes in niche areas of Electronics and ICT for the development of the required knowledge base, skills and tools to unleash the talent of the Indian population. In addition to the faculty development programmes (FDPs) on fundamental and advanced topics in electronics, information and communication technologies, the Academy conducts customized training programmes for students, corporate sectors and research promotion workshops in emerging areas. The Academy is identified by the MeitY as the central hub of activities on training, internships, research, and consultancy programmes.

About PDPM IITDM Jabalpur

PDPM IITDM Jabalpur was established in 2005 with a focus on education and research in IT-enabled Design and Manufacturing. Since its inception, PDPM IITDM Jabalpur has been playing a vital role in producing quality human resources for contribution to India's mission of inclusive and sustainable growth. The Institute offers undergraduate, postgraduate and PhD programmes in Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Design and PhD programmes in Mathematics, Physics and Literature. Further, the Institute offers an undergraduate programme in Smart Manufacturing. Under IIT act, the Institute has been declared as an Institute of National Importance. The Institute campus is developed on 250 acres of land close to Dumna Airport, Jabalpur. The Institute is 10 kms from the main railway station and 5.5 kms from Dumna Airport, Jabalpur.

Faculty Development Programme

Securing Internet of Things: Trends, Technologies, and Threat Mitigations

The course is designed to equip participants with comprehensive knowledge of the Internet of Things (IoT) and its associated security challenges. It aims to empower educators and researchers with a deep understanding of various security threats within IoT ecosystems, along with practical tools and methodologies to detect and mitigate them. Additionally, the course explores a range of real-world IoT applications, including smart cities, smart homes, healthcare systems, and more, highlighting both the opportunities and vulnerabilities inherent in these domains.

Who can attend: The Programme is open to faculty from all colleges, universities, and technical and professional institutes. Students, fresh graduates, researchers, and industry personnel working in allied disciplines can also attend.

Important Dates:

Last Date of Online Registration: July 20, 2025

FDP Dates: July 24-Aug 01, 2025

Coordinators:

Dr. Ranjeet Kumar Ranjan, Computer Science and Engineering Discipline, PDPM IITDM Jabalpur

Dr. Kriti Bhushan, Computer Engineering, NIT Kurukshetra

Contact us:

academy@iitdmj.ac.in, eict@iitdmj.ac.in

Mr. Durgesh Kushwaha : 7898670354

Faculty Development Programme

Securing Internet of Things: Trends, Technologies, and Threat Mitigations

July 24-Aug 01, 2025 (Online mode)



Electronics and ICT Academy, Phase II



*An Initiative of
Ministry of Electronics and Information Technology,
Government of India*



PDPM Indian Institute of Information Technology,
Design and Manufacturing, Jabalpur
Dumna Airport Road, Jabalpur 482005

Faculty Development Programme Securing Internet of Things: Trends, Technologies, and Threat Mitigations

July 24-Aug 01, 2025 (Online mode)

RESOURCE PERSONS

- Dr. Munesh Singh, NIT Delhi
- Prof. B. B. Gupta, Asia University, Taiwan
- Prof. D. K. Lobiyal, JNU New Delhi
- Dr. Vijay Kumar, NIT Jalandhar
- Dr. Neelam Dayal, IIIT Jabalpur
- Dr. Amit Singh, DRDO Delhi
- Dr. Sudhakar, CERT-In, MeitY
- Dr. Ankit Jaiswal, JNU New Delhi
- Dr. Ranjeet K. Ranjan, IIITDM Jabalpur
- Dr. Kriti Bhushan, NIT Kurukshetra

COURSE COORDINATORS

Dr. Ranjeet Kumar Ranjan,

Assistant Professor, CSE
PDPM IIITDM Jabalpur
Email: ranjeet.kr@iiitdmj.ac.in
Phone: +91-761 2794234
Mobile: +91-9013733204

Dr. Kriti Bhushan,

Assistant Professor, Computer Engg,
NIT Kurukshetra
Email: kritibhushan@nitkr.ac.in
Phone: +91-1744 233 558
Mobile: +91-72065 98772

Course Contents

- Introduction of IoT and its applications
- IoT Network Architecture and Threat Vectors
- IoT Security threat detection and mitigation:
 - Malware
 - Anomaly and Intrusion
 - DDoS attack
 - Botnet attacks, etc.
- Artificial Intelligence in IoT Security
- Role of Explainable AI (XAI) in IoT Security
- Real-World Applications and Case Studies
- Image forensics in IoT systems
- Security Concerns in Healthcare IoT (IoMT)
- Security Concerns in Industrial IoT (IIoT) and Critical Infrastructures.

Hands-On Sessions

- Python programming for Machine Learning
- IoT devices and Networks Simulations
- IoT Networks Security Threats and Mitigation
- IoT Botnet Detection on IoT Botnet using Machine Learning and XAI
- DDoS Attacks detection and mitigation in IoT Networks and SDN
- Intrusion and Malware detection in IoT systems
- Image Forensic in IoT environment
- DDoS Attacks detection and mitigation in SDN.

Programme Features

- Fundamentals of IoT ecosystems and their real-world applications.
- IoT specific security challenges and their detection and mitigation techniques.
- Instructor-led rigorous hands-on sessions with online (live streaming) sessions.
- Certificate on successful completion with full access to the course material.

Registration Details

- Registration link – Please fill out registration using the following link:
<https://forms.gle/squjNKAK9EejNQQ8>
- Registration fee: 500 INR/- (For Online)
- **Last Date for Registration: July 20, 2025**

Online Payment Details

• Internet banking

Beneficiary Name	PDPM IIITDM Jabalpur
Bank Name	INDIAN BANK
A/C No.	50018692852
IFSC Code	IDIB000M694

• UPI ID: iiitdmj@indianbk

