

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

From Solid-State Joining to Smart Factories: Technologies Advancements and Industrial Applications

This FDP covers recent technological advancements in solid state processes for high-performance and dissimilar material joining. The program emphasizes sensor-based monitoring, digital twins, and AI/ML-driven process optimization for real-time quality control and intelligent decision-making. Industrial case studies from aerospace, automotive, defence, and energy sectors are discussed to highlight practical implementation and scalability. The FDP aims to bridge the gap between fundamental joining science and data-driven smart manufacturing applications.

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 25, 2026**

Coordinators:

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Faculty Development Programme

From Solid-State Joining to Smart Factories: Technologies Advancements and Industrial Applications

July 27- August 04, 2026

(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

From Solid-State Joining to Smart Factories: Technologies Advancements and Industrial Applications

July 27 August 04, 2026
(Online mode)

RESOURCE PERSONS (names are in alphabetical order)

- Prof Arshad Noor Siddique, Jamia Millia Islamia New Delhi
- Prof. P. K. Jain, IIITDM Jabalpur
- Prof. Puneet Tandon, IIITDM Jabalpur
- Prof Satish V Kailas, IISc Bengaluru
- Prof. Tanuja Sheorey, IIITDM Jabalpur
- Prof. V. K. Gupta, IIITDM Jabalpur
- Faculties of other IIT's

COURSE COORDINATORS

Dr. Sachin Kumar,
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Course Contents

- Fundamentals of joining processes: fusion vs solid-state joining
- Friction Stir Welding and its advanced variants
- Linear Friction Welding (LFW), process windows, joint quality, and application domains
- Sensor integration and instrumentation for smart FSW and LFW systems (force, torque, temperature, vibration)
- Digital twins for FSW and LFW: process modeling, virtual commissioning, and predictive control
- AI/ML-based process optimization, defect prediction, and quality assurance in solid-state joining
- Augmented and Virtual Reality (AR/VR) in Industrial Applications
- Smart factory concepts: Industry 4.0, cyber-physical systems, and digital manufacturing
- Industrial case studies of FSW and LFW in smart factories (aerospace, automotive, defence, energy sectors)

Programme Features

- Interactive lectures and hands-on workshops conducted by leading academicians, industry professionals, and domain experts
- Opportunities to connect with experts in the field.
- Instructor-led rigorous hands-on sessions with online (live streaming) sessions.
- Certificate on successful completion

Registration Details

- Registration link – Please fill out registration using the following link:
- <https://forms.gle/hKAKx2cZF6MLExzz8>
- Registration fee: 500 INR/- (For Online)
- Last Date for Registration: **July 25, 2026**

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**

