About Electronics & ICT Academy at PDPM IIITDM 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 IIITDM 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 IIITDM Jabalpur

PDPM IIITDM Jabalpur was established in 2005 with a focus on education and research in IT-enabled Design and Manufacturing. Since its inception, PDPM IIITDM 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. Under IIIT 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.

Online Faculty Development Programme

Smart Materials: Theory, Modelling and Applications July 06-11, 2026

Smart materials change their properties such as size, shape, or viscosity in a controlled, reversible way when exposed to external stimuli. Common applications include sensors, actuators and energy harvesting. The course is designed to provide participants with in-depth knowledge of smart materials, numerical modelling techniques and experimental demonstrations to provide live experience.

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: 04 July 2026

FDP Dates: July 06-11, 2026

Patron

Prof. Bhartendu K. Singh

Director, PDPM IIITDM Jabalpur, Madhya Pradesh, India

Coordinator

Dr. M. Zahid Ansari
Associate professor, MEMS & Microfluidics Lab,
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Online Faculty Development Programme

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Electronics and ICT Academy, Phase II

Digital India Power To Empower

PDPM IIITDM Jabalpur

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

Organised by:

MEMS & Microfluidics Lab

MEMS & Microfluidics Lab,
Mechanical Engineering Discipline,
PDPM Indian Institute ofInformation Technology, Designand Manufacturing, Jabalpur,Airport Road, Jabalpur, Madhya Pradesh, 482005

Smart Materials: Theory, Modelling and Applications
July 06-11, 2026

Programme Features

- Covers all important types of Smart Materials and their applications.
- On-hand training sessions in numerical simulations using COMSOL/ANSYS.
- Experimental analysis and its live demonstration.
- Opportunities to connect with experts in the field.
- Numerical modelling can help in designing novel sensors and actuators.
- Learnings can be a seed to the future research direction of the participants.
- Certificate on successful completion with full access to the course material.

Resource Persons

- Prof. A. Arockiarajan, IIT Madras
- Prof. Bishakh Bhattacharya, IIT Kanpur
- Prof. I. A. Palani, IIT Indore
- Prof. Ashok Kumar Pandey, IIT Hyderabad
- Prof. Chongdu Cho, Inha University, Korea
- Prof. Pan Qiang, BUAA, Beijing, China
- Prof. Afzal Husain, SQU, Muscat, Oman
- Prof. Abdus Samad, IIT Madras
- Prof. V. K. Gupta, PDPM IIITDM Jabalpur
- Dr. S. Mukherjee, PDPM IIITDM Jabalpur
- Dr. S. Chokka, PDPM IIITDM Jabalpur
- Dr. M. K. Thakur, PDPM IIITDM Jabalpur
- Dr. M. Z. Ansari, PDPM IIITDM Jabalpur

Course Contents

- Introduction to Smart Materials
- Piezoelectric Materials
- Smart Fluids (ER/MR)
- Shape Memory Alloys
- Magnetoelectric Materials
- Piezoresistive Materials
- Electroactive Polymers
- Active and Passive Vibration Control
- Triboelectricity
- Self-healing Materials
- Smart Materials in MEMS Applications

Hands-On Sessions

- Numerical modelling of piezoelectric cantilever-based fluid density measurement
- Experimental study on application of piezoelectric cantilever in fluid density measurement
- Experimental study on application of piezoelectric cantilever in energy harvesting
- Numerical modelling of magnetorheological (MR) actuator
- Experimental study on Shape Memory Alloy (SMA) actuator
- Numerical modelling of flexible polymeric piezoresistive sensor
- Experimental study flexible polymeric piezoresistive sensor
- Experimental study on IPMC actuator
- Experimental study on Triboelectric nanogenerators

Registration Details

- **Registration link:** https://forms.gle/nQrwvEZTvXSEZVL2A
- **Registration fee** is ₹500 for national and $60 USD for international participants.
- **Last Date for Registration:** **04 July 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**

Contact Persons

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