



High End Workshop

on

3D Printing, Bio-manufacturing and Characterization of Materials

(Under the KARYASHALA Scheme - A SERB Initiative)

May 06 – 12, 2024

Organized by

**Mechanical Engineering Discipline,
PDPM IIITDM Jabalpur**

Sponsored by

**Science and Engineering Research Board (SERB),
Department of Science and Technology (DST),
Government of India under Accelerate Vigyan
Scheme**

Coordinator

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About KARYASHALA

"Accelerate Vigyan" strives to provide a big push to high end scientific research and prepare scientific manpower which can venture into research careers and a knowledge-based economy. 'KARYASHALA' is an effort to improve research productivity of promising scholars/employees from universities/organizations through high-end workshops on specific themes.

About the Program

The workshop offers education on 3D Printing advancements, hands-on demonstrations of additive manufacturing equipment, and insights into bio-manufacturing with real-life examples like scaffolding and tissue engineering. Scholars/employees will receive practical training on material characterization equipment and explore current research in mechanical engineering and interdisciplinary areas.

About the Institute

PDPM IIITDM Jabalpur is an Institute of National Importance, established by Government of India 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 in India's mission of inclusive and sustainable growth. The Institute is located at a distance of 10 kms from the Jabalpur railway station and 5.5 kms from Dumna Airport, Jabalpur. <http://www.iiitdmj.ac.in>

About the Department

Department of Mechanical Engineering started his journey in the year of 2005. The department has undergraduate program in Mechanical Engineering. At the postgraduate level, department offer Master and Doctoral program. The department is known for maintaining active research groups to carry out funded collaborative and interdisciplinary research.

Who can attend?

KARYASHALA is open to Undergraduate final year, postgraduate students and research scholars nationwide Preference will be given to the students who have an interest and background towards metal forming and deformation.

Tentative List of Resource Persons

- ❖ Prof. U. S. Dixit, IIT Guwahati
- ❖ Prof. Pulak M. Pandey, IIT Delhi
- ❖ Prof. Puneet Tandon, PDPM IIITDM Jabalpur
- ❖ Prof. Sachin Maheshwari, NSUT New Delhi
- ❖ Prof. John Kechiagas, University of Thessaly, Greece
- ❖ Prof. J. Paulo Davim, University of Aveiro, Portugal
- ❖ Prof. V K Gupta, PDPM IIITDM Jabalpur
- ❖ Prof. Prashant K Jain, PDPM IIITDM Jabalpur
- ❖ Mr. Abhay Kumar, RRCAT Indore
- ❖ Dr. M. Zahid Ansari, PDPM IIITDM Jabalpur
- ❖ Dr. Manu Srivastava, PDPM IIITDM Jabalpur
- ❖ Dr. Dan Sathiaraj, IIT Indore
- ❖ Dr. Avinash Kumar, IIITDM Kancheepuram
- ❖ Dr. Choo Hui Leng, Taylor's University, Malaysia
- ❖ Dr. Ashish Rajak, IIT Indore
- ❖ Dr. A. N. Jinoop, Teesside University, UK

Course Contents

- ❖ Introduction to 3D printing
- ❖ AM techniques and recent developments
- ❖ Bio-manufacturing
- ❖ Role of additive manufacturing in bio-manufacturing
- ❖ Food printing
- ❖ Mechanical and microstructural characterization
- ❖ Sample preparation for different characterization
- ❖ Role of sensors and actuators in manufacturing
- ❖ Hybrid additive manufacturing and recent trends
- ❖ Role of friction stir welding/processing in 3D printing
- ❖ Recent advancements in manufacturing
- ❖ Visit to design and mechanical departmental facilities of host institute

Registration Details

Registration Fee: There is no registration fee*

Registration link -

<https://forms.gle/AWR3hjb1BhAUATvo9>

Note: Only 25 candidates will be shortlisted and allowed to participate Travel, Food and Accommodation related expenses will be borne by PDPM IIITDM Jabalpur for the shortlisted candidates The participants must upload the "No Objection" certificate during registration (See the Reg link)

Last Date for Registration : April 28th, 2024

Intimation of selection through email by April 30th, 2024

Scan for
Registration

