



Workshop on High-End Equipment's: Fabrication and Characterization of Electronic Devices

21th JULY – 27th JULY 2022



Organized by
**Department of Electrical
Engineering &
Physics**

Indian Institute of Technology Patna
Bihta, Bihar:- 801106

About IIT Patna

Indian Institute of Technology Patna, established in August 2008, is an autonomous institute of education and research in science, engineering, and technology located in Bihta, 35 km from Patna. The new campus is spread over 500 acres of green land. IIT Patna has ten academic departments that offer B.Tech, M.Tech, MSc, and Ph.D. programs. The faculty members of this institute come with academic and research training from various institutes of excellence within the country and abroad. The recent publication records of the faculty members is commendable.



It includes many reputed national and international journals. Research activity in IIT Patna has been published in high-quality and peer-reviewed national and international journals. Faculty members of IIT Patna have been also participating in national and international conferences of repute.

About the Course:

This 'KARYASHALA' is aimed to provide hands-on experience to the students primarily from universities, colleges, and private academic institutions on device fabrication and characterization tools. This is a skill development program on device fabrication and its characterization by using the modern tools to analyze the experimental results. The program is meant to support motivated PG and Ph.D. level students with a strong will to excel in their scientific research pursuits.

Contents

The workshop will cover different thin film deposition techniques. The participant will get chance to understand the design of devices and fabrication. The electron microscopy technique will be covered with practical demonstration. Atomic force microscopy and VSM technique will be demonstrated. The detailed XRD techniques will be demonstrated.

FESEM



XRD



TEM



Local Committee Members

Patron: Director, IIT Patna

Dr. Saurabh Kumar Pandey (Convenor)

Dr. Manoranjan Kar (Co-Convenor)

Dr. Rajib Kumar Jha, HOD, EE

Dr. Pramod Kumar Tiwari

Dr. Kailash Chandra Ray

Dr. Jawar Singh

Dr. Yatendra Kumar Singh

Dr. A. D. Thakur, HOD, Physics

Dr. N. K. Nishchal

Dr. A.K. Thakur

Dr. Alpana Nayak

Dr. S. J. Ray

Dr. Md. Lokman Hakim Choudhury

Dr. A. K. Mukherjee

Events

❖ **Expert Talk**

❖ **Experimental Demonstration**

❖ **Software Demonstration**

❖ **Oral Presentation**

❖ **Lab Visits**

Outcomes

- There are sessions for Hands on Experiments and Visits to the research & teaching laboratories.
- Through the virtual fabrication process flow as well as the device and circuit designing the aspect, they will be able to simulate some basic devices.

Karyashala Organizer:

Dr. Saurabh Kumar Pandey

Assistant Professor

Department of Electrical Engineering

IIT Patna

Dr. Manoranjan Kar

Associate Professor

Department of Physics

IIT Patna

For any query please write to:

saurabh@iitp.ac.in, mano@iitp.ac.in

During the workshop, all the necessary protocols related to the safety from COVID shall be strictly followed. Applicants must be fully vaccinated (with two doses) against COVID 19. (Certificate verification for shortlisted candidates)

Fee Payment

The participation fees Rs 3000/- for the workshop will be accepted only through SBI i-collect under category : SERB-FCED. Interested candidates can register by completing the online Google form. Boarding, lodging, and travel support (train-AC-III only) will be provided to all the selected participants

<https://www.onlinesbi.com/sbicollect/icollecthome.htm?corpID=1968961>

Registration Link

<https://docs.google.com/forms/d/10aTQtK9TqmqFY0qSGRziuYd2EQOogWoKS9niuWN23Wo/edit>

Important Dates:

Registration opens: **July 07th, 2022**

Last date for registration: **July 18th, 2022**

Before registration, make the online payment as registration form requires the screen shot of online payment, date, and reference number. Selection will be on first come first serve basis.

An Electronic Certificate of participation from IIT Patna will be awarded to all participants after successful completion of the course.