



VLSI and Nanotechnology in Energy, Environment, and Neuromorphic Computation TEOP

Organized by





Centre for Advanced Electronics (CAE) Indian Institute of Technology Indore

December 21-23, 2020





Course Overview

This faculty development program (FDP) will cover topics in nanotechnology for next-generation applications in electronics, photonics, memory technologies, biochemical sensors, solar cells, energy storage and converters for the advancement of knowledge. This brings together expertise from engineers/scientists in different premier institutes in the country and abroad. This FDP is designed to give an exposure to design of experiments, material growth, characterizations and device/system fabrication and system packaging and integration. This course is aimed to bring together engineers, technologists, scientists and researchers through academic training and learning activities to augment and expand on acquired knowledge and encourage in-depth discussions through tutorials to prepare for research-led activities. This FDP is in line with various GoI initiatives such as Make in India, NITI Aayog, Aatmanirbhar Bharat, Digital India so on and so forth.

Course Details

Module 1: Fundamentals and advances in nanotechnology

Module 2: Design of experiments, growth, characterization, cleanroom processing and fabrication

Module 3: Nanotechnology in advanced memory

neuromorphic computation, VLSI circuit and system design

Module 4: MQWs and plasmonics in solar cells

Module 5: Nano-scale materials for biochemical sensors

Module 6: Advances in nanotechnology for energy storage and hybrid electric vehicles

Module 7: Fundamentals and advances in basics of applications in beyond 5G communications

Module 8: IoT applications of LEDs and photodiodes

Module 9: On-chip devices for optical fibre communication and optical interconnects

Module 10: Nanofabrication of advanced semiconductor devices and advanced packaging techniques



Subramanian S. Iver University of California, Los Angeles, USA



Samit Kumar Ray Director, S. N. Bose National Center for Basic Sciences, Kolkata

Distinguished



Manijeh Razeghi Northwestern University, USA



Sebastian Lourdudoss



KTH-Royal Institute of Technology, Sweden



Mukesh Kumar



IIT Indore



Shaibal Mukherjee IIT Indore



Vimal Bhatia IIT Indore

Myo Than Htay

Shinshu University, Japan



Yogesh S. Chouhan

IIT Kanpur

S. K. Vishvakarma IIT Indore



Manan Suri IIT Delhi



Apurba K. Das IIT Indore



Srimanta Pakhira IIT Indore

Course Fees

No registration fee for faculty members from TEQIP institutes

Participants from non-TEQIP institutes

- Rs. 10,000* (for industry personnel)
- Rs. 5,000* (for faculty / scientist)
- Rs. 2,000* (for student)

Fees Mode of Payment

For Online Payment

http://www.iiti.ac.in/page/e-payments

Name:

Bank Transfer

Beneficiary Name: Registrar IIT Indore

Bank Name: Canara bank

Branch: IIT Indore, Khandwa Road,

Simrol, Indore

Account number: 1476101027440

IFS Code: CNRB0006223

SWIFT Code/BIC: CNRBINBBISG

Important Information

The soft copy of completely filled registration form (along with Online payment receipt for the course fee) should be sent to the course coordinator on or before **December 19**, **2020**.

Course Registration

- Number of seats are limited. There is no registration fee for faculty members from TEQIP affiliated institutes.
- Online link will be provided for the registered participants prior to the FDP.
- Certificates will be issued for the registered participants.
- ❖ All relevant queries should be directed through e-mail to: shaibal@iiti.ac.in

Course Coordinator

Dr. Shaibal Mukherjee
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Email: shaibal@iiti.ac.in



REGISTRATION FORM (Please fill and send through e-mail)

Designation:
Institution/Organization:
Address:
Are you a faculty member from TEQIP Institute? (Yes or No)
E-mail id:
Phone/Mobile No.:
Payment details (For participants other than a faculty member from TEQIP Institute)
Bank Name:
Transaction reference:
Amount transferred:
Date of transaction:
Any other relevant information:

Signature of the applicant with date

^{*}inclusive of service tax