

Emerging Trends in VLSI and Nanoelectronics for Building Atmanirbhar Bharat Organized by







Centre for Advanced Electronics (CAE) Indian Institute of Technology Indore February 15-20, 2021





Course Overview

This faculty development program (FDP) will cover topics in VLSI and nanoelectronics devices and technologies for multidisciplinary applications including computing, communication, medical, defence, space and and energy. This FDP is designed to give an exposure to design of experiments, material growth, characterizations and device/system fabrication and system packaging and integration. The vision of the program is to expand knowledge and technology in specialized areas in advanced electronics through research, training, discussions and brainstorming sessions and to inculcate young faculty members, scientists, students and young researchers to become future leaders and innovators. This FDP is in line with various GoI initiatives such as Make in India, Aatmanirbhar Bharat, Skill India, Startup India, Digital India, AMRUT, so on and so forth.

Course Details

Module 1: Advances in VLSI and Nanoelectronics

Module 2: Modeling, material growth, characterization, Cleanroom processing and fabrication of devices, system

integration

Module 3: Neuromorphic computation and Silicon brain

Module 4: Advancement in solar cell technology,

biomedical applications, and biochemical sensing

Module 5: VLSI circuits and systems for AI and machine learning

Module 6: Nanoelectronics for energy storage, hybrid electric vehicles, and CMOS Photonics

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 for Atmanirbhar Bharat

Eminent Speakers



Prof. Udayan Ganguly IIT Bombay



Prof. Nihar Ranjan Mohapatra IIT Gandhinagar



Prof. Enakshi Bhattacharya **IIT Madras**



Prof. Madhusudan Singh IIT Delhi



Prof. Shree Prakash Tiwari IIT Jodhpur



Prof. Mahesh Kumar Prof. Shaibal Mukheriee



IIT Indore



Prof. Abhinov Kumar Singh Prof. Vivek Kanhangad IIT Indore



IIT Indore



Prof. Mukesh Kumar IIT Indore



Prof. Ram Bilas Pachori IIT Indore



Prof. Vinod Kumar IIT Indore



Prof. Vimal Bhatia IIT Indore



Prof. Apurba K. Das IIT Indore



Prof. Srimanta Pakhira IIT Indore

Course Fees

No registration fee for faculty participants from AICTE approved colleges and institutes

<u>Participants from non-AICTE</u> institutes

- Rs. 7,000* (for industry personnel)
- Rs. 5,000* (for faculty / scientist)
- Rs. 2,000* (for student)

Mode of Payment

For Online Payment

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

Bank Transfer

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Course Registration

- Number of seats are limited.
- 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

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REGISTRATION PROCESS

Click on the link below for online registration:-

https://forms.gle/PsqKoDddLzYf Wd4F6

Note

- ✓ Registration in the course should be completed by February 10, 2021.
- ✓ Notification of acceptance of registration will be notified via email by February 13, 2021.

^{*}inclusive of service tax