



## Mini-Colloquia

Indian Institute of Information Technology Design and Manufacturing,  
Kancheepuram

### THEME

## Nanoelectronics and Optoelectronics: From Fundamentals to Future (F2F)

The event aims to deliver the topics related to the fundamentals of the semiconductor devices, current trend in nanoelectronics, optoelectronic devices and its future from materials to devices perspective including theory to practice.

**Date : 16-09-2024**

### Organizing Institute

Indian Institute of Information Technology Design and Manufacturing Kancheepuram is a Centre of Excellence for technical education and research established by the Ministry of Education, Government of India to pursue design and manufacturing oriented engineering education and research and to promote the competitive advantage of Indian products in global markets. The institute has several centers of excellences like Teaching Learning Centre, Incubation Centre, Smart Manufacturing, Semiconductor Materials and Devices lab, Microelectronics and VLSI lab, Bio-inspired lab, Photovoltaics Lab, etc. with cutting edge research facilities and advanced tools in the respective domains.

### Organizing Team

The organizing team is consisting of several enthusiastic faculty members as well as student members who are working closely in the proposed Mini Colloquia (MQ) topic. The team will able to provide a detailed theoretical, and hands-on exposure to the participants in understanding the fundamentals of nanoelectronics and Optoelectronics including energy transition. The team has lab facilities with advanced and industry standard computing tools like Sentaurus TCAD, COMSOL Multiphysics, Cadence Virtuoso, MATLAB, Python, etc. for model development and simulation to excel in the proposed MQ theme. The details of organized events: <https://bit.ly/IEEE-EDS-SBC-IIITDM-KANCHEEPURAM>

### Outcome of the Event

The purpose of the MQ is to help the technical community to update themselves about recent trends in nanoelectronics and optoelectronics. Participants will be introduced to research-oriented problem solving, as well as the latest tools and techniques in the broad areas semiconducting devices.

- (ii) Understand the current trends in Nanoelectronics and Optoelectronics
- (iii) Learn about various emerging materials and devices
- (iv) Better job/research opportunities.

### Tentative Schedule

Day/Time	9:00 AM-9:30 AM		9:45 AM-11:00 AM	11:15 PM-12:30 PM		02:00 PM-03:15 PM	03:15 PM-03:30 PM
Events	Inauguration Ceremony	High Tea	Lecture-L01	Lecture-L02	Networking Lunch	Lecture-L03	Open House Discussion Validatory

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## How to Register

The registration is open to all UG/PG/Ph.D./Academicians/Industry Professionals working in the broad aspects of Electron Devices, optoelectronics, nanoelectronics. There are **no registration fees** to attend the event.

The event is a physical event fully sponsored by IEEE EDS scheduled in the IIITDM Kancheepuram campus, which is situated in Chennai. <https://www.iiitdm.ac.in/>

Link to Register: [https://bit.ly/EDS\\_Mini\\_Colloquia](https://bit.ly/EDS_Mini_Colloquia)

IEEE EDS IIITDM Student Branch Chapter: <https://bit.ly/IEEE-EDS-SBC-IIITDM-KANCHEEPURAM>



## DISTINGUISHED LECTURERS

**Prof. Navakanta Bhat, Professor, Centre for Nano Science and Engineering(CeNSE) Indian Institute of Science, Bangalore, India**



Dr. Navakanta Bhat has been a faculty at the Indian Institute of Science, Bangalore since 1999, where he is currently a Professor in the Centre for Nano Science and Engineering. He has made significant contributions in the areas of Nanoelectronics and Sensors technology. He was instrumental in creating the National Nanofabrication Center at IISc Bangalore, which has been benchmarked against the best university facilities in the world.

***L01 : Introduction to photovoltaics and energy transition materials and devices***

**Prof. Anil Kottantharayil, HAL R&D Chair Professor, Department of Electrical Engineering IIT Bombay, India**



Prof. Anil Kottantharayil received the Dr.Ing. degree (summa cum laude) from the Universitat der Bundeswehr, Munich, Germany, in 2002. From 2001 to 2006, he was with the Interuniversity Microelectronics Centre, Leuven, Belgium, where he worked on FinFETs, metal gate, and high-k integration in logic technologies. Since 2006, he has been with the Department of Electrical Engineering, Indian Institute of Technology Bombay, where he is currently a Professor.

***L02 : Nanoelectronics device physics and technology***

**Prof. Kuei-Shu Chang-Liao, Professor, National Tsing Hua University, Taiwan**



Prof. Kuei-Shu Chang-Liao received the Ph.D. degree from National Taiwan University, Taipei, Taiwan, in 1992.,He has been with the National Tsing Hua University, Hsinchu, Taiwan, since 1992, where he has been a Professor since 1999.

***L03 : Dielectric and Channel Materials for Advanced CMOS Devices from Memory Perspective***

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