Registration Form

Full Name: .....

.....

Designation: .....

Academic Qualification: .....

Department: .....

Organization: .....

Address for Correspondence: .....

.....

.....

Phone no.: .....

Mobile no.: .....

Email: .....

Type of Participation: (Please Tick)

- ☐ Students / JRFs / SRFs
- ☐ Teachers
- ☐ Scientists/Engineers from Industries and research organizations

Accommodation required (Yes/No):.....

Type of accommodation: (Please Tick)

☐ C-DAC Hostel ☐ Hotels

Details of registration fee:

Amount: ..... UTR no.: .....

Bank: ..... Date: .....

Date: Signature of Applicant

Registration Fee

Category of participants	Fees	On-Spot
• Students	500	750
• Faculty/Academicians/Researchers	1000	1250
• Scientists / Industrial delegates	1500	2000

Note: The form is available on the website: *http://www.acsd.ac.in*

Registration fee is to be paid through online process:

Bank Name : State Bank of India
Branch : Phase-7, Mohali
Account Holder : Director, Centre for Development of Advanced Computing, Mohali
Account Number : 0055034442545
IFSC Code : SBIN0050502
Branch Code: 50502
MICR Code: 160002137

Address of Correspondance

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Organized by:
Academic Consultancy and Services Division
Centre for Development of Advanced Computing,
Government of India
Ministry of Electronics and Information Technology(MeitY)
Mohali-160071 (India)

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DST-SERB Sponsored Workshop on

NE M&N

Futuristic Trends of Nano-Electronics, MEMS and NEMS

SEPTEMBER 18–19, 2018

Significance and Objectives of the Course

The Nano-Electronics, NEMS /MEMS market is one of the fastest growing zones of the semiconductor industries for the consumer, medical, defense, space, communication etc applications. Nanoelectronics, NEMS and MEMS is one of the increasingly important multidisciplinary areas from designing medical devices to manufacturing super computing devices to better batteries, and from manipulating the atomic molecules to manufacturing. There have been many developments in the last few decades towards the design, fabrication and commercialization of MEMS and NEMS based sensors. The electro mechanical device basically includes micro actuators, micro sensors, micro transducers, micro-switches, Biosensors, magnetic biochips, cell sorting, magnetic nanoparticles, spin electronic materials and sensors, magnetic inductive heads, and magnetic integrated inductors and transformers etc, these microdevice have occupied their own positions for different applications. The technical advancements in silicon industry and the requirement of high speed electronic and optical devices inevitably lead to an increased density of components on an integrated chip (IC) implementing the geometrical scaling. The conventional metal oxide semiconductor (MOS) devices behave differently at small dimensions increasing the problem of gate leakage, power dissipation, interconnection, cost of fabrication etc. In addition, conventional devices have also been modified to increase their operating speeds by implementing different devices configurations and geometries such as multi-gate MOSFETs, Vertical MOSFETs, Double gate FET, FinFETs, CNT and photodiodes etc. The advanced materials including, graphene, MoS2, and Black phosphorus etc. are being employed for the fabrication of such devices.

This workshop will help the participants to understand the Current and Futuristic Trends of Nano electronics, MEMS & NEMS devices. The course will provide an insight to both theoretical and practical knowledge for the design, analysis, and operation of state-of-the art Nanoelectronics, NEMS and MEMS devices in order to meet the needs of relevant industry and research organization.

Course Content

The major topics to be covered in workshop are:

- Overview of basic microfabrication processes
- Bulk and Surface micromachining.
- MEMS/NEMS design, modeling and simulation.
- MEMS/NEMS-based sensors and actuators.
- Design and simulation of micro cantilever beams and diaphragms
- Challenges in CNT based Devices
- CNT based Interconnects
- FinFET based SRAM design
- Quantum dots for cancer detection
- Quantum dot based displays

Resource Persons

- Scientists from Semiconductor laboratory(Mohali)/CSIO, Chandigarh, CSIR-IMTECH, Chandigarh
- Faculty from IIT Delhi, IIT Roorkee, Punjab University
- Engineers from Cadence, Cadre Design and Intel Bangalore

Participants

The course is intended for faculty, research scholars, Ph.D / M.Tech./ B.Tech, and professional from industries.

Accommodation

Accommodation for pre-registered delegates can be arranged in C-DAC hostels / nearby hotels on request. The participants should clearly indicate their requirement in registration form.

Schedule

Day 1 (September 18, Tuesday)

9:00 – 9:30 Registration	Registration Counter (Main Gate)
9:30 - 10:00 Inauguration	Auditorium
10:00 – 11:00 Keynote lecture	Auditorium
11:00 – 11:30	High Tea
11:30 – 12:30 Keynote lecture	Auditorium
12:30 – 13:30 Invited Talk	Auditorium
13:30 – 14:30 Lunch Break	Cafeteria
14:30 – 15:30 Invited talk	Auditorium
15:30 – 16:00	High Tea
16:00 – 17:30 Experimental Hands on Session-1	R&D Lab:39

Day 2 (September 19, Wednesday)

9:00 – 10:00 Invited lecture	Auditorium
10:00 – 11:00 Invited lecture	Auditorium
11:00 – 11:30	High Tea
11:30 – 13:30 Experimental Hands on Session-2	R&D Lab:39
13:30 – 14:30 Lunch Break	Cafeteria
14:30 – 15:30 Invited talk	Auditorium
15:30 – 16:30 Valedictory	Auditorium
16:30 – 17:00	High Tea