

**Three Days Workshop
On**

**“Recent Trends in
Microelectronics and MEMS
Technologies”**

10-12 April, 2015

Department of Electronics and
Communication Engineering,
National Institute of Technology Silchar,
Silchar – 788010, Assam, India.

Registration Form

1. Name:
2. Designation.....
3. Organization:.....
4. Address:
-
-
5. Phone/Mob.....
6. E-mail.....
7. Education Qualifications:.....

Date:

Signature:

You can also register online for the workshop at:

http://www.nits.ac.in/ieee_eds_student_chapter/rtnmt.html

Patron: Prof. N. V. Deshpande,
Director, NIT Silchar

Chairperson: Prof. S. Baishya,
Dean (R&C), NIT Silchar

Co-chairperson: Dr. R. H. Laskar,
Head, Dept of ECE, NIT Silchar

Branch Counsellor: Prof. F.A. Talukdar,
Dean (Academic), NIT Silchar

Branch Chapter Advisor: Dr. T.R. Lenka
Asst. Prof., Dept. of ECE, NIT Silchar

Workshop Coordinator:

Dr. Taimoor Khan

Asst. Prof., Dept of ECE, NIT Silchar
Email: ktaimoor@gmail.com
Mobile: +91-9411823416/+91-8135048134

Student Coordinators:

Pralay Chakrabarty,
M.Tech, NIT Silchar
Email: pralay0755@gmail.com
Mobile: +91 9864469272

Mithlesh Kumar
M.Tech, NIT Silchar
Email: mithlesh.ece@gmail.com
Mobile: +91 9435107784

Saurabh Agarwal
M.Tech, NIT Silchar
Email: saurabhagarwalshanu@gmail.com
Mobile: +91 7896223518

**Three Days Workshop
On**

**“Recent Trends in
Microelectronics and MEMS
Technologies”**

10-12 April, 2015

At

NIT SILCHAR



Organized By

**Department of Electronics &
Communication Engineering
National Institute of Technology Silchar
Assam-788 010**

In Association with

**IEEE-EDS Student Branch Chapter
NIT Silchar,**



www.nits.ac.in/ieee_eds_student_chapter/

About NIT Silchar:

National Institute of Technology (NIT) Silchar (an Institute of National Importance by MHRD, Govt. of India), was established in 1967 as Regional Engineering College (REC) Silchar, Assam. In 2002 it was upgraded to NIT Silchar. It is situated on the banks of river Barak and on a sprawling campus spread over 600 acres of land on the outskirts of Silchar. It is surrounded by beautiful lakes and hillocks. It offers six undergraduate courses and ten Post-Graduate courses. The department of Electronics & Communication Engineering offers B. Tech (ECE), M. Tech (Microelectronics and VLSI Design) and M. Tech. (Communication and Signal Processing Engg.) and Ph.D. (in several thrust areas of ECE) degrees. The department is equipped with state-of-art laboratories of VLSI Design, Microwaves, Signal processing, Communication Engg with industry standard simulation tools and Equipments.

About IEEE-EDS Students Chapter:

The IEEE-EDS (Electron Devices Society) Students branch chapter was formed at NIT Silchar in 2013 with eight EDS Members.

Important Dates:

Receipt of Registration Form: **8th Feb. 2015**
Date of Workshop : **10-12th April 2015**

About the Workshop:

Since the discovery of transistor and development of first generation ICs in silicon material about 60 years back, the world of electronics has undergone a revolutionary change over the past 6 decades. Today, millions of transistors are packed in a silicon chip having just a few square cm areas. There

is hardly any aspect of human life which is not touched by this revolution. The "gate length" of the MOS transistor continues to shrink with advent of newer concepts and technologies allowing more and more functional elements to be packed in a single silicon chip. The fabrication of ICs can be visualized as combining various individual unit processes in a definite sequence. Some of the unit process steps are: thermal oxidation, diffusion, ion implantation, masks making, photolithography, deposition of dielectric and conducting layers, selective etching of different layers and CMP. In addition, the silicon wafer needs to be "diced" to separate the individual chips and then packaged so that these can be mounted on a PCB for its practical use in a gadget. The entire fabrication process is carried out in ultraclean room. The cost of establishing a modern manufacturing line for Silicon Integrated Circuits runs into several billion dollars.

MEMS can broadly be termed as devices which incorporate some mechanical elements with electronic function. In early eighties, MEMS evolved from the IC fabrication technologies which were already matured at that time. With passage of time, many new materials and devices emerged from these developments and today, there are several devices which are made using polymers and other materials.

Topics to be covered:

- **Microelectronics Technology: An Overview**
- **Microelectronics Fabrication: What Academic Institutions can do?**

- **MEMS Technology: From Concept to Implementation**

Speaker:

Prof. Sudhir Chandra

Professor,
Centre for Applied Research in Electronics,
IIT Delhi

Intended Audience/Benefits and Learning Objectives:

Faculty and Students from Academic Institutes, Researchers from R&D Organizations with branches of Electrical Engineering, Instrumentation Engineering and Mechanical Engineering, who wish to develop interest in Microelectronics Technology and MEMS Technology, are encouraged to apply. Participants will acquire in-depth understanding on these technologies starting from basic overview to futuristic advancement.

Registration:

There is no registration fee for the workshop.
Candidates are encouraged to register online for the workshop.

How to Reach NIT Silchar:

There are daily flights from Kolkata, Guwahati, Imphal and Agartala. Silchar is also well connected by road. Buses run every day from Guwahati, Agartala and Imphal and provide day as well as night services. The preferred bus services are Capital, Network, ASTC, Jagannath and Royal Tours and Travels. Rail connectivity is discontinued temporarily due to broad gauge conversion of railway tracks.