Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India

ONE DAY WORKSHOP ON

SEMICONDUCTOR DEVICE MODELING USING Visual TCAD & GENIUS 3D

Organized by: Electronics Engineering Department, S.P.I.T. in association with 'Cadre Design Systems'

You are invited to attend workshop focusing on the usage of TCAD simulation tools for the purpose of Semiconductor Device Operation and Modeling. The workshop aims at giving a basic introduction and hands-on training on TCAD software.

About Semiconductor Device Modeling

As semiconductor design becomes more and more complicated with devices getting ever smaller approaching the physical limits, it becomes extremely time-consuming and expensive to optimize device design. Such efforts on the part of experimentalists can be vastly reduced with the help of detailed computer modeling. Semiconductor device modeling creates models for the behavior of the electronic devices based on fundamental physics, such as the doping profiles of the devices.

About TCAD

Technology CAD (Technology Computer Aided Design, or TCAD) is a branch of electronic design automation that models semiconductor fabrication and semiconductor device operations. Use of TCAD starts from the physical description of integrated circuit devices, considering both the physical configuration and related device properties, and builds the links between the broad range of physics and electrical behavior models that support circuit design. It seeks to quantify the underlying understanding of the technology and extract that knowledge to the device design level, including extraction of the key parameters that support circuit design and statistical metrology.

Speakers

Company representatives from **Cadre Design Systems** would be conducting the workshop. Cadre Design Systems is a leading Electronic Design Solutions supplier and TCAD/ASIC/FPGA EDA Tools in India. Cadre provides TCAD & EDA software solutions to address the ever growing and challenging design requirements of the semiconductor industry

Topic Cover during workshop: VISUAL TCAD Tool Overview

Building Multiple TCAD Devices Experiments
Creating a 3D Device Structure using GDS2MESH.

Advance Devices simulation using TCAD

- Design and implementation of CMOS using NMOS and PMOS.
- Implementation of DGFET.
- Implementation of FINFET & Nanowire FET using GDS2MESH and GENIUS.

DATE : Wednesday, 19 feb 2014, Timing: 10:00AM to 5:00 PM

Registration Charges: Rs. 1000/--

Limited seats only, You are requested to enroll your registration fees by cash or through a Cheque/DD on or before 15th Feb. 2014. Cash/Cheque/Demand Draft in the name of "SPIT Allied Division", payable at Mumbai.

Venue : SARDAR PATEL INSTITUTE OF TECHNOLOGY, Andheri (West) MUMBAI

For further info and registrations, contact Dr. Surendra Singh Rathod (9920228275, surendra_rathod@spit.ac.in)

Outcomes of Workshop:

1. Understanding of Device simulation and use of Visual TCAD for the same
2. Possible experiments to be conducted in revised course **Electronic Devices** (SEM: III: Electronics Engg.)
3. Possibilities of research topics with Visual TCAD simulator

Device Gallery: