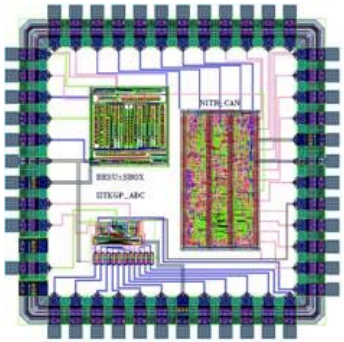
A Short Term Course on

VLSI DESIGN & CAD TOOLS

(10th June – 2nd July 2013)



Coordinators

K.K.Mahapatra

A.K.Swain

Co-coordinators

B.D.Sahoo

D.P.Acharya

Dept. of Electronics & Comm. Engg.

National Institute of Technology

Rourkela – 769 008.

COURSE OBJECTIVE:

Very Large Scale integrated Circuits (VLSI) have become the prime medium of realization of modern Electronic Systems. There has been a great thrust to train professionals in the VLSI Design to meet the requirements of semiconductor industry. CMOS concepts have become the key of VLSI & ULSI for high-performance computing and other engineering applications.

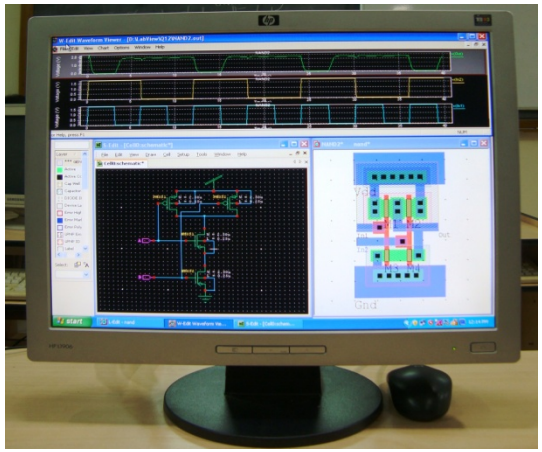
The main objective of this course is to train students & Professionals with VLSI Design fundamentals and provide them with hands on experience on the software and CAD tools used for VLSI design.

COURSE CONTENTS:

Module-I VLSI Design Fundamentals

(10th June – 20th June 2013)

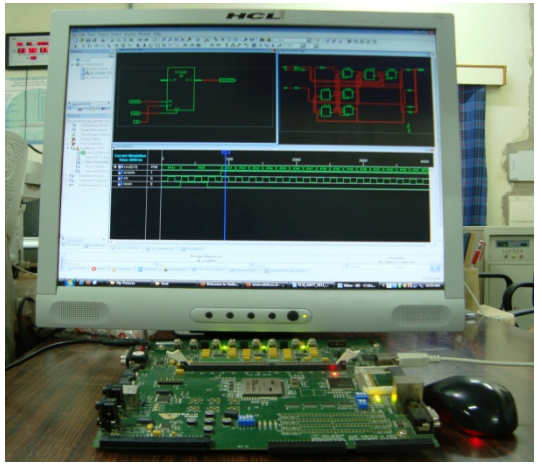
- VLSI Design Overview
- MOS fabrication process
- CMOS logic gates
- Dynamic Logic, Memory Design
- CMOS layout design
- Analog VLSI Design



Module-II VLSI System Design

(21st June – 2nd July 2013)

- ASIC Design, FPGA implementation
- RTL design using HDL (VHDL/ Verilog)
- Synthesis & Timing Analysis,
- Placement & Routing,
- Floor-planning,
- Testing & Verification.



VLSI CAD Tools to be used:

Tanner Tools, Xilinx ISE, Synopsys, and Cadence

Knowledge of Basic and Digital Electronics is a pre-requisite.

INTENDED AUDIENCE:

The course is designed primarily to train students, professionals, scholars, faculties to take up VLSI Design as a career option in industry and academics. Students and Faculties of Electronics, Electrical and Computer Science & Engineering would find this course extremely useful.

ABOUT NIT ROURKELA:

National Institute of Technology (NIT), Rourkela was founded as Regional Engineering College, Rourkela in 1961. It is a prestigious Institute with a reputation for excellence at both undergraduate and postgraduate levels, fostering the spirit of national integration among the students, a close interaction with industry and a strong emphasis on research, both basic and applied.

The city of Rourkela is a bustling industrial town, cosmopolitan by nature and is well connected to all parts of the country by road and rail. It is en-route Howrah-Mumbai main line of South-Eastern Railway. Nesting amidst greenery on all sides, NIT campus is approximately 7km from Rourkela railway station. The nearest airports are Ranchi, Kolkata and Bhubaneswar, which are well connected by trains.

WEBSITE:

http://www.nitrkl.ac.in/

REGISTRATION AND FEES:

Module	Student	Faculty	Industry
Module-I	4000/-	5000/-	7500/-
Module-II	4000/-	5000/-	7500/-
Both	**6000/-**	**8000/-**	**13000/-**

MODE OF PAYMENT:

Payment should be done in DD in favor of "**Continuing Education, NIT Rourkela**" payable at **SBI, NIT Campus Branch**. (Code: 2109).

ACCOMMODATION:

Accommodation will be provided in Students' hostel or Visitors' hostel of NIT, Rourkela as per availability. For hostel & Visitor Hostel room rent will be charged as per actual.

IMPORTANT DATES:

Last date of receipt: **06/06/2013**
(Completed application form with Draft)
Selection letters to be mailed: **07/06/2013**
Course Commences on: **10/06/2013**

CONTACTS:

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NOTE : Please mention on the envelope "APPLICATION FOR TRAINING PROGRAM ON VLSI Design & CAD Tools"

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VLSI DESIGN & CAD TOOLS

10th June – 2nd July 2013

Registration Form

1. Name : _____
2. Sex (M/F):_____
3. Category: Student / Faculty / Industry
4. College / Organization name:_____

   _____
5. Highest Academic Qualification:_____
6. Address for Correspondence:

   Phone/Mobile:

   Email:
7. Accommodation Required: Yes/No

   (Hostel/Visitor Hostel)
8. Bank Draft Details:

   Amount_____ Draft No: _____

   Drawn on _____

Date:
Place: Signature of Participant

Forwarding remark of the Head of the Department / Institute

Signature (with seal)