About E&ICT Academy

Electronics and ICT Academy is an initiative of Ministry of Electronics & Information Technology (MeitY), Govt. of India for conducting various Faculty/ Research Scholar Development Programme. Academy has planned short term training programmes on fundamental and advanced topics in IT, Electronics & Communication, Product Design, Manufacturing with hands on training and project work using latest software tools and systems. In addition, the Academy will conduct specialized/customized training programmes and research promotion workshops for corporate sector & educational institutions.

Mode of Delivery
Online through Webex Platform

Date and Time

Start date of Registration: 01 *January, 2025*
Last date of Registration: 08 *February, 2025*
Per Day Timings: *02:00 pm to 06:00 pm*
Contact Hours: *40 Hrs*
(Theory, Hands-on & Evaluation)

Registration Fees

Rs. 500/- (Inclusive of GST)
Mode of Payment Online Only
(NEFT/ RTGS /IMPS)

**Note:
1. Registration Fees includes E&ICT Academy bag, stationaries and 10 days working lunch and only evening Tea.
2. Registration Fees is Refundable if the registration cancellation request is submitted before the last date of registration.

Details for Online Transfer

Bank Name: State Bank of India
Account Name: IIT Guwahati R and D E and ICT Academy
Account No.: 36071160089
IFSC Code: SBIN0014262
Bank Name: State Bank of India

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IIT Guwahati

सत्यमेव जयते

An Initiative of
Ministry of Electronics & Information Technology (MeitY), Government of India

Electronics & ICT Academy
IIT Guwahati, Assam

Two - Week Joint Faculty Development Programme on

VLSI Design using Open Source tools

10 - 21 February, 2025

In Association with
Spoke Centre: GITAM University

GITAM
DEEMED TO BE UNIVERSITY

Digital India
Power To Empower

ELECTRONICS INDIA
Billion Needs Million Chips

About OpenROAD

OpenROAD is a database-centric, object-oriented, 4GL rapid application development (RAD) tool that lets you develop and deploy mission-critical, n-tier business applications on Windows and Linux. OpenROAD connects to databases such as Ingres, Microsoft SQL Server, Oracle, Zen and Actian X and supports additional databases using ODBC.

Course Objectives

The objective of this FDP is to train the participants with VLSI design backend flow through the open-source VLSI design tool "OpenROAD". After successful completion of this FDP, the participants would be able to run the RTL synthesis to GDS-2 flow for their own design.

Course Content

Introduction to VLSI Backend Flow
Stages and Sign-off Checks Overview
OpenROAD Design Flow
Detailed VLSI Backend Flow is as follows:
RTL Synthesis, Floorplanning, Placement, Static Timing Analysis, Clock Tree Synthesis, Routing, GUI, OpenROAD for PPA

Hands - On

Installation of the OpenROAD Tool.
Input files
RTL synthesis
Sanity Checks
Floorplan and Placement
Post-placement Timing Analysis
Clock Tree Synthesis (CTS)
Post-CTS Timing Analysis
Routing and DRC/LVS Check

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Coordinators from the Spoke Institute

- Dr. Ch R Phani Kumar - Program Coordinator
- Dr. Ch Rajasekhar - Local Coordinator
- Dr. Ijjada Sreenivasa rao - Lab Co-ordinator

Who Can Apply

Programme is open to Faculty Members and PhD Research Scholars from Universities and Colleges working in the domain of digital VLSI Design.

Pre- Requisite

Ubuntu 22.04 Version
8 GB Ram
Core i3 Processor

Course Outcomes

The FDP on Opensource EDA Design tool, OpenROAD, is organized to bring together researchers, developers, and users to discuss advancements, share knowledge, and collaborate on open-source tools for chip design. After completion of this FDP, participants would be able to design digital circuits through VLSI backend flow.

How to Register

Online: The participants may log on to the E&ICT Academy, IIT Guwahati website:

https://eict.iitg.ac.in/index_course_category?cate=em9DWXhJQTVkRkdXMUhQT0dtSjkzQT09

Scan the QR for registration

Registration Form Link:
https://forms.gle/msxCWQNs543niRRR8

Note:

- The Faculty/Staff are requested to submit the NOC from respective department before attending the session.
- The participant need to carry the Institute/ Organization valid Identity Card (Both in Original & Photocopy). The participants need to carry their passport size photos.
- Participants willing to attend the FDP in the offline mode at IIT Guwahati will get on-campus hostel accommodation if available. The participants will stay on self paid basis.
- These FDPs can be considered at par with other QIP (Quality Improvement Programme) and other provisions for recognition/credits.
- Participants have to submit UTR No./Transaction receipt as the proof of payment while registering for the FDP.