About the College

National Institute of Technology – Trichy, an institution of academic excellence, was established in the year 1964. Most of our programmes have been accredited by National Board of Accreditation (NBA). Recognizing the excellent infrastructure, faculty, progressive outlook, high academic standards and record performance, One unique feature at National Institute of Technology - Trichy is the close collaboration of educational institution and industry, resulting in the cross fertilization of theory with practice.

About the Department

The Department of Computer Science and Engineering with its cohesive team of faculty members, offers a sound program at the UG as well as the PG levels. The curriculum is a blend of the conventional and the radical. It is updated regularly to keep up with the growing demands and the changing trends of the software industry and research laboratories. Core courses include Programming Languages, Computer Architecture, System Software, Networking Technologies and Artificial Intelligence. State-of-the-Art computing facilities are provided by the Octagon Computer Center - Computer Support Group, our Computer Centre in the newly established Centre. They epitomize the cutting edge technology available in our college.

About the Coreel Technologies

CoreEL University Technologies is a CASPS technology company with business spread across design services & product development, distribution and training. Head Quartered in Bangalore, India, CoreEL is a leading provider of VLSI & Embedded Systems design services and IP. Since its inception in 1999, CoreEL Technonologies a privately held corporation has always strived to deliver quality solutions & support in all the business areas that it serves. Our Services offerings include Distribution of Silicon solutions, EDA tools, COTS products, Engineering Services, Education and Manufacturing,. These services are offered to Defense and Aerospace, Telecommunication and Networking, Homeland Security, Broadcast Video and Education segments. CoreEL University Program: CoreEL University Program provides Eco-System support to Indian Academia in Engineering Higher Education, in the field of Embedded systems thereby enabling the delivery of quality education. CoreEL university achieves this by providing state of the art products from XILINX, MENTOR GRAPHICS, MATLAB, Ansys, VxWorks (WIND RIVER), Speedgoat, PCB Design Tools for Mentor

Objectives of The Training Course

This course provides participants with an introduction to embedded system design flow on Zynq using ZedBoard and Xilinx Vivado design software suite.

Two Days Workshop on Advanced Embedded system design on Zynq using Vivado targeting Zed board

30th and 31st July 2015

Organized by
Department of Computer Science & Engineering
National Institute of Technology
Trichy - 620 004
In Association With
**Highlights**
- Use Xilinx design constraints to estimate performance.
- Rapidly architect an embedded system targeting the ARM processor of Zynq located on ZedBoard using Vivado and IP Integrator.
- Write an application to access peripherals.
- Extend the hardware system with Xilinx provided peripherals.
- Debug the design using Vivado hardware analyzer.

**Eligibility**
Faculty working in engineering institutes are eligible to apply.

**Prerequisites**
The participants should be familiar with the following:
- Conceptual understanding of Xilinx All Programmable SoC and hardware design
- Basic embedded concepts

**Course Content**

**Lab 3: Extending Memory Space with Block RAM**
- Instantiate AXI BRAM controller and BRAM to extend address space and run application from it.

**Day 2:**
- Interrupts
- Low Latency High Bandwidth
- **Lab 4: Direct Memory Access using CDMA**
- Perform DMA operations between various memories using AXI CDMA

**Schedule**
**Day 1:**
- Review Embedded System Design in Zynq using Vivado
  - **Lab 1: Create a SoC-Based System using Programmable Logic**
    - Create a complete processor system with built-in processor and IP in programmable logic.
  - **Advanced Zynq Architecture**
  - **System Debugging using Vivado Logic Analyzer and SDK**
  - **Lab 2: Debugging using Vivado Logic Analyzer cores**
    - Insert various Vivado Logic Analyzer cores to debug/analyze system behavior.
  - **Memory Interfacing**

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**Registration Form**

Name:
Designation:
Institution Address:

E-mail:
Mobile No:
Need For Accommodation: Yes/No
D.D.No:
Date:
Bank Name & Branch:

**Signature of the applicant**

**Committee**

Coordinators
N Ramasubramanian,
B. Shameedha Begum,
Dept. of Computer Science and Engineering,
National Institute of Technology,
Tiruchirapalli

**Registration Fee:**
Faculty Members: Rs.1200/-
Limited Seats Available
Tea, Snacks and Working Lunch will be provided. Accommodation will be provided in NIT Guest House on Payement basis
For technical queries contact: shameedha@nitt.edu
Mobile: +91 9791912070
Mobile: +91 9597818491 (Accommodation )

**Important Dates**
- Last date for the receipt of applications: 20th July 2015
- Confirmation: 22nd July 2015

**Resource Persons**
- Mr. H. Balachander, Manager AE, CoreEL Technologies Expert Team.
- Mr. Sivasathy Narayanan, Mob: 9843713132