

## REGISTRATION DETAILS

### Registration Fee

Faculty members (IEEE Members)	: Rs. 1200
Faculty members (Non IEEE Members)	: Rs. 1500
Corporate Members	: Rs. 2000
Interested Students	: Rs. 500

Registration fee should be drawn in favor of "Nitte Meenakshi Institute of Technology" payable at Bengaluru. For registration, click the link given below and upload scanned copy of application and DD. The hard copy of the application and DD is to be submitted by hand on 04-06-2018. Selection will be on first come and first serve basis and limited to first 40 participants only.

### Important Dates

Receipt of Application	: 02-06-2018
Intimation of Selection	: 03-06-2018

### For registration contact:

Ms. Prajna K B : 9886052528  
Email Id: [prajna.kb@nmit.ac.in](mailto:prajna.kb@nmit.ac.in)

### Registration link:

<https://goo.gl/forms/yYPDyJGfGFpan4032>

## TRAVEL AND ACCOMMODATION

No TA/DA will be provided. For local travel, participants can make use of college route buses. Accommodation may be arranged on request with nominal charges.

## ADDRESS FOR CORRESPONDENCE

Department of Electronics and communication Engineering, Nitte Meenakshi Institute of Technology, Yelahanka, Bengaluru- 560064  
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## CHIEF PATRONS

Sri. N.V.Hegde, President, Nitte Education Trust  
Prof. N.R.Shetty, Advisor, Nitte Education Trust

## PATRONS

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Dr. K. Sudha Rao, Advisor (Admin & Management), NMIT  
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Mr. Rohit Punja, Administrator, NET  
Dr. Jharna Majumdar, Dean (R&D), NMIT

## TECHNICAL ADVISORY COMMITTEE

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## CONVENER

Prof. Rajesh N  
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## RESOURCE PERSONS

Mr. Sanjeev Kubakaddi, Director, itie Knowledge Solutions  
Mr. Vijendra V, Application Engineer, CoreEL Technologies  
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## Faculty Development Program on Signal Processing and Embedded System Design using Xilinx and MATLAB Tools

June 4 – 9, 2018



## Organized By

DEPARTMENT OF ELECTRONICS AND  
COMMUNICATION ENGINEERING, NMIT,  
YELAHANKA, BENGALURU- 560064

## In association with



### ABOUT THE INSTITUTION

Nitte Meenakshi Institute of Technology (NMIT) is one of the institutions run by the Nitte Education Trust, Mangalore. NMIT has been ranked 100 amongst various Engineering colleges by National Institutional Ranking Framework (NIRF), MHRD, Govt. of India. NMIT offers wide range of academic programs comprising of seven UG and eight PG programs in Engineering besides MBA and MCA. Ten Departments of NMIT offer doctoral programs of VTU / Mysore University. NMIT has several sponsored research projects amounting to Rs.7+ Crores sanctioned by different reputed National Funding Agencies such as DST, DIT, AICTE, DRDO Labs, VGST, IEEE, VTU etc. NMIT is a unique institution which has established five multi-disciplinary research centers viz for Small Satellites, Robotics, Nanomaterial & MEMS, Computational Fluid Dynamics and Design Engineering & Process Simulation.

### ABOUT THE DEPARTMENT

The Department of Electronics and Communication Engineering started in the year 2001 with an intake of 60 undergraduate students. And now the intake has been increased to 180 in the year 2012-13. The department has qualified and technically competent faculty with a rich blend of academic, industrial and research background. The department has high-end lab with industry standard tools like Cadence, HFSS, MATLAB, and Xilinx. The department regularly conducts education programs such as seminars, workshops and courses on current technical topics, related to the emerging trends of technology development.

### ABOUT CoreEI 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 (Rapid Controller Prototyping, Hardware-in-the-Loop simulation, and deployment,) PCB Design Tools from Mentor Graphics, Analog Discovery Kits from Digilent (Analog Discovery kit can replace the conventional regulated power supply, Function Generator, Oscilloscope, and smaller parts like Bread board etc with one portable, compact and power effective and low cost solution!) to universities. Multiyear application engineering support on these products Faculty and student training, providing industry specific inputs to update the curriculum and helping universities set up Centers of Excellence in Embedded Systems arena.

### WORKSHOP AGENDA

#### Day-1:

- Fundamentals of Matlab and simulink
- FPGA Architecture
- Embedded system design using FPGA
- Xilinx System Generator

#### Day-2:

- Signal processing Using Matlab
- Model based design using Simulink
- Introduction to Xilinx and System Generator Work flow, Image processing with Matlab

#### Day-3:

- Generating HDL code from Simulink
- Generating HDL code & Testbench for simulink models
- Performing speed and area Optimizations
- 7-Series Architecture Overview
- Vivado Design Flow
- Lab 1: Creating an HDL Design

- Use Vivado IDE to create a simple HDL design. Simulate the design using the XSIM HDL
- Simulator available in Vivado design suite. Generate the bitstream and debug the design using Vivado Logic Analyzer
- IP Integrator and Embedded System Design Flow
- Lab 2: Create a Processor System using IP Integrator
- Create a simple ARM Cortex-A9 based processor design targeting the ZedBoard using IP
- Integrator.
- Lab 3: Debugging using Vivado Logic Analyzer cores

#### Day-4: Industrial Visit

#### Day-5:

- Embedded System Design with Custom IP
- Lab 4: Creating and Adding Your Own Custom IP
- Use the Manage IP feature of Vivado to create a custom IP and extend the system with the custom peripheral.
- Write a basic C application to access the peripherals.
- System Debugging using Vivado Logic Analyzer and SDK
- Video and Image Processing Demo on FPGA/Zynq Boards

#### Day-6:

- On chip XADC Demonstration on Nexys4 DDR Board
- Video Processing Demonstration on Genesys2 Board