

COURSE HIGHLIGHTS

- Introduction to the PYNQ project
 - Pynq framework
 - PYNQ-Z2 board
 - Jupyter Notebook Interface
 - Overlays and Hardware designs
 - Designing overlays
- Hands-on experience with Jupyter Notebook and the board

COURSE CONTENT

- Session 1
- Introduction to the PYNQ project
- Board setup
- Labs:
 - Getting started with Jupyter Notebooks
 - Getting started with IPython Exploring the board
 - Programming on-board peripherals
- Session 2
- Introduction to overlays
- Labs:
 - Peripherals: Grove Temp sensor
 - Peripherals: Pmod OLED
 - Peripherals: Grove LED bar (optional)
 - Peripherals: Grove ALS sensor (optional)
- Session 3
- Pynq IOPs
- logictools overlay
- Labs:
 - Using Wavedrom
 - Using Boolean generator
 - Using Pattern generator
 - Using FSM generator
 - MicroBlaze programming
- Session 4
- Overlay design methodology
- Labs:
 - Using PS GPIO, AXI GPIO
 - MMIO with PL slaves
 - Memory allocation with Xlnk
 - Accessing DRAM from PL masters
 - Using DMA with AXI streams
 - Resizer example

About Speaker

Name of speaker: Dr. Parimal Patel

Dr. Parimal Patel received a Doctor of Philosophy in Electrical and Computer Engineering from the University of Texas at Austin, Texas in 1986.

In 1987 he joined the University of Texas as an Assistant Professor, got promoted to Associate and then to Full Professorships. During his tenure at the university he taught variety of courses including Logic Design, Digital Systems Design, Microcomputer Systems (peripheral interface principles), Embedded Systems Design, VLSI System Design, Computer Architecture, RISC Processor Design, Engineering Workstations, and Advanced HDL modeling.

Parimal has always enjoyed teaching and developing new courses. He started as a contract trainer and then full time employee of Xilinx developing variety of courses for Customer Education department. He joined the Xilinx University Program in April 2007 developing new courses, updating current courses, and delivering XUP workshops worldwide, including High-Level Synthesis, Embedded Systems, Advanced Embedded Systems, DSP Design Flow, DSP Implementation Techniques, Designing with SDSoC, Dynamic Partial Reconfiguration, Python Productivity on Zynq (PYNQ), and Accelerated Cloud Computing on AWS with SDAccel.

Ms Sadiya A

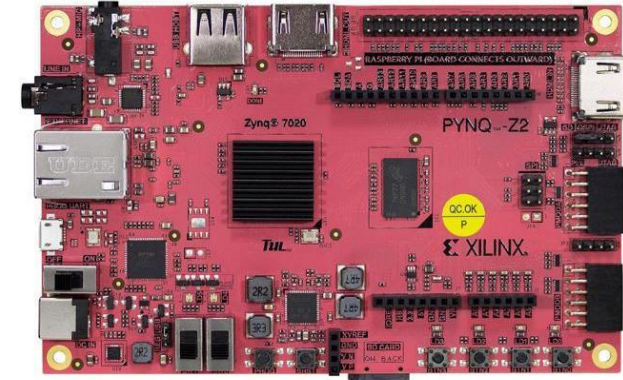
Director – Sales
Educational and Skill Development
CoreEL Technologies (I) Pvt Ltd Bangalore.

Workshop

On

*Python Productivity for Zynq using
PYNQ-Z2*

15th Dec 2018



Organized by

**Department of
Electronic Systems Engineering,
Indian Institute of Science**



In Association with



ABOUT CoreEL TECHNOLOGIES

CoreEL Technologies (I) Pvt Ltd, CoreEL is a customer Application Specific Products & Solutions company offering Intellectual Property (IP) Hardware, Software & Engineering Services to customers, enabling them to Design Manufacture and Market world class electronic products. The portfolio of offerings include IP cores, System Design, Architecture, Validation, Sustenance, Prototype Manufacturing, Next-Gen products, Semiconductor solutions & Distribution of EDA Tools & COTS products. CoreEL was founded in 1999 and is an ISO 9001:2008 certified headquartered at Bangalore India.

About 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, SIEMENS, 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

ELIGIBILITY

Faculties from Engineering Colleges with relevant background.

PRE-REQUISITES

- Basic Zynq-7000 SoC Architecture Knowledge.
- System level design experience using Xilinx FPGA
- Good understanding of C/C++ and Python programming

REGISTRATION DETAILS

Intimation of selection will be done via e-mail.

APPLY BY SENDING THE SCANNED COPY OF APPLICATION FORM TO upt@coreel.com

Contact Details

Cell No: +91-9535277988
Cell No: +91-9591168070

SCHEDULED DATES

Last date for Registration. : 10/12/2018.
Intimation of selection : E-mail.

Venue

Department of Electronic Systems Engineering,
Indian Institute of Science,
CV Raman Rd, Bengaluru,
Karnataka 560012

APPLICATION FORM

Workshop On Python Productivity for Zynq using PYNQ-Z2

1. Name :
2. Designation :
3. Educational Qualification :
4. Name of the Institute :

5. Address for Communication :

6. Professional Experience :

Email :

Mobile :

Declaration:

The information furnished above is true to the best of my knowledge.

Date:

Place:

Signature of the Applicant

Mr./Ms./Dr. _____ is an employee/student of our institute. He / She will be permitted to attend the programme if selected.

Date:

Place:

Signature & Seal
of Head of Organization