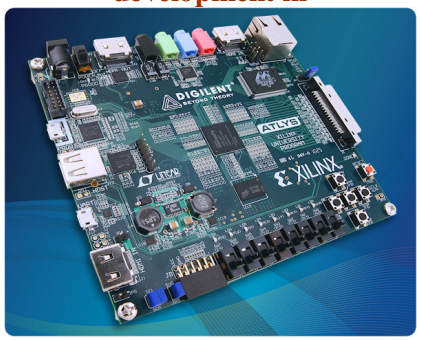
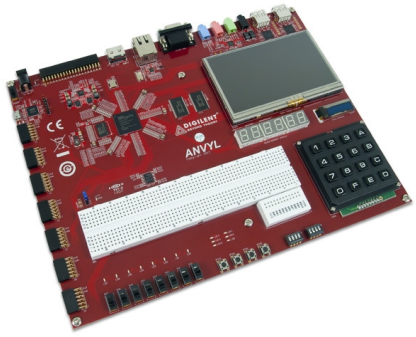
## HARDWARE PLATFORMS

**Xilinx ZYNQ 7000 Video and Imaging Kit**

**ATLYS-Spartan 6 FPGA development ki**



**Anvyl – Spartan 6 FPGA Board**



## ORGANIZING COMMITEE

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**Convenor**

Dr.S.Veni (Associate Professor , ECE)

**Coordinator**

Mr.Peeyush.K.P (Assistant Professor, ECE)

**Co-coordinator**

Ms.J.Aravinth (Assistant Professor, ECE)

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*For further enquries and communication,*


**Co-ordinator**
**National Workshop on**
**SIGNAL AND IMAGE PROCESSING APPLICATIONS USING XILINX SYSTEM GENERATOR**
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**AMRITA Vishwa Vidyapeetham**
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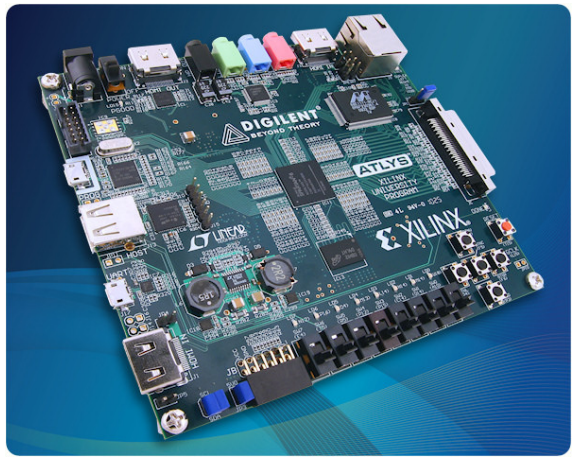
# National Workshop on Signal & Image Processing Applications using Xilinx System Generator

**April 10th & 11th, 2014**



**Organized by**

**Department of Electronics and Communication Engineering**

**In Association with**

CoreEL Technologies — Enabling Excellence

XILINX

## About Us

Amrita Vishwa Vidyapeetham established under the guidance of Satguru Mata Amritanandamayi Devi, with its head quarters at Ettimadai, Coimbatore is one of the youngest educational institutions in India to have been granted the University status. Amrita Vishwa Vidyapeetham is one of the very few universities to have a multi-campus, multi-disciplinary character, offering under graduate, post graduate and research programmes.. Amrita is the nation's first multi-campus university interlinked via satellite facilitating E-learning that transcends limitations of time & space. NAAC has accredited A Grade to Amrita University..

## About the Institution

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, Sytem 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 headquatered at Bangalore India.

## About the Institution

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 achieves this by providing state of the art products from XILINX, MENTOR Graphics, MATLAB, VxWorks, Speedgoat(Rapid Controller Prototyping, Hardware-in-the-loop simulation & development), PCB Design Tools from Mentor Graphics, etc to Universities with multiyear application engineering support on these products, faculty & student training, providing industry specific inputs to update the curriculum & helping Universities set up Centers of Excellence in Embedded Systems arena

## ELIGIBILITY

Faculties from AICTE approved Engineering Colleges with relevant background. Candidates from industries and R & D organizations will also be considered.PG students in related discipline are also eligible.

## BOARDING AND LODGING

Boarding and lodging will be provided on payment basis, to the participants in university hostels inside the college campus on request.

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## REGISTRATION DETAILS

Registration for the course can be made by sending the duly filled Registration form along with a DD for **Rs.1500/- in favour of "Amrita School of Engineering", payable at Coimbatore**. Registration Fee includes working lunch, tea breaks and required materials.

## HOW TO APPLY

1) **Demand Draft** for **Rs.1500** should be drawn in favour of **"Amrita School of Engineering", payable at Coimbatore**.
2) Fill in the Online Registration Form available at **www.amrita.edu/sipws**.
3) Send the scanned copy of your DD along with a covering letter duly signed by the Principal of your institution to "**amritaecews@gmail.com**" on or before April 5, 2014.
4) Sent Original DD to the Coordinator of the Workshop. (address mentioned in the front page of the brochure) on or before April 5, 2014.

## SCHEDULED DATES

**Last date for Online Reg. : 5th April, 2014**
**Intimation of selection : 8th April, 2014**

## Course Content

**Day1:**

- Need of FPGAs for addressing high-performance DSP designs.
- Introduction to Xilinx System Generator for DSP.
- Concepts of system modeling using Simulink.
- Overview of Xilinx block sets and system modeling for hardware implementation.
- Model and simulate a DSP block using Simulink/Xilinx System Generator.
- Lab: Getting started with Simulink.
- Lab: Creating a 12 x 8 MAC Using the System Generator for DSP.
- Lab: Signal Routing - custom system modeling for DSP applications.

**Day 2:**

- Concepts of Hardware co-simulation using System Generator DSP.
- Addressing Video and Image Processing applications using Xilinx FPGA's - challenges and current trends
- Zynq all programmable SoC.
- Zynq FPGA architecture - Capabilities and benefits for Video and Image Processing applications.
- Lab: Demonstration of Real Time Image processing application using Xilinx Spartan-6 & Virtex-5 FPGA Development platform.
- Lab : Implementing a system controller as per the design specifications.
- Lab : Designing a Multirate MAC FIR system.
- Lab: Hardware co-simulation of FIR filter using Virtex-5 FPGA Evaluation platform.