System on Chip (SoC) lab

Lab Description

The System on Chip (SoC) lab is a cutting-edge facility dedicated to the design, development, and evaluation of integrated circuits with a focus on the integration of digital and analog components. This lab provides students and researchers with access to state-of-the-art Electronic Design Automation (EDA) tools and FPGA hardware kits to support various projects and experiments. The primary objective of the LAB is to provide hands-on experience to students in the field of analog, digital and mixed-signal circuit design.

Lab Facilities

Hardware Facilities

- CY8CKIT-001C development boards & kits-ARM PSoC
- CY8CKIT-025-PsoC Precision Analogue Temperature sensor Expansion Board
- BASYS 3
- NEXYS 4 video
- ZYBO board
- Artix-7 FPGA
- PYNQ
- PMODS – TMP3, OLED,MAX SONAR, KYPD, AD2,DA4,CLP, AMP2, IR Sensor, GPS RX, MTDS, PCAM 5C, MIC3

Software Facilities

- XILINX VIVADO 2016.4
- Cadence for design and development of electronic systems and integrated circuits (ICs)

Utilization

This lab is utilized for conducting the following course(s):

- 10211EC302Digital Electronics Lab
- 10211EC301 Analog Integrated Circuits Lab
- 10211EC303 Signal Processing Lab
- 10211EC202 Internet Of Things Lab
- 10212EC213Digital Image and Video Processing Lab
- 10212EC228 Data science and Visualization
- 1152EC261 Professional Python Programming