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Hands-on Workshop on

Analog System Design in Embedded System

Workshop Objectives:

Analog and mixed-signal circuits are an integral part of any embedded system. Pre-amplifiers, signal conditioners, filters, data converters, power management circuits, drivers etc. are examples of such analog and mixed-signal systems. The embedded system industry needs analog system designers who understand and can design with analog integrated circuits to create products that are efficient in terms of cost, performance, and power. The objective of this tutorial is to give hands-on exposure of Analog System Design to the participants. We will make use of Analog System Lab Kit (ASLK) from Texas Instruments as a platform to provide hands-on training. The participant will simulate the analog systems using TINA software using macro models of analog ICs and then verify the designed circuit through bread boarding.

About Analog System Lab Kit (ASLK)

ASLK is a very easy to use, versatile kit/platform which helps you build any analog system with ease using very simple & robust solder-less connections. It is a complete educational product which comes with a comprehensive user manual. ASLK features three important analog building blocks – Op-Amps (TL082), Multiplier (MPY634KP), DAC(DAC7821) using which you can realize any analog system. Kit features an array of resistors and capacitors present onboard which minimize the dependence on connecting any external components. There is a proto board & proto type area available on the kit to connect any external component/sensor with ease and lastly the comprehensive user manual featuring 10 experiments that can be performed using the kit. Manual covers theory and step-by-step approach to carry out each experiment.ASLK is an ideal platform for labs in engineering colleges for teaching analog systems design at both UG & PG level. In fact, ASLK is already adopted by over 100 engineering colleges in India including top IITs & NITs.

Workshop Topics

- Introduction to Analog System Design – Analog &Academia
- Calculating op-amps characteristics using negative feedback systems
- Building an instrumentation amplifier
- Regenerative Feedback System & Building Multivibrator

- Analog Filters Design
- Function Generator
- Voltage Control Oscillator
- FSK Generator

Resource Person:

Mr. Sagar Juneja, Design Engineer

Who can attend?

- UG students working in area of Analog Design
- Researchers (Masters, Doctoral students and Fellows) with thesis in ADE
- Academicians for enhancing skills in delivering Advanced Analog labsLabs at Institute/University
- Design engineers from industry

Pre-requisites

- Basics of Analog design
- Basic experience with Electronics devices and circuits

Registration

- Prior registration for the workshop by submitting the duly filled registration form is mandatory before **March 16**. Registration Form & Registration Process is available at Registration Page (CLICK HERE)
- There is a nominal registration fee for attending the workshop. Please visit Registration Page (CLICK HERE) to know the fee structure.
    - There is a special discount on Fee for IEEE & IETE members
- For Conference Authors, workshop registration is absolutely FREE.

Contact

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