K.S. INSTITUTE OF TECHNOLOGY, BANGALORE – 560109
DEPARTMENT OF
COMPUTER & COMMUNICATION ENGINEERING

REPORT
Technical talk on

"EMBEDDED SYSTEM & IT'S ENGINEERING FUTURE "

Date of conduction: 5th July 2024
Venue: KSIT Seminar Hall
Time: 10:00AM – 12:30 PM
Sponsoring Bodies/ Associating Organization: NA

Expert details — with photo

Resource Person:
Name: Padmanaban K.
Designation: Software Enabling & Optimization Engineer,
Organization: Intel Technologies India PVT. LTD.
Place: Bangalore

Brief Profile about the Expert:
Padmanaban has been working as the Software Enabling and Optimization Engineer in the Customer Experience Group at Intel PSG for the past 3 years. He is the academic ambassador for the Intel India FPGA University Program. Padmanaban has a postgraduate degree in Applied Electronics from Anna University, Chennai, and a Bachelor in EEE from GCT, Coimbatore. He has 16+ years of experience in digital design for both FPGA and ASIC. Prior to joining Intel, he worked as a Chief Faculty in Sandeepani School of VLSI design (Training division of CoreEL Technologies, Bangalore) for 8 years and as an Assistant Professor and Project Coordinator at Ramaiah University of Applied Sciences (RUAS) Bangalore for 5 years

Description of the Event:

Embedded System is a microprocessor-based computer hardware system with software that is designed to perform a dedicated function, either as an independent system or as a part of a large system.

Description about the Altera Products and how to replace the external devices with Programmable Logic by reducing the cost, complexity and Power. System on Board (SoB) consists processor and FGPA Architecture components separately. This is time consuming and more complex so, we choose System on Chip (SoC).System on Chip(Soc) FPGA (Field Programmable Gate Arrays) devices are integrate with both processor and FPGA Architecture in to a single device results in increased system performance, reduced the power consumption, board size and system cost. Applications of an FPGA in an Embedded System are Custom embedded controller and Multiprocessor.

Industry broadest customizable Processor portfolio products are Discrete, Integrated Arm or IA and soft CPU. Hard Processor Systems consists of three architectures, they are- Architecture-1(consist of Dual Core), Architecture-2(consist of quad core) and Architecture-3(consist of two quad cores or four dual cores).Among these architectures, third architecture is given more preference as it is key component for artificial intelligence (AI) technology and also a key component for researchers and industrialists to increase the efficiency of the hardware system keeping this core a base for their research.

Objectives / key highlights:

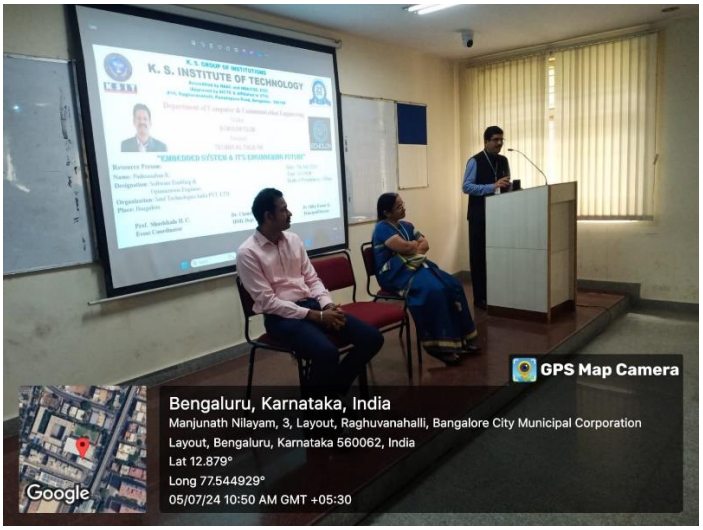
- Understand the Embedded Systems and SoCs
- Learn about the SoC Architecture for Embedded and AI Application
- Understand the Altera FPGA Portfolio products and their feature
- Unleashing Limitless AI Possibilities with FPGAs

Participant details:

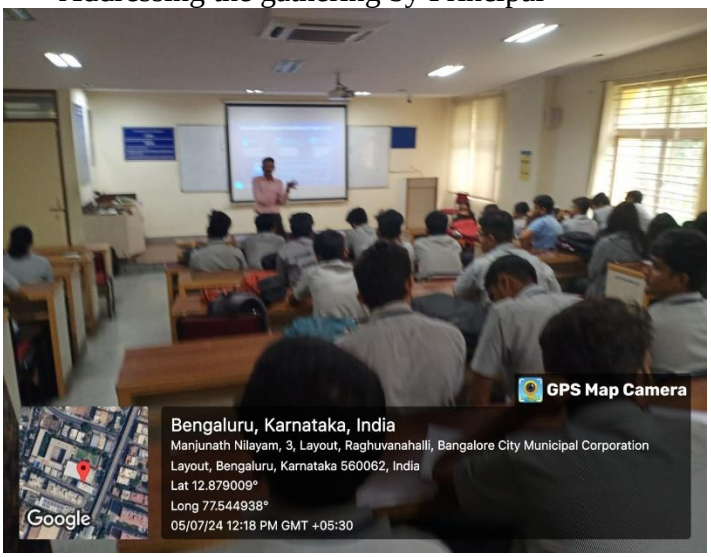
- No. of participants in total: 53
- Students of CCE Dept.-53
- Faculty: Prof.Shashikala H. C. (CCE)
- Faculty: Prof.Nagajyothi, (CCE)
- Faculty: Prof. Rachana V. Murthy(IOT)

Photos:

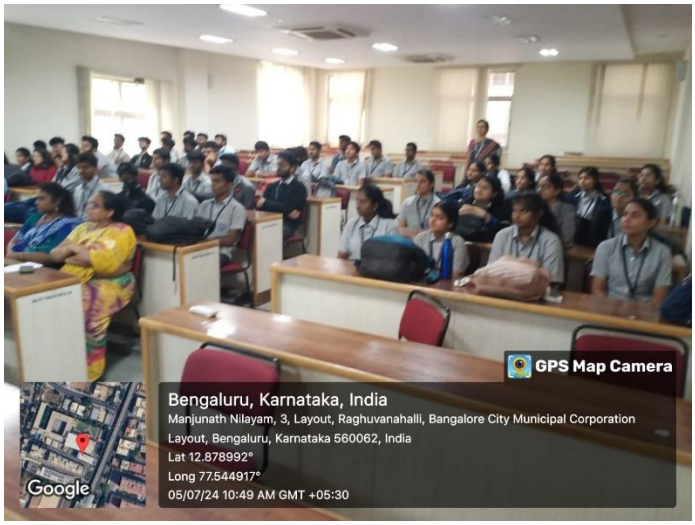
Guest welcoming by Principal



Addressing the gathering by Principal



Talk on Embedded System and its Engineering



Students listening to technical talk

Outcomes/Benefits:

- Students understood about the Embedded System and its Engineering future.
- Students gained the knowledge on Embedded System.

Attachments:

1. Communication with Resource person.
2. Resource person Profile.
3. Evaluation and Feedback

CO/PO&PSO mapping -CCE

CO/PO& PSO	PO1	P02	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
PO&PSO	-	-	-	-	03	02	-	-	-	02	-	02	02	-
Event (Technical Talk)	-	-	-	-	03	02	-	-	-	02	-	02	02	-

PSO1: To understand and apply the concepts to design and develop solutions in computer and communication Engineering.

PSO2: To use the inculcated experiential learning for research and develop inventive solutions for societal benefit while ensuring security with moral values and ethics.

Shashikala H.C.
Event Coordinator

Dr. Chanda V Reddy
Head- CCE

Dr. Dilip Kumar K
Principal, KSIT