AJ INSTITUTE OF ENGINEERING & TECHNOLOGY

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Department of Electronics and Communication Engineering

In Association with Electrovertz Students Association (EVSA)

Date: 28/02/2025

Technical talk report on **"Technical Talk on "Scope in VLSI Domain-Semiconductor Industry and IC Fabrication" "**

Name of the Program:	Technical Talk **on "Scope in VLSI Domain-Semiconductor Industry and IC Fabrication"**	Program Dates & Timings:		28/02/2025 2.00PM- 4.30PM	
Name & Details of the Resource Person:	**Mr. Pawan Raj, Senior Layout Design Engineer at Karmic Design Pvt. Ltd, Manipal**				
Organized by (Clubs/ Dept.)	ECE Department	EVSA			
Number of Participants	100	Students	97	Faculty	3
Program Outcome (PO) Mapping	PO1,PO2,PO3,PO4,PO5, PO10, PO11,PO12				
Coordinators	Mr. Prakash K Shetty, Ms. Pratheksha Rai N				
Faculty Participated	Dr Kiran Kumar V G, Mr. Prakash K Shetty, Ms. Pratheksha Rai N				

About the Program:

The Department of Electronics and Communication Engineering (ECE), in collaboration Electrovertz Student Association (EVSA), organized a **Technical talk -on "Scope in VLSI Domain- Semiconductor Industry and IC Fabrication"** for third-year and second Year ECE students. The talk aims to provide students with insights on scope in digital VLSI domain in the current industry trends and practical insights on IC Fabrication by the industry expert.

The **Inauguration Ceremony** of the talk was held on 28th February 2025 at Seminar Hall 2.

The event commenced at 2:00 AM with a **prayer**, followed by the **Welcome Address** by **Ms. Kavana, 3rd Year** in the Department of ECE. The **Resource Person**, **Mr. Pawan Raj, Senior Layout Design Engineer at** Karmic Design Pvt. Ltd, Manipal was florally welcomed by Dr. Kiran Kumar V G, HOD Department of ECE.

The traditional Lighting of the Lamp ceremony followed, symbolizing the commencement of the talk and the spread of knowledge. This was followed by the Introduction of the **Resource Person**, **Mr. Pawan Raj, Senior Layout Design Engineer at** Karmic Design Pvt. Ltd, Manipal**.**

The event proceeded by a brief addressing by **Dr. Kiran Kumar V G**, Head of the Department of ECE. He provided a **briefing about the talk**, outlining the objectives and expected outcomes of the talk. Dr. Kiran Kumar V G emphasized how VLSI design is crucial in shaping the careers of students in the rapidly evolving electronics industry.

The event concluded with the **Vote of Thanks** delivered **by Master of Ceremony**, **Ms. Kavana**, a third-year ECE student, who efficiently conducted the proceedings.

The inauguration ceremony was attended by the faculty members, teaching and non-teaching staff, and third-year ECE students.

Session 1: Introduction to Digital VLSI Design
Time:2:15PM- 3:00PM
Duration: 45 minutes

Key Topics Covered

- **VLSI Design Fundamentals:** Definition and significance in modern electronics.

- **Design Approaches:** Overview of ASIC (Application-Specific Integrated Circuit) and FPGA (Field-Programmable Gate Array) design flows.
- **ASIC Design Flow:** Stages including specification, design, verification, fabrication, testing, and deployment.
- **FPGA Design Flow:** Steps from design entry to configuration, highlighting advantages.

Highlights

- Engaging discussions on ASIC vs. FPGA advantages.
- A Q&A session allowing participants to clarify their doubts.

Session 2: Information on **IC Fabrication** and **Scope on VLSI Domain**

Time: 3:00 PM - 3:30 PM
Duration: 0.5 hours

Valedictory Session Overview

- **Participant Feedback:** Attendees shared their insights and experiences from the day's sessions, discussing what they learned and how they can apply it in their professional endeavors.

- **Token of Gratitude:** The Head of the Department (HOD) presented a memento and an appreciation letter to Mr. Pawan Raj, the resource person, in recognition of his valuable contributions and expertise.

- **Vote of Thanks:** A formal vote of thanks was delivered, expressing gratitude to all participants, the resource person, and the organizing committee for making the workshop a success.

Objectives: The program enables students to

- Enhance Practical Skills in VLSI Design and IC Fabrication.
- Bridge the Gap between Academics and Industry .

Outcomes: On successful completion of this workshop the students should able to:

1. Demonstrate an understanding of digital VLSI design principles and methodologies using industry-standard tools (VIVADO and FPGA).
2. Understand the Scope in VLSI Domain.
3. Analyse the IC Fabrication process through industry experts.

4. Analyse and solve real-world technical problems in VLSI design and embedded systems using collaborative teamwork and effective communication.

Course Outcomes	Program Outcomes											
	1	2	3	4	5	6	7	8	9	10	11	12
1	1		1		1							1
2		1										1
3				1	1							
4		1								1	1	
Average	1	1	1	1	1					1	1	1

Photos

Fig: Workshop Inauguration.

Fig: Address by HOD.

Fig: Formal Segment of Technical Talk.

Fig: Session by Mr. Pawan Raj

Co-ordinator   HOD-ECE   Dean Academics   Principal

SHORT DESCRIPTION

The Department of Electronics and Communication Engineering, in association with EVSA-ECE Student Association, successfully organized an Industry expert Talk for Second and third year Students on the "Scope in VLSI Domain – Semiconductor Industry and IC Fabrication" on 28th February 2025 by Mr. Pavan Raj, Senior Layout Design Engineer at Karmic Design Pvt. Ltd., Manipal, at Seminar Hall -2,who delivered an insightful session, shedding light on the latest trends, career opportunities, and advancements in the VLSI and Semiconductor Industry. His expertise and real-world experiences provided students with valuable knowledge about IC Fabrication, Semiconductor design, and Career pathways in VLSI.

This talk intended on bridging gap between classroom learning and real-world applications and received good feedback from students. The department will focus for more industry-academia interactions talk in future.