

## Report of Guest lecture on “The Era of Digital Transformation (IoT, AI) – Industry Outlook”

<b>Date of the event</b>	21/03/2025
<b>Title of the Event &amp; Lecture</b>	Guest lecture on “The Era of Digital Transformation (IoT, AI) – Industry Outlook”
<b>Name of the Resource Speaker</b>	Mr. Anil Kumar Patchipulusu, Director, R&D Engineering, IPG, Synopsys, Bengaluru
<b>No. of Participants</b>	110
<b>Venue</b>	Seminar Hall 5

The Department of Industrial IOT organized a Guest Lecture on the topic “The Era of Digital Transformation (IoT, AI) – Industry Outlook” on 21/03/2025. This event was held at Seminar Hall 5. The expert speaker was Mr. Anil Kumar Patchipulusu, Director, R&D Engineering, IPG, Synopsys, Bengaluru, India. A total of 110 participants had attended the guest lecture from various departments of IIOT, ECE, EC (ACT).

Mr. Anil Kumar Patchipulusu, an alumnus of Vellore Institute of Technology, is an accomplished professional with over 20 years of in-depth experience in the semiconductor domain. He currently leads the SNPS Standard Cell Library Characterization team in India, overseeing all aspects of the process, from methodology definition and implementation to deployment in production. His expertise extends to project planning, execution, and delivery, ensuring efficiency and innovation in standard cell characterization.



Figure 1: Dr. M.Thilagaraj, HoD IIOT, MVJCE welcoming the chief guest.

Dr. M. Thilagaraj, HoD of Industrial IOT Department welcomed the industry expert with a bouquet.

In an insightful guest lecture, the speaker provided a comprehensive overview of the Era of Digital Transformation, emphasizing the impact of IoT and AI on various industries. The session began with an industry outlook, highlighting how businesses are rapidly adopting IIoT (Industrial Internet of Things) devices for real-time monitoring, predictive maintenance, and automation. Moving forward, the speaker delved into Artificial Intelligence (AI), explaining its role in transforming decision-making, enhancing efficiency, and driving innovation across sectors. The discussion then shifted to ARM microcontrollers, which serve as the backbone of embedded systems due to their power efficiency and versatility in various smart applications. The concept of embedded systems was explored in detail, showcasing their significance in

modern technology, from automotive to consumer electronics. A particularly engaging part of the session was on ChatGPT, where the speaker demonstrated how AI-powered language models are revolutionizing communication, content generation, and automation. Finally, the lecture concluded with an introduction to Very Large Scale Integration (VLSI) technology, explaining its role in the miniaturization and performance enhancement of processors, particularly in smart phones. The session was highly interactive, with real-world examples and industry insights, leaving the audience with a deeper understanding of these transformative technologies.



Figure 2: Chief Guest addressing the gathering.

He explained that there are many engineers who have pursued a course in IIOT, Embedded Systems in order to prepare themselves for the industry. He also motivated students to gain knowledge about real time operation system (RTOS).





Figure 3: Students attentively listening to the lecture.



Figure 4: Students while listening to the lecture.

The outcome of the guest lecture was highly impactful, as it provided attendees with a deeper understanding of emerging technologies shaping the digital world. Participants gained valuable insights into IoT, AI, IIoT devices, ARM micro controllers, embedded systems, ChatGPT, and VLSI, along with their real-world applications. The session enhanced their awareness of industry trends and technological advancements, equipping them with knowledge relevant to modern engineering, automation, and AI-driven innovations.

Additionally, the event fostered engagement and curiosity, encouraging students and professionals to explore career opportunities in these fields. Practical demonstrations and case studies helped bridge the gap between theory and real-world applications, making the session interactive and informative. Overall, the guest lecture empowered attendees with industry-oriented knowledge, preparing them for future roles in the rapidly evolving tech landscape.