



# **MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE**

**(UGC-AUTONOMOUS INSTITUTION)**

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## **Report on Guest Lecture Alumni Student Interaction for Semiconductor Industry Opportunities On 02.02.2024**

### **Introduction**

The Department of Electronics and Communication Engineering (ECE) at MITS Madanapalle hosted a guest lecture on February 2, 2024, featuring two distinguished alumni from Aisemicon Pvt. Ltd., Veeranapalya, Nagavara, Bangalore. The lecture, held in the college auditorium, was centered on the theme "Alumni Student Interaction for Semiconductor Industry Opportunities." The guest speakers were Mr. Vilipi Rajesh, an Associate Engineer specializing in VLSI, and Mr. Noor Mahammad, a Frontend Developer. The event was part of the department's ongoing efforts to provide students with industry insights and career guidance in the rapidly evolving field of semiconductors.

### **Objective**

The primary objective of the lecture was to bridge the gap between academic learning and industry practices in the semiconductor sector. It aimed to offer students a comprehensive understanding of career opportunities, industry trends, and the practical applications of their academic knowledge. This interaction was designed to inspire and equip students with the knowledge required to pursue a successful career in the semiconductor industry.

### **Opening Remarks**

The session began with a welcome address by Dr. S Rajasekaran, Head of the ECE Department, who emphasized the importance of industry interaction for students. He highlighted the department's commitment to fostering an

environment that encourages students to connect with industry professionals and alumni, which is crucial for their professional development.

Speaker 1: Mr. Vilipi Rajesh

Mr. Vilipi Rajesh, an Associate Engineer specializing in Very-Large-Scale Integration (VLSI) at Aisemicon Pvt. Ltd., provided an in-depth overview of the semiconductor industry. His presentation covered the following key points:

### Industry Overview

Mr. Rajesh began by explaining the significance of the semiconductor industry, which is pivotal in driving technological advancements across various sectors, including consumer electronics, automotive, and healthcare. He discussed the current market trends, emphasizing the growing demand for semiconductor components driven by innovations in artificial intelligence (AI), Internet of Things (IoT), and 5G technologies.

### VLSI Design and Applications

Delving into VLSI, Mr. Rajesh explained that VLSI design is the process of creating integrated circuits (ICs) by combining thousands of transistors into a single chip. He highlighted the role of VLSI in enhancing the performance and functionality of electronic devices while reducing their size and power consumption. He showcased various applications of VLSI, such as in microprocessors, memory devices, and signal processors, underscoring the importance of this technology in the development of advanced electronic systems.

### Career Opportunities

Mr. Rajesh outlined the various career paths available in the VLSI domain, including roles in design, verification, testing, and fabrication of ICs. He emphasized the need for a strong foundation in electronics and circuit design, along with proficiency in software tools like VHDL, Verilog, and SPICE. He encouraged students to focus on developing their technical skills and to stay updated with the latest industry trends to excel in this competitive field.

### Practical Insights

Sharing his professional journey, Mr. Rajesh provided practical insights into the challenges and rewards of working in the semiconductor industry. He spoke about the importance of problem-solving skills, attention to detail, and the ability to

work in multidisciplinary teams. He also discussed the impact of ongoing research and development in pushing the boundaries of what is possible in semiconductor technology.

Speaker 2: Mr. Noor Mahammad

Mr. Noor Mahammad, a Frontend Developer at Aisemicon Pvt. Ltd., followed with a presentation that focused on the intersection of software development and semiconductor technologies. His talk covered the following aspects:

### The Role of Software in Semiconductors

Mr. Mahammad emphasized the critical role that software plays in the functionality of semiconductor devices. He explained how software development is integral to the design, testing, and operation of semiconductor components. This includes firmware development, embedded systems programming, and the creation of software tools used in the design and simulation of ICs.

### Frontend Development in the Semiconductor Industry

Exploring his specific area of expertise, Mr. Mahammad discussed the relevance of frontend development in the semiconductor industry. He highlighted how user interfaces and software applications are designed to facilitate the interaction between end-users and semiconductor devices. This includes applications for device configuration, monitoring, and control.

### Emerging Technologies

Mr. Mahammad talked about emerging technologies like machine learning, edge computing, and quantum computing, which are poised to transform the semiconductor industry. He discussed the increasing integration of these technologies into semiconductor devices to enhance their capabilities and performance.

### Career Pathways and Skills

He provided insights into the skills required for a career in software development within the semiconductor industry, including proficiency in programming languages like Python, C++, and JavaScript, as well as an understanding of hardware-software integration. He advised students to focus on building a strong foundation in computer science and to gain practical experience through internships and projects.

## Interactive Session

Following the presentations, an interactive Q&A session was held, where students had the opportunity to ask questions and seek advice from the speakers. Topics discussed included strategies for entering the semiconductor industry, the future of VLSI technology, and the integration of AI in semiconductor design. The speakers provided valuable guidance and encouraged students to pursue continuous learning and networking to advance their careers.

## Conclusion

The guest lecture concluded with a vote of thanks by Mr E Ramesh, the event coordinator, who expressed gratitude to the speakers for sharing their expertise and inspiring the students. The event was a significant success, providing students with a clearer understanding of the semiconductor industry and the vast opportunities it offers. The interaction not only enriched the students' knowledge but also motivated them to explore new avenues and set ambitious career goals.