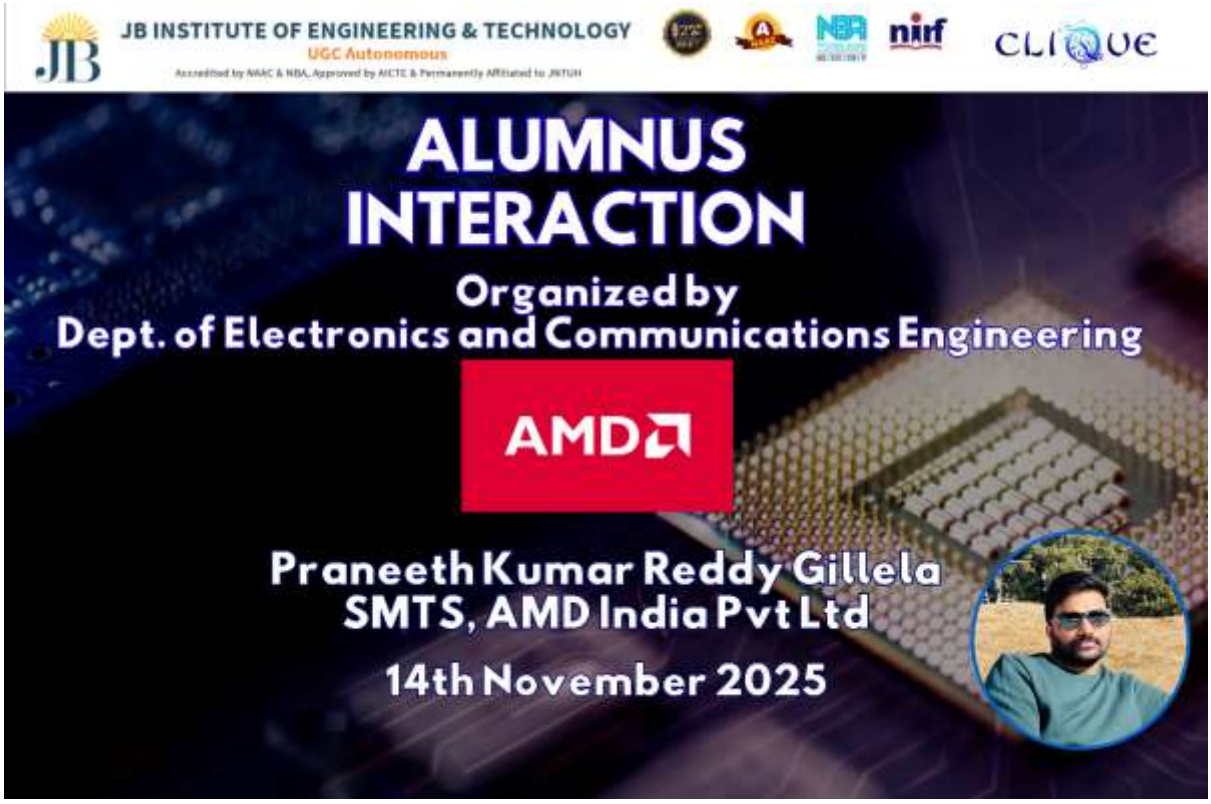
Report on
Alumnus Interaction Session on VLSI and current market trends
Organized by
JB Institute of Engineering & Technology
on
14th November 2025

The Electronics and Communication Engineering Department at **J.B. Institute of Engineering & Technology (JBIET)** organized **an Alumnus Interaction Session on VLSI and Current market trends**, which was held on 14th November, 2025.



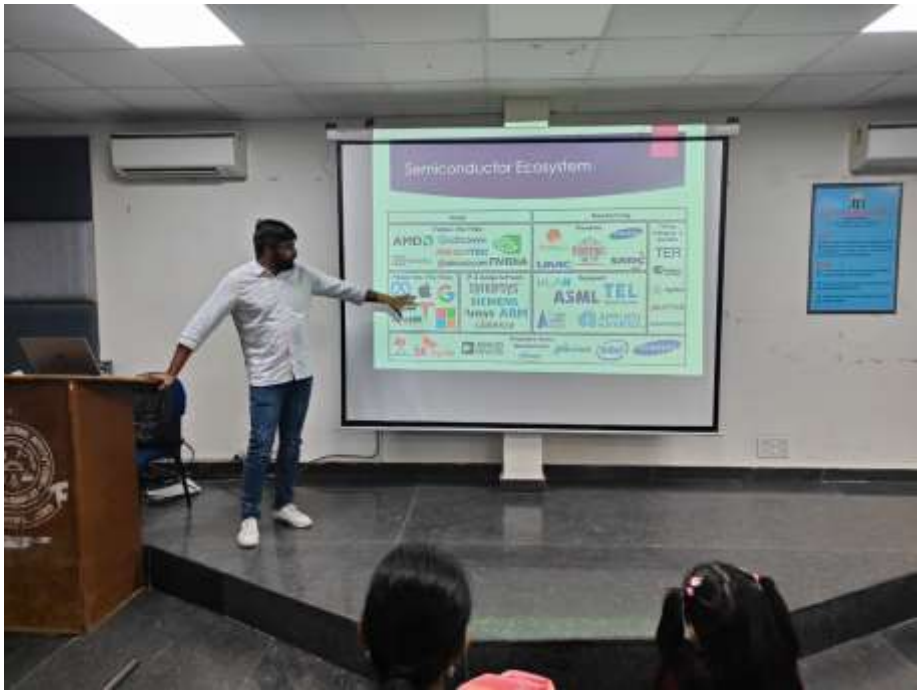
Objective

The primary objective of the session was to provide current Electronics and Communications Engineering students with direct industry insight into the field of Very Large Scale Integration (VLSI). The event aimed to bridge the gap between academic curriculum and real-world applications by hosting Mr. Praneeth Kumar Reddy Gillela, an accomplished alumnus (2006-2010 batch) and a Senior Member of Technical Staff at AMD India Pvt Ltd. The goal was to educate students on current semiconductor trends, a practical VLSI design flow, and the skills necessary to succeed in the industry.

Praneeth Kumar Reddy Gillela Senior Member Of Technical Staff (SMTS), AMD India Pvt Ltd JBIET Pass Out Year: 2010
Profile: Physical design engineer with 13+ years of experience. Working on complex SoCs like AI accelerators, x86/Zen cores, and gaming consoles on industry-advanced 3nm and 2nm process nodes.

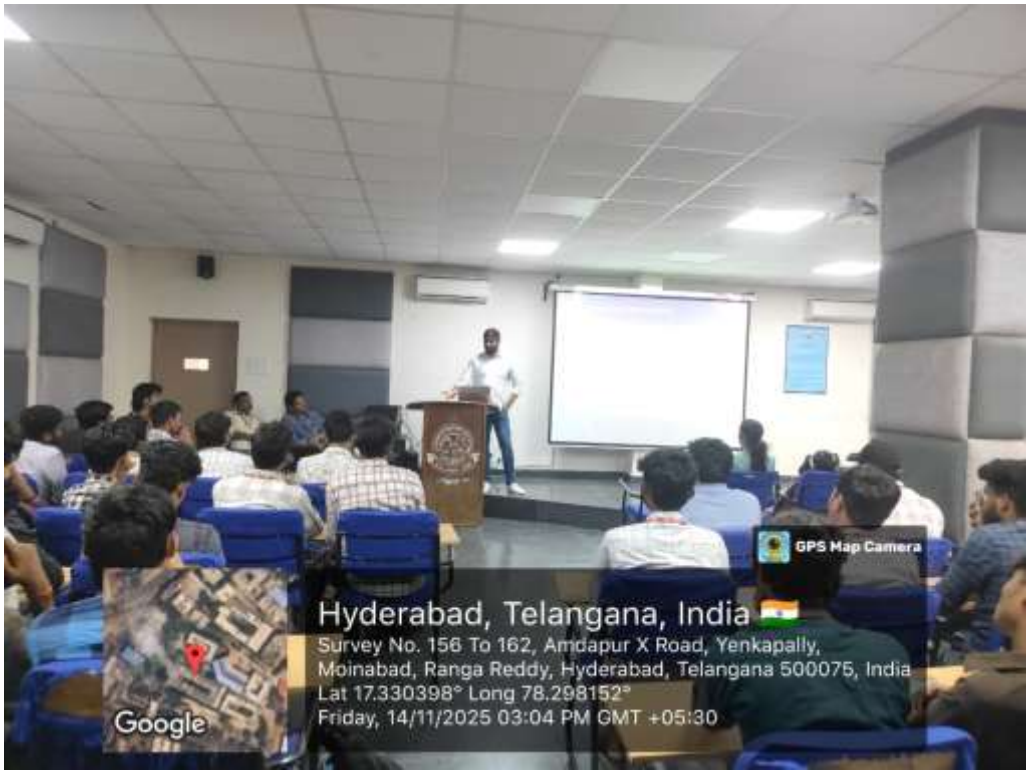
Topics Covered:

Mr. Gillela delivered a comprehensive presentation covering several key areas of the semiconductor industry



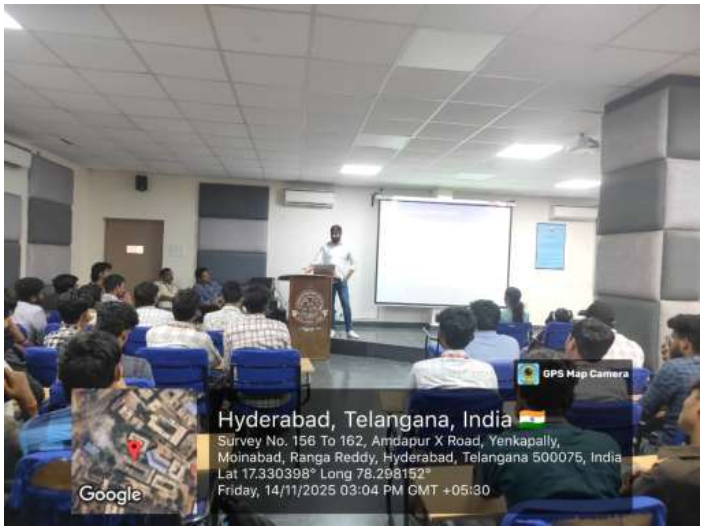
- **Industry Introduction:** He shared his professional journey, starting from his time at JBIET to his current role at AMD, offering a relatable path for students to follow.
- **Latest Trends:** He discussed the cutting edge of semiconductor manufacturing, highlighting his own work on next-generation **2nm and 3nm technology nodes**. He elaborated on the challenges and innovations required to push the boundaries of Moore's Law.
- **VLSI Design Flow:** A significant portion of the session was dedicated to explaining the complete, end-to-end VLSI design lifecycle. The flow was broken down into the following key stages:
    1. **Specialisation (Specification):** Defining the requirements, features, and architecture of the chip.
    2. **RTL and Verification:** Writing the hardware description language (HDL) code and rigorously testing it to ensure functional correctness.

3. **Physical Design:** Converting the design into a physical layout (placing and routing) optimized for performance, power, and area.
4. **Fabrication:** The manufacturing process of creating the chip on a silicon wafer in a foundry.
5. **Testing and Validation:** Post-fabrication testing to ensure the chip functions correctly and meets all specifications.
6. **Packaging:** Encasing the silicon die for protection and integration into a larger system.
7. **Consumer:** The final stage where the chip is integrated into a consumer product (e.g., a laptop, phone, or server).



Engagement and Activities

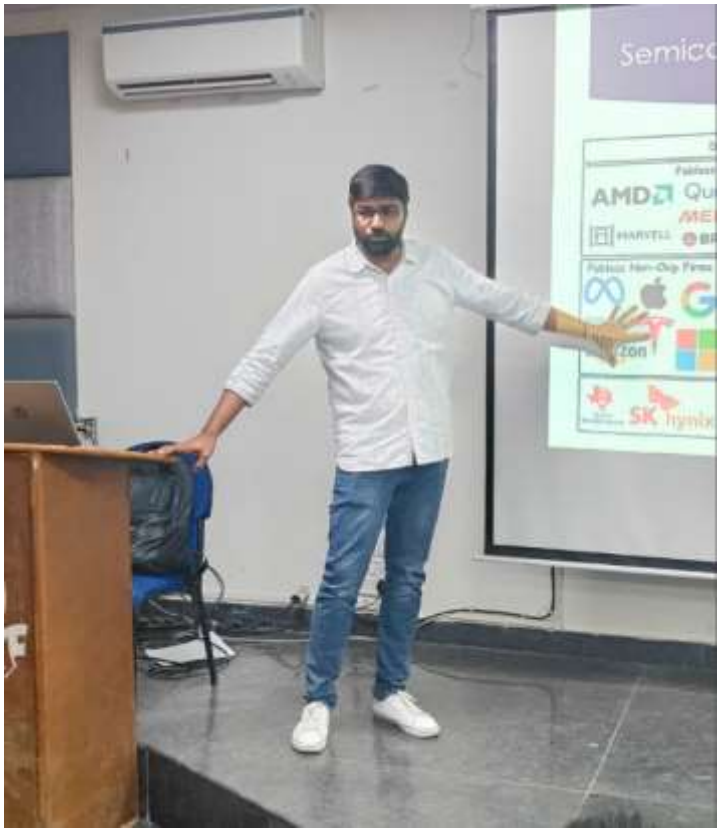
The session was highly interactive and far from a one-way lecture. Mr. Gillela's presentation, which detailed his hands-on experience at a leading company like AMD, was filled with real-world examples that captured the students' full attention and made complex topics more accessible. The presentation was followed by a robust Question & Answer (Q&A) segment that extended well into the allotted time. Students actively engaged with the speaker, asking insightful questions about technology, career preparation, in-demand skills, and the day-to-day responsibilities of a VLSI engineer. Mr. Gillela answered each query with patience and detail, even providing personal anecdotes to illustrate his points.



Outcomes and Impact

The interaction session was a significant success and had a clear positive impact on the attending students.

- **Enhanced Clarity:** Students gained a practical, step-by-step understanding of the VLSI design flow, connecting their academic subjects to a tangible industry process.
- **Industry Exposure:** Attendees received firsthand knowledge of the most current trends (2nm and 3nm) directly from an expert working on them.
- **Career Motivation:** Hearing from a successful alumnus provided tangible career guidance and motivated students to pursue opportunities in the core semiconductor field.
- **Targeted Learning:** The session provided a clear roadmap, helping students identify specific areas within the VLSI flow (like RTL, Verification, or Physical Design) they might want to specialize in.
- **Networking:** The event successfully strengthened the connection between the department and its alumni network, providing a valuable resource for students.



Key Takeaways

- The semiconductor industry is rapidly evolving, with a focus on advanced nodes like 2nm and 3nm, making it a challenging and exciting field.
- A career in VLSI requires a deep, holistic understanding of the entire design flow, as each stage impacts the others.
- RTL, Verification, and Physical Design were highlighted as critical, high-demand skill areas for new graduates to focus on.
- Continuous learning is essential for long-term success in the fast-paced semiconductor industry.

Overall, the session was highly informative and successfully fulfilled its objective of inspiring and educating the next generation of ECE engineers.

Conclusion

The session concluded with a heartfelt vote of thanks.

Prof. Snehalatha ma'am and Prof. Ramesh Babu Sir, from the ECE department, took the opportunity to share a few words about Mr. Praneeth Kumar Reddy, fondly recalling him as their former student. They expressed pride in his professional accomplishments and his willingness to give back to his alma mater. As a token of appreciation from the department and the college, they presented Mr. Gillela with a memento to honor his valuable contribution.