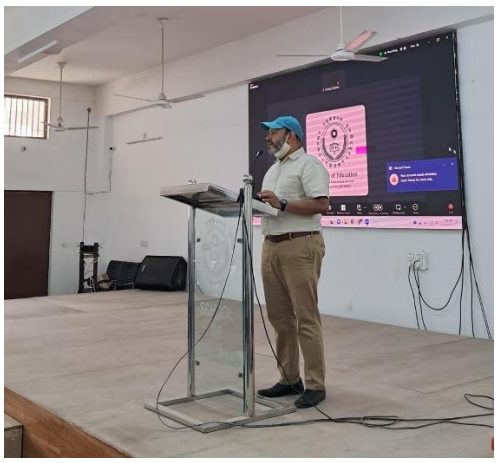
Alumni Insights: Advancing Careers and Technologies in Engineering

The Department of Electrical Engineering at Dayalbagh Educational Institute successfully organized an Alumni Guest Lecture session on January 25, 2025. The event featured three distinguished alumni, Mr. Umang Chauhan, Mr. Sushobhit Singh, and Mr. Agam Satsangi, who provided insightful discussions on cutting-edge technological advancements and career opportunities. The session was attended by third and fourth-year B.Tech students specializing in Computer Science and Electronics.

Mr. Umang Chauhan, an experienced IT professional currently associated with GE Healthcare as the Director of Software Engineering, delivered an engaging session on the evolving landscape of artificial intelligence (AI) and its impact on career prospects. Drawing from his extensive global experience, he emphasized that AI is not a threat to employment but a transformative force reshaping job roles. He illustrated this point by referencing GitHub's Copilot as an example of AI augmenting human capabilities rather than replacing them. During the session, he showcased a thought-provoking video by Ethan Mollick for Big Think, which explored potential scenarios for AI's future.

He also provided an overview of the four stages of the Industrial Revolution, highlighting advancements in AI, IoT, cloud computing, and robotics. He encouraged students to deepen their AI expertise through hands-on projects, industry certifications (IBM, Coursera), and active participation in hackathons and open-source contributions. His insights served as a valuable roadmap for students aiming to thrive in the AI-driven technological landscape.



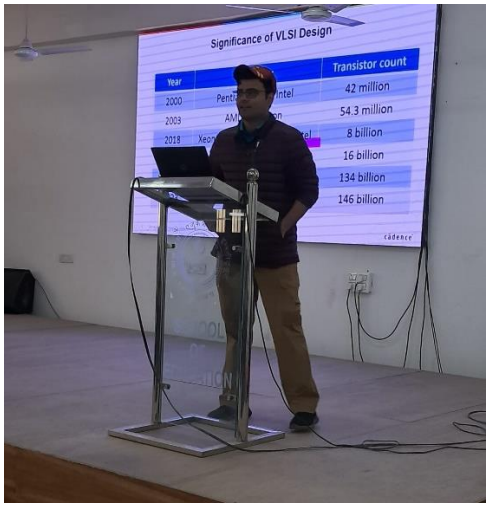
Dr. Sushobhit Singh, a Software Architect at Cadence Design Systems with nearly 20 years of experience in the semiconductor industry, delivered an insightful lecture on the latest trends, challenges, and opportunities in the field. He holds a PhD in distributed timing signoff of digital designs, has 10 US patents, and has published extensively in reputed international journals. His session provided an in-depth analysis of the industry's rapid advancements, economic frameworks, and future challenges, underscoring the increasing global demand for skilled semiconductor engineers. Key takeaways from his lecture included the semiconductor

industry’s projected growth to a $1 trillion market by 2030 and the influence of AI, IoT, and cloud computing on semiconductor advancements.

He highlighted the critical role of design, manufacturing, and packaging in semiconductor development, along with the significance of Electronic Design Automation (EDA) tools in modern semiconductor fabrication. Mr. Singh also emphasized the necessity for continuous skill development, stronger industry-academic collaborations, and government initiatives supporting semiconductor research and manufacturing. His lecture provided students with valuable insights into the dynamic nature of the semiconductor industry and its promising career prospects.

Mr. Agam Satsangi, a Lead Software Engineer in the R&D team at Cadence with over five years of experience, conducted an informative session on VLSI (Very Large-Scale Integration) design. He specializes in Static Timing Analysis (STA) and Engineering Change Order (ECO) solutions, focusing on developing high-performance EDA tools, optimizing timing closure methodologies, and improving VLSI design automation workflows. His lecture covered fundamental and advanced concepts, equipping students with essential knowledge in VLSI design. Key topics discussed included physical design and timing closure methodologies, including static and dynamic analysis, as well as critical aspects of cell and interconnect delays.

He elaborated on principles of combinational and sequential circuit design, Static Timing Analysis (STA), verification challenges, and optimization techniques for timing signoff. The session concluded with a discussion on career opportunities in VLSI design and the industry’s evolving technological landscape. Mr. Satsangi’s lecture significantly enhanced students’ understanding of modern VLSI design challenges and best practices.



Conclusion

The Alumni Guest Lecture session provided an enriching platform for students to gain industry-relevant knowledge and insights into emerging technological trends. The Department of Electrical Engineering extends its gratitude to Mr. Umang Chauhan, Mr. Sushobhit Singh, and Mr. Agam Satsangi for their invaluable contributions and for inspiring the next generation of engineers. Such interactions play a pivotal role in bridging the gap between academia and industry, fostering career preparedness, and encouraging students to pursue excellence in their respective fields.