SILIZIUM

Departmental Society of Electronics

Deen Dayal Upadhyaya College

(University of Delhi)

Semicon India 2024 Visit

Introduction:

On September 13, our college organized an industrial visit to **Semicon India 2024**, held in Noida, Uttar Pradesh. This event served as a premier gathering of semiconductor industry leaders, researchers, and professionals, offering a valuable platform for us to explore the latest advancements in semiconductor technology, innovation, and manufacturing. The visit was designed to bridge the gap between theoretical knowledge and real-world applications in the field of semiconductors, providing us with first-hand exposure to cutting-edge technologies and industry trends.

The 'SEMICON INDIA 2024' is being organized by India Semiconductor Mission in partnership with SEMI and industry associations under the visionary leadership of Hon'ble Prime Minister Shri Narendra Modi with the aim to positioning India as a trusted partner in the global Semiconductor Supply Chain to drive forward the vision of the India Semiconductor Mission.

Objective of the Visit: The primary aim of our visit was to gain a comprehensive understanding of the semiconductor industry, including its ecosystem, current challenges, and emerging trends. It also aimed to enhance our technical knowledge, provide networking opportunities with industry experts, and expose us to career prospects in this rapidly growing sector. Additionally, the visit was intended to inspire students to contribute to India's semiconductor growth through research and development.

Key Highlights of the Event:

1. **Inauguration and Keynote Sessions:**

   - The event commenced with an inaugural session featuring prominent industry leaders, policymakers, and government officials discussing India's role in the global semiconductor ecosystem.
   - Eminent speakers from multinational semiconductor companies, research institutions, and government agencies emphasized the importance of semiconductor self-reliance and the 'Make in India' initiative.
   - Discussions revolved around the increasing demand for semiconductors, India's potential to become a key player in semiconductor manufacturing, and strategic government policies to foster growth in the sector.

2. **Exhibitions and Technology Demonstrations:**

   - Various semiconductor companies, including leading global and Indian firms, showcased state-of-the-art products such as microprocessors, memory chips, AI-driven semiconductors, IoT-enabled devices, and next-generation transistors.
   - Live demonstrations on semiconductor fabrication, chip designing, lithography techniques, and advanced packaging methods were conducted, providing an in-depth understanding of the manufacturing process.
   - Startups and emerging firms displayed innovative semiconductor solutions aimed at enhancing efficiency, reducing energy consumption, and supporting high-performance computing.

3. **Industry-Academia Interaction:**

- Special sessions focused on fostering collaboration between academia and industry to drive innovation and skill development.
- Discussions covered research opportunities, internship programs, and the role of universities in strengthening India's semiconductor ecosystem.
- Experts highlighted the importance of interdisciplinary learning, encouraging students to explore VLSI design, embedded systems, and AI-driven chip development.

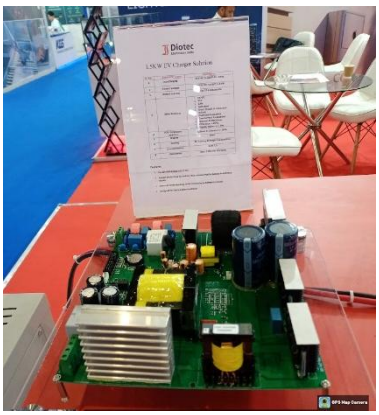


4. **Networking and Interaction:**
    - The event provided an excellent opportunity to interact with professionals from top semiconductor companies, including engineers, researchers, and executives.
    - We were able to discuss career pathways, industry demands, and the skills required to excel in semiconductor technology.
    - Insights were gained into semiconductor R&D projects, future technological advancements, and government initiatives to boost semiconductor manufacturing in India.

Key Learnings and Takeaways:

- The visit reinforced the importance of semiconductor technology in powering modern digital infrastructure, including computing, communications, automotive, and industrial automation.
- We developed an in-depth understanding of the semiconductor fabrication process, including wafer production, photolithography, doping, etching, and packaging.
- Awareness about India's semiconductor industry and its rapid growth potential was enhanced, along with knowledge about various government-led initiatives aimed at boosting local semiconductor manufacturing.

- The visit provided clarity on career opportunities, required skill sets, and educational pathways for aspiring semiconductor engineers.
- The significance of interdisciplinary knowledge in semiconductor technology, such as the integration of AI, ML, and quantum computing, was emphasized.



Conclusion: The visit to **Semicon India 2024** was an eye-opening and enriching experience, allowing us to witness firsthand the advancements and breakthroughs in the semiconductor industry. The event provided us with practical exposure to cutting-edge technologies and deepened our understanding of the industry's functioning, challenges, and opportunities. Furthermore, it motivated us to explore careers and research opportunities in this critical sector, reinforcing the importance of innovation and self-reliance in India's journey towards becoming a global semiconductor hub.

For more photos:
https://drive.google.com/drive/folders/1Il8lUIAUIhFyqsLX8rTV8Oms0zwdOhLa?usp=sharing