

Report on

Five-DayFDP on "CHALLENGES AND OPPORTUNITIES IN VLSI FOR IOT APPLICATIONS"

Date(s):21-06-2021to25-06-2021



A 5-day Faculty Development Program (FDP) on "Challenges and Opportunities in VLSI for IoT Applications" was organized by department of Electronics and Communication Engineering, in association with Academic Staff College, KLEF. The FDP was conducted with the aim of

providing a platform for academicians and researchers to delve into the intricacies of Very Large Scale Integration (VLSI) and its applications in the Internet of Things (IoT) domain. The program addressed the evolving landscape of IoT and the role of VLSI in enabling its diverse applications.

The FDP commenced with an inaugural session highlighting the importance of VLSI in the context of IoT applications. Head of the Department, ECE Dr. M. Suman, emphasized the need for collaborative efforts between academia and industry to address the challenges and harness the opportunities in this domain.

The sessions provided an overview of VLSI design methodologies, including RTL design, synthesis, and verification. Participants gained insights into the key concepts and tools used in VLSI design. The sessions also focused on the architecture of IoT systems and various applications spanning healthcare, smart cities, agriculture, and industrial automation. Speakers highlighted the significance of low-power design and integration challenges in IoT devices.

Participants explored the unique challenges faced in VLSI design for IoT applications, such as energy efficiency, reliability, security, and miniaturization. Case studies and real-world examples were presented to illustrate these challenges. The FDP also focussed on emerging trends and opportunities in VLSI for IoT, including edge computing, AI integration, and hardware security. Participants gained insights into potential research directions and collaboration opportunities.

Practical workshops were conducted to familiarize participants with VLSI design tools and simulation techniques. Participants had the opportunity to work on design projects related to IoT applications, enhancing their practical skills. A panel discussion involving experts from academia and industry was held to address queries and facilitate discussions on pertinent topics. Key insights were shared regarding the future prospects of VLSI for IoT and strategies to overcome existing challenges.

The Faculty Development Program on Challenges and Opportunities in VLSI for IoT Applications provided a comprehensive platform for educators and researchers to explore the dynamic landscape of VLSI design in the context of IoT. Through insightful sessions, hands-on workshops, and interactive discussions, participants gained a deeper understanding of the challenges and opportunities inherent in this domain. The program fostered collaboration and knowledge exchange, paving the way for innovative research and development in VLSI for IoT applications.



