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Guest Lecture organized by Department of Electronics and Communication Engineering

Report on Guest lecture on 'Semiconductor Devices for High-Speed Applications'

Date of the event	09/11/2024
Title of the Event & Lecture	Guest lecture on 'Semiconductor Devices for High-Speed Applications'
Name of the Resource Speaker	Mr. Chandrasekhar Kypa, Vice President & Business Leader, Quest Global, Bengaluru
No. of Participants	349
Venue	Auditorium

The department of Electronics and Communication Engineering organized a Guest Lecture on the topic 'Semiconductor Devices for High-Speed Applications' on 9th November 2024. The event was held in Auditorium from 10.30 am to 12.45pm. The expert speaker was Mr. Chandrasekhar Kypa, Vice President & Business Leader, Quest Global, Bangalore, India. Students from the departments of Electronics & Communication Engineering, Industrial IOT and VLSI participated in the event and a total of 349 students attended this event.

The anchor for the program Ms. Noble Jose, final year student of ECE, welcomed the guest. The event was graced by Dr. Shrinivas L Gombi, Dean Academics, MVJCE, Bangalore. Ms. Donna Liz Vinoth, final year ECE student introduced the guest speaker, Mr. Chandrasekhar Kypa.

Ms. Donna Liz Vinoth introducing the chief guest

Mr. Chandrasekhar Kypa completed his M.S. in Software Systems from BITS Palani, India in 2003, and Sr. Management Program from IIIM Calcutta in 2014.

He had worked with esteemed organizations like Infineon Technologies, AMD, Philips Semiconductors, and Synopsys. He had executed projects targeting AI/ML, Automotive, Hardware Security, Graphics, and Network Interface Products. He has more than 25 Years of experience in VLSI Design. Currently, he is working as Vice President & Business Leader in Quest Global, Bangalore.

Dr. Shrinivas L. Gombi, Dean Academics, MVJCE shared his thoughts about guest lecture and introduced the guest and addressed the gathering.

Dr. Shrinivas L Gombi, Dean Academics , MVJCE addressing the gathering

Dr. Shrinivas L. Gombi, Deans of Academics, MVJCE welcomed the industry expert with a bouquet.

Dr. Shrinivas L Gombi, Dean Academics , MVJCE welcoming the guest

Mr. Chandrasekhar Kypa opened his talk by highlighting the significance of the word "high speed" across various fields including communications, automotive, medical, and manufacturing. To achieve high-speed applications, we need circuits that operate at high speeds, which in turn, require high-speed devices.

IC design involves several stages including RTL design, gate-level design, transistor-level design, layout design, and mask-level design. To achieve high-speed performance, it's essential not only to use high-speed devices but also to approach the design of each stage with a focus on speed. Only by optimizing each stage from a high-speed perspective can one create high-speed circuits.

Currently, the semiconductor industry is focused on the 3nm technology node, with the prevailing device architecture being FinFET. From a device perspective, there is a drive to further shrink the technology node. Presently, Intel, the multinational company, is working on a node like 5Å, which is comparable in size to the silicon atom, making it increasingly difficult to reduce the size further.

At this point, the speaker posed a question to the students: "What comes next, beyond silicon?" He suggested that high-speed semiconducting materials such as GaAs, InP, and GaN will play a crucial role in the future.

Students Attentively listening to the lecture.

As a result of this event, students gained valuable insights into the importance of high-speed systems and learned practical approaches to achieving them, from system design and gate design to device and mask design.

Ms. Noble Jose delivered the vote of thanks, bringing the informative session to a close.