University at Buffalo

Center for Advanced Semiconductor Technologies

INAUGURAL DISTINGUISHED-SPEAKER SEMINAR

MEMORY TECHNOLOGY INNOVATIONS:
ENABLING HIGH PERFORMANCE COMPUTE APPLICATIONS

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Abstract:
An increasing demand for data generation, storage, and intelligence generation from data is driving advances in memory technology and advanced computing applications. Memory performance is starting to define modern day computing in both mobile and server environments. There is an absolute need to continue the tremendous pace of memory technology improvements to deliver performance gains while managing the associated economics of scaling. In this discussion, we present the current status of primary memory technology (DRAM and NAND) and their scaling path while highlighting the importance of emerging memory options – their shortcomings and advantages. We will also discuss the economics of scaling and need for continued innovation in memory technology and system enablement to deliver to diverse end application requirements.

Biography:
Nirmal Ramaswamy is currently the Vice President of Advanced DRAM and Emerging Memory Technology at Micron Technology Inc. His focus areas are DRAM research and development, CMOS engineering and emerging memory development at Micron. He has a bachelor's degree in Metallurgical Engineering from Indian Institute of Technology, Madras, India, a PhD in Materials Science and Engineering from Arizona State University and is a graduate of the Stanford Graduate School of Business Executive Program. Dr. Ramaswamy joined Micron in 2002 and has served in various leading roles in process development, process integration and technology development in DRAM, NAND and Emerging Memories. He holds more than 300 issued patents in the field of semiconductors.

DATE: Friday, March 1st, 2024
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