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Flash Architecture for the Datacenter

Soaring demand for increased storage performance at lower cost is raising the bar for design & innovation within the industry. Developers are innovating with new materials and more customer-focused features at the device level, but even more innovation is occurring at the memory level. With an increasing number of data-intensive applications becoming SSD-friendly, storage designers have been faced with significant overhead due to the persistence of a number of legacy protocols and an entrenched software stack. NAND technology continues to push the limits of density, scaling, latency reduction and performance, innovation in flash chips, next gen storage protocols, and supportive software is helping solid state storage break through long-defiant bottlenecks. However applications like machine learning, artificial intelligence and health sciences are driving new domain specific architectures that present challenges for traditional hardware and software stack for flash. We will cover latest advances by Samsung and summarize some of the key research areas for new flash architectures.

Vijay Balakrishnan

Director, Memory Solutions Lab, Samsung Semiconductor, Inc.

Vijay is one of the leaders of the Samsung Memory Solutions Lab building efficient and high-performance solutions for the datacenter. He works on solutions that leverage Samsung's industry leading flash, SSD and DRAM technologies. Prior to Samsung he worked at Sun Microsystems and Microsoft designing and building high-performance systems.

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4:00pm - 5:00pm EST
Hewlett Room, 32-G882
Ray and Maria Stata Center
Cambridge, MA 02139

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