February 17th, 2017

JOINT SEVERO OCHOA RESEARCH SEMINAR:
Professors Wen-Mei Hwu and Avi Mendelson

Severo Ochoa Research Seminar
BSC
2016-2017

2. NVDRAM a new technological evolution of a new system revolution?

Avi Mendelson
Electrical Engineering and Computer Science Professor at the Technion.

Abstract

Nonvolatile memories are being used for quite long time in computer systems. So far, they successfully added another level of abstraction to the current memory hierarchy. The introduction of byte addressable nonvolatile memory may end-up serving the same purpose; i.e., yet another technology evolution, or may be used to carry on the next revolution in system architectures. In his talk, he will give a short survey of what had been done so far in this area and will discuss few challenges that still need to be solved in order to enable NVDRAM to become the enabler of the next computer architecture revolution.

Bio

Avi Mendelson is a professor in the departments of Electrical Engineering and Computer Science at the Technion. He earned his BSc and MSc degrees from the Computer Science department in the Technion and his PhD degree from the ECE department, University of Massachusetts at Amherst, USA. Prof. Avi Mendelson re-joined Technion recently after spending many years in industry. As part of his industry roles, he was in charge of the first CMP implementation Intel made (Core Due 2), he researched the impact of future SW technologies (such as GPGPU) of future processors and was involved with defining and implementing of many other related technologies such as power management, PCIe-3, memory management unit and more. Avi has more than 60 papers and 18 patents in the field of computer architecture and SW/HW interfaces. Avi has supervised more than 30 doctoral and master degree students, served as an editor of professional journals and was on the program committee of various top conferences. He also served as the program chair of two ICS conferences and the General chair of ISCA'2013 conference. He is member of the ACM Europe council board and serves in the advisory board of

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HiPEAC (European network of excellence) and has participated in several EU projects including FP7 FET Teraflux and FP7 IP Encore. His main research interests are in the areas of computer architectures, heterogeneous systems (including GPGPU), fault-tolerance systems and operating systems.

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