Electrical & Computer ENGINEERING

JUDITH RESNIK YEAR OF WOMEN IN ECE

Graduate Seminar

Internet of Things: History and Hype, Technology and Policy

Margaret Martonosi

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Professor, Computer Science
Princeton University

Thursday, January 26th **4:30 pm Scaife Hall 125**

Abstract:
Although Internet-of-Things (IoT) applications and services have their roots in ideas that are decades old, their increasingly widespread deployments have made them a hot topic these days. Frequent topics of discussion and hype, they are causing both excitement and concern. As many as 50B networked devices are envisioned by 2020, and proponents of IoTs see a world where embedded sensing and control techniques help vehicle traffic flow more smoothly, where environmental sensing and data analysis facilitates better use of natural resources like water, and where personalized health monitoring helps individuals improve their quality of life. On the other hand, properly addressing policy concerns around security and privacy may play a role in IoT's adoption and success. My talk will discuss key technology and policy challenges for future IoT applications and devices, and will outline particular technical issues for researchers to address. Overall, I will be drawing from both technical experiences and trends, as well as from perspectives gained during a one year fellowship doing technology policy within the U. S. Department of State.

Bio:
Margaret Martonosi is the Hugh Trumbull Adams '35 Professor of Computer Science at Princeton University, where she has been on the faculty since 1994. From August 2015-2016, she served as a Jefferson Science Fellow doing international aspects of technology policy within the U. S. Department of State. Martonosi's technical research focuses on computer architecture and mobile computing, particularly power-efficient systems. Past projects include the Wattch power modeling tool used by thousands of engineers worldwide, and the ZebraNet mobile sensor network, which was deployed for wildlife tracking in Kenya. Her current work addresses hardware-software challenges in heterogeneous parallelism.

Martonosi is a Fellow of both IEEE and ACM. Her major awards include Princeton University's 2010 Graduate Mentoring Award, the Anita Borg Institute's 2013 Technical Leadership Award, NCWIT's 2013 Undergraduate Research Mentoring Award, the 2015 Marie Pistilli Women in EDA Achievement Award, and ISCA's 2015 Long-Term Influential Paper Award. She was also recently named an Andrew Dickson White Visiting Professor-at-Large at Cornell University. She serves on the Board of Directors of the Computing Research Association.

SEMINAR NOTES: (REFRESHMENTS SERVED AT 4:00 PM)

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