Sustainable Computing: A Quantitative Perspective

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Sustainable computing refers to a holistic approach to computing that stretches from equipment manufacturing to energy-efficient operation to end-of-life disposal and recycling, all to reduce the total greenhouse gas emissions of our IT infrastructure. It is a critically important technology solution that affects prospects for sustainable development of human society. In my talk, I will review the guiding principles and current solutions for sustainable computing with a discussion of the role of AI, new computing paradigms, information accessibility, and education.

Massoud Pedram is Charles Lee Powell professor of Electrical and Computer Engineering at the University of Southern California. Dr. Pedram, who is an IEEE fellow and AAAS fellow, received the 2015 IEEE Circuits and Systems Society Charles A. Desoer Technical Achievement Award for his contributions to modeling and design of low power VLSI circuits and systems and the 2017 USC Viterbi School of Engineering Senior Research Award. Dr. Pedram serves as the PI of the IARPA ColdFlux project, and the NSF DISCoVER Expedition focusing on superconductor electronics and its applications.

Refreshments will NOT be provided (sorry!).

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