University of Rochester
Department of Electrical and Computer Engineering
Colloquia Series

Energy-Efficient Nanoelectronics and Memory Devices

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12:00PM 1:00PM
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Abstract: A central issue of nanoelectronics concerns their fundamental scaling limits, that is, the smallest and most energy-efficient devices that can function reliably. In the first part, I will focus on phase change memory (PCM) devices, which unlike conventional charge-based electronics, are more immune to leakage at nanoscale dimensions. We developed novel approaches to build PCM nanowires with individual carbon nanotube (CNT) electrodes. With diameters ranging from 1-5 nm, CNTs are the smallest electrodes available, allowing us to