Speaker: Ari Trachtenberg, Boston University

Title: Some big problems of simple systems

Abstract: Even relatively simple and well-understood systems face significant implementational challenges that may not be understood until well after they are deployed and in widespread use. This talk will discuss our recent research into two such systems: (i) the operating system page cache, wherein efficiency considerations inherently lead to side-channels and covert channels that cannot be easily stamped out, and (ii) the Bitcoin network, where small decisions like certain buffer sizes can have a remarkable impact on performance and accessibility.

Bio: Ari Trachtenberg is a professor of Electrical and Computer Engineering at Boston University, with affiliations in Computer Science and Systems Engineering. His research interests include cybersecurity (side-channels), distributed systems (automated exposure notification, data synchronization, networks), and algorithms (rateless coding, information theory).