

University of Rochester
Department of Electrical and Computer Engineering Colloquia

Back to the “War of Currents”: Can AC Computing be an Alternative for Wirelessly Powered Devices?

Dr. Emre Salman

Wednesday, May 10th
12:00PM – 1:00 PM
Computer Studies Building (CSB) 209

Abstract: Energy autonomy is one of the fundamental challenges facing future Internet of Things (IoT). Relying on existing battery technologies is not only impractical, but also insufficient due to stringent constraints on form factor and limited power densities of conventional electrochemical charge storage techniques. Wireless/RF developing an efficient computing paradigm for wirelessly powered IoT devices. The proposed method investigates the direct use of AC power for computing while increasing the efficiency by more than an order of magnitude. This significant increase in energy efficiency enhances the IoT device intelligence, thereby allowing for local decision-making mechanisms. At the end of the talk, I will introduce several exciting future directions at the intersection of circuits, communication, and electronics.

Bio: Emre Salman is an associate professor at the Department of Electrical and Computer Engineering at State University of New York (SUNY), where he directs the Nanoscale Ci

