

Influence of Emerging Devices in Revitalizing Electronic Systems Design

Vijaykrishnan Narayanan

Pennsylvania State University, USA

E-mail: vijay@cse.psu.edu

Abstract

There are a multitude of ongoing efforts in exploring new physics, new devices, and new computational paradigms to sustain progress in the semiconductor industry. This talk will provide an overview of the influence of some promising emerging devices at the system level. It will also provide insights on challenges and solutions when designing entire systems in yet-to-mature technologies. Specifically, this talk will focus on steep sub-threshold slope transistors, non-volatile logic/memory elements, and coupled oscillators and their potential impact on energy-scavenged assistive health systems and intelligent vision systems.