TECHNOLOGIES FOR RF FRONT-ENDS BEYOND 5G

Professor Linda Katehi

Electrical and Computer Engineering, University of California, Davis

Friday, September 29 | 12:10-1:00 | 1002 Geidt Hall
ECE Department Seminar Series

ABSTRACT

The concentration of the world's population around cities has resulted from the impact of the three industrial revolutions we have experienced in the past 250 years. The First Industrial Revolution originated in England in the late eighteenth century and used water and steam power to mechanize production. It resulted in the early rise of the city as a center of activity, when farming became more effective using mechanization and more people turned to cities for work. The Second Industrial Revolution in the late nineteenth century started in the US and used electric power to create mass production, which brought even more people from rural areas and farms to the assembly lines. The Third Industrial Revolution also originated in the US in the mid to late twentieth century, and used electronics and information technology to automate production, thus forcing people out of the assembly lines and in unemployment. We stand on the brink of a new technological revolution, which may be more powerful and more dangerous than all the previous ones. In its scale, scope, and complexity, this transformation may be unlike anything we have experienced before.

The Fourth Industrial Revolution is building on everything we have discovered so far and it is using the internet to connect humans and machines in one task.

BIOGRAPHY

Professor Linda Katehi received her bachelor's degree in Electrical and Mechanical Engineering from the National Technical University of Athens, Greece and her master's and doctoral degrees in Electrical Engineering from UCLA in 1981 and 1984, respectively. She served as Provost and Vice Chancellor for Academic Affairs at the University of Illinois at Urbana-Champaign from 2006 to 2009; the John A. Edwardson Dean of Engineering and Distinguished Professor of Electrical and Computer Engineering at Purdue University from 2001 to 2006; and Associate Dean for Academic Affairs and Graduate Education in the College of Engineering and Professor of Electrical Engineering and Computer Science at the University of Michigan. She served as the sixth chancellor of the University of California, Davis, from August 2009 to August 2016.

Professor Katehi is an expert in the areas of development and characterization (theoretical and experimental) of microwave, millimeter printed circuits; the computer-aided design of VLSI interconnects; the development and characterization of micro-machined circuits for microwave, millimeter-wave and sub-millimeter-wave applications including MEMS switches, high-Q evanescent mode filters and MEMS devices for circuit re-configurability; the development of low-loss lines for sub-millimeter-wave and terahertz frequency applications; theoretical and experimental study of uniplanar circuits for hybrid-monolithic and monolithic oscillator, amplifier and mixer applications; theoretical and experimental characterization of photonic band-gap materials.

All Are Welcome