USC Viterbi School of Engineering
Ming Hsieh Department of Electrical Engineering

Seminar Announcement

Yuan Xie

Professor, Computer Science and Engineering
Pennsylvania State University

"Three-dimensional Integrated Circuits (3D ICs) Design, Architecture, and Applications"

Friday, April 18, 2014
10:30AM – 12:00PM
EEB 248

Hosted by MuraliAannavaram

3D Integration emerges as an attractive option to sustain Moore's law as well as to enable More-than-Moore. This talk will present an overview of recent research progress in 3D IC designs, including both design tools/VLSI perspective and architecture perspective. It will describe the following research directions for future 3D IC design: Design automation and test techniques and methodologies for 3D designs are imperative to realize 3D integration; Novel architectures and design space exploration at the architectural level are also essential to leverage 3D integration technologies for performance gain; Possible "killer" application for 3D integration (e.g., what application could dramatically benefit from 3D stacking technology or what novel applications are enabled by 3D technology.)

Yuan Xie is currently a Professor in the Computer Science and Engineering department at the Pennsylvania State University. He received Ph.D. from Princeton University, and was with IBM Microelectronic before joining Penn State. He also helped establish and lead AMD Research China Lab. Prof. Xie is a recipient of the National Science Foundation Early Faculty (CAREER) award, the SRC Inventor Recognition Award, IBM Faculty Award, and several Best Paper Award and Best Paper Award Nominations at IEEE/ACM conferences. His research covers areas of EDA, computer architecture, VLSI circuit designs, and embedded systems. His current research projects include: three-dimensional integrated circuits (3D ICs); emerging memory technologies; low power and thermal-aware design; reliable circuits and architectures; and embedded system synthesis.