University of Rochester
Department of Electrical and Computer Engineering
Colloquia Series

Modeling and Design Solutions for Emerging and Nanoscale Systems

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11:00 AM – 12:00 PM
Computer Studies Building (CSB) 209

Abstract:
The recent advancements in process technology have enabled the idea of a system on a chip to become a reality, allowing designers to pack hundreds of million devices on a single chip while continuously demanding high performance. In this talk, I will provide an overview of our research efforts in several of key modeling and design challenges facing the realization of high performance and low power systems, such as variability-aware and analog/RF design automation. I will also talk about long-term solutions in Nanotechnology. Building interconnects that utilize carbon-based or nanophotonics technologies would provide an excellent alternative for interconnects and would alleviate the problems associated with current interconnect technologies. By exploiting advances in Nanotechnology, engineers will be better equipped to deliver future high-performance nanoscale circuits and systems.

Biography:
Yehia Massoud is the Chair of the Electrical and Computer Engineering (ECE) department at the University of Alabama at Birmingham (UAB), where he also holds the Wallace Bunn Endowed Chair in Telecommunications since January 2011. He is also the Director of the UAB Center for Integrated Systems. He received his PhD degree in Electrical Engineering and Computer Science from the Massachusetts Institute of Technology in 1999. He was a member of the Technical Staff at the Advanced Technology Group at Synopsys Inc., Mountain View, CA from 1999 to 2003. He joined Rice University in July 2003, where he was the founding director of the Nanoelectronic Systems Laboratory (NSL), and an associate professor (2007-2010)/assistant professor (2003-2007) in the Electrical and Computer Engineering, Computer Science, and Applied Physics departments at Rice University.

He is an Associate Editor of the IEEE Transactions on Very Large Scale Integration Systems (TVLSI), the IEEE Transactions on Circuits and Systems I (TCAS-I) and the Journal of Circuits, Systems, and Computers. He also serves on the founding editorial board of the NanoCom Journal. He also served as a guest Co-Editor of the special issue of the IEEE Transaction on Circuits and Systems I on ISCAS'09. He has served as the 2009 General Program co-Chair and the 2007 Technical Program Co-Chair of the IEEE/ACM Great Lakes Symposium on VLSI. He has published more than 190 papers in peer reviewed journal and conferences. He served as the theme leader for Novel Interconnects and Architectures in the SRC Southwest Academy of Nanoelectronics (SWAN) from 2006-2011. He is an elected member of the IEEE Nanotechnology Council since 2009 and is a recipient of the National Science Foundation CAREER Award in 2005, the DAC fellowship in 2005, the Synopsys Special Recognition Engineering Award in 2000, several Best Paper Award Nominations, and two Best Paper Awards at the 2007 IEEE International Symposium on Quality Electronic Design and the 2011 IEEE International Conference on Nanotechnology.