



COLLOQUIUM

School of Computing and Software Engineering (CSE)

Subject: Power/Thermal-Aware Real-Time Scheduling

Speaker: Dr. Gang Quan, Department of Computer Science and Engineering
University of South Carolina, Columbia, SC

Date: Thursday, March 5, 2009

Time: 10:10-11:10 AM

Place: J 131

ABSTRACT

According to Borkar et al. from Intel, there are more than 30 billion transistors integrated into a single 300mm² die today, and the number is growing rapidly toward 100B by the middle of the next decade. The power consumed by these transistors is also tremendous, reaching 300W in early next decade. The exponentially increased power consumption has posted significant challenges not only on how to provide sufficient power source to an electronic system but also on how to dissipate the heat generated by the system.

In this talk, Dr. Quan will present our recent research on the power/thermal-aware scheduling for real-time embedded system, with an emphasis on the interplay between the leakage and temperature. Dr. Quan will also discuss his other teaching and research interests.

Biographical Sketch

Dr. Gang Quan is currently an assistant professor in the Department of Computer Science & Engineering, University of South Carolina. He received his PhD from the University of Notre Dame. His research interests include real-time system, embedded computing, power-/thermal-aware design, electronic design automation, advanced computer architecture, and reconfigurable computing. He is the recipient of an *NSF Faculty Early Career Award* and a *Best Paper Award* from 38th Design Automation Conference. One of his papers is selected in 2007 as one of *The Most Influential Papers* of 10 Years Design, Automation, and Test in Europe Conference (DATE).

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