CRA-W/CDC Distinguished Lecture Series

Jointly presented by
Florida Institute of Technology, Department of Computer Sciences
Rollins College, Department of Mathematics and Computer Science
University of Central Florida, Department of EECS, Computer Science Program

Tuesday, March 26, 2013
Harris Engineering Center
University of Central Florida

Scheduled events:

4:30 pm	Seminar by Russ Joseph, HEC 101
5:30 pm	Reception with coffee, tea, and hors d'oeuvres, HEC Atrium
6:00 pm	Seminar by Barbara Simons, HEC 101
7:00 pm	Panel discussion on Graduate School in Computer Science, HEC 101
	Dinner will be served.

Microarchitecture and Compiler Support for Timing Speculation
Russ Joseph

Timing speculative architectures present an innovative design direction which may allow us to circumvent some of today's most pressing technology challenges. Under this design paradigm, the processor runs at at voltage, frequency, and thermal operating points which would not guarantee signal setup time constraints for all logic paths -- abandoning one of the tenets of synchronous digital design. The system applies dynamic countermeasures to correct nascent errors, so program behavior is unaffected. This approach relaxes constraints at the circuit-level and empowers the system designer to apply novel trade offs throughout the system stack without compromising overall correctness. In this talk, I will discuss some recent developments that may boost the impact of timing speculation by drawing on support from the microarchitecture and compiler. These techniques highlight some of the potential in relaxing traditional system design boundaries.

Bio:
Russ Joseph is Associate Professor of Electrical Engineering and Computer Science at Northwestern University. His research interests are in power and reliability aware computer architecture. Specifically his ongoing projects examine cooperative hardware/software techniques that adaptively manage microprocessors to respond to environmental conditions, manufacturing variability, and hardware failure. Joseph has been a Northwestern faculty member since 2004. He is the recipient of a 2007 NSF CAREER Award and a 2009 BEYA Modern Day Technology Leader Award. He earned his Ph.D. in Electrical Engineering from Princeton University in 2004. He earned a B.S. degree with a double major in Electrical and Computer Engineering and Computer Science from Carnegie Mellon University in 1999.

I Can Bank Online; Why Can't I Vote Online?
Barbara Simons

There is a widespread perception that Internet voting is the wave of the future and the way to save money while increasing voter participation, especially by young people. There is also strong pressure to adopt Internet voting in the U.S. for voters with disabilities and for members of the military and civilians living abroad. Consequently, Internet voting is currently being deployed in some states and considered by others.

Do you know what your state is doing? Do you think you can bank online? Come and find out.

Bio:
An expert on electronic voting, Dr. Barbara Simons recently published Broken Ballots: Will Your Vote Count?, a book on voting machines co-authored with Douglas Jones. She was appointed to the Board of Advisors of the U.S. Election Assistance Commission in 2008, and she was a member of the workshop, convened at the request of President Clinton, that produced a report on Internet Voting in 2001. She co-authored the report that led to the cancellation of Department of Defense's Internet voting project (SERVE) because of security concerns. Simons, a former ACM President, co-chaired the ACM study of statewide databases of registered voters. She also co-authored the League of Women Voters report on election auditing. She is Board Chair of Verified Voting.

Simons, who is retired from IBM Research, is the only woman to have received the Distinguished Engineering Alumni Award from the College of Engineering of U.C. Berkeley. She is a Fellow of ACM and of the American Association for the Advancement of Science, and she has received several awards, including the Computing Research Association Distinguished Service Award and the Electronic Frontier Foundation Pioneer Award.

For more information: crawcdc.eecs.ucf.edu