

Workshop: Architectures for post-CMOS Switches

Tuesday, August 18, 2009 • University of Notre Dame, McKenna Hall

- 8:00 Check-in and continental breakfast
- 8:30 Welcome – *Kerry Bernstein, Applied Research Associates* and *Wolfgang Porod, Univ. of Notre Dame*
- 8:40 Introductory remarks – *Pinaki Mazumder, Program Director, Emerging Models and Technology Program, National Science Foundation*
- 8:50 Opening remarks – *Jeff Welser, Director, Nanoelectronics Research Initiative*
- 9:00 NRI – Computing of the future – *Larry Cooper, Arizona State University*
- 9:30 Communication of novel computational state variables: Physical limits and circuit implications – *Azad Naeemi and James Meindl, Georgia Institute of Technology*
- 10:00 Discussion, followed by BREAK
- 10:30 Parallel processing and circuit design with nano-electro-mechanical relays – *Elad Alon, University of California, Berkeley*
- 11:00 CMOS++: Opportunities for magnetic materials in on-chip power management – *Ken Shepard, Columbia University*
- 11:30 Stochastic logic – *David Ricketts, Carnegie Mellon University*
- 12:00 Discussion, followed by LUNCH
- 1:30 Stable learning in networks of unreliable, memristive nanodevices – *Greg Snider, Hewlett-Packard*
- 2:00 Architectural design for “noisy” fabrication – *André DeHon, University of Pennsylvania*
- 2:30 Virtual and physical cellular machines – *Tamas Roska, Hungarian Academy of Sciences*
- 3:00 Discussion, followed by BREAK
- 3:30 Brains, artificial neural networks, and some future hardware issues – *Ralph Linsker, IBM T.J. Watson Research Center*
- 4:00 Biologically inspired intelligent signal processing – *Dan Hammerstrom, Portland State University*
- 4:30 Stochastic computational associative memories: Neuromorphic architectures beyond Moore’s Law – *Andreas Andreou, Johns Hopkins University*
- 5:00 Wrap-up and discussion
- 6:30 RECEPTION and DINNER at Notre Dame Stadium Press Box
- Dinner talk: NRI Benchmarking – *Kerry Bernstein, Applied Research Associates*
- Closing remarks – *Alan Seabaugh, MIND/University of Notre Dame*