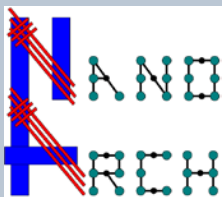# CALL FOR PAPERS

6th IEEE/ACM International Symposium on Nanoscale Architectures (NANOARCH '10)

Co-located with the 47th Design Automation Conference (DAC)
June 17-18, 2010   Anaheim, CA, USA

NANOARCH is the annual forum for the presentation and discussion of novel nanoelectronic circuit and system architectures. The **NANOARCH** symposium seeks papers on innovative ideas for solutions to the principal challenge facing integrated electronics in the 21st century—how to design, fabricate, and test circuits and systems that will have to rely upon devices beyond conventional CMOS. In particular, such systems will (1) contain anywhere from a hundred to a trillion unconventional nanodevices with unique functionalities, (2) need to cope with unavoidably high levels of defects and faults, and (3) require rethinking of the methodologies involved, from the construction of basic logic gates / functional units to the compilation and mapping of high-level programs onto novel nanoscale computational fabrics.

This 6th symposium seeks to build on the successes of the previous five iterations of **NANOARCH** (2005-2009). The symposium's topics of interest include (but are not limited to) the following:

- Ideas for novel nanoelectronic circuits or system architectures that resolve key issues anticipated in the design, fabrication, and operation of nanoelectronic systems
- Performance simulations of nanoscale architectures, macro blocks, or key nanocircuits
- Novel implementations of microarchitecture concepts using nanoscale building blocks
- Computational paradigms and programming models for nanoscale architectures
- Methodologies for incorporating defect and fault tolerance
- Validation frameworks for ensuring correct functionality in defective nanoscale fabrics
- Computer aided design tools and methodologies for nanoelectronic architectures
- Experimental assessment and/or validation of nanoscale architectural concepts

Authors are invited to submit papers up to 6 pages in length, describing original, unpublished recent work. Clearly describe the nature of the work, explain its significance, highlight novel features, and describe its current status. Electronic submission through the symposium website is required. The submission of a paper will be considered evidence that upon acceptance, the author(s) will present their paper at the symposium. The final versions of accepted papers will be included in the NANOARCH Symposium Proceedings and will be considered for the NANOARCH Best Paper Award.

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Submit papers at http://nanoarch.org by April 5, 2010
Notification of acceptance: May 10, 2010
Early registration deadline: May 17, 2010