

## Call for Papers

### Industrial perspectives on Challenges for Next-Generation Computer Systems

### Special Session in the 13<sup>th</sup> International Symposium on High- Performance Computer Architecture (HPCA-13)

Phoenix, AZ, February 10-14, 2007

<http://www.hpcacnf.org/hpca13>

The 13<sup>th</sup> International Symposium on High-Performance Computer Architecture (HPCA-13) will include a session on the architecture of future platforms, including processors, caches, memory and I/O. The objective of this session is to provide a unique forum for developers to present their perspective on technical challenges and the approaches to resolve them. Presenting such technical challenges will also encourage the research community to investigate solutions. The session will include a small number of papers (approximately 3-5) selected based on depth and relevance to the HPCA audience.

Designers and developers involved in some aspect of industrial computer systems design and development are invited to submit a paper (short or long are acceptable) describing new challenges, issues, and opportunities that need or can be addressed in the next-generation computer systems. Topics of interest include, but are not limited to:

- Circuit technology: noise, process variation, and memory scaling
- Issues with deeply scaled CMOS
- Design complexity and verification
- Power, energy, and temperature
- Systems reliability
- Implications of software on architecture
- New application domains
- Microarchitecture
- Chip-level parallel systems
- Memory systems
- Storage systems
- Interconnect and network interfaces
- Innovative architectural paradigms
- Innovative hardware/software trade-offs
- Advanced compilation techniques
- Performance evaluation of real machines

Authors are requested to submit their abstracts for consideration to the chair, Philip Emma ([pemma@us.ibm.com](mailto:pemma@us.ibm.com)) no later than 11:59PM PST **September 15<sup>th</sup>, 2006**. Submissions should be PDF files and should not exceed 10 pages (around 3,000 words).

Authors will be notified of inclusion in the conference on October 6<sup>th</sup>, 2006. Accepted papers will be printed in the HPCA Proceedings and the authors will present their work at the conference. Presentations will be posted on the conference website.

**Chair:** [Philip Emma](#), IBM Corporation

**Important Dates**

*Submission Deadline: 9/15/2006 (11:59PM PST)*

*Authors Notification: 10/6/2006*