FPGA 2007: Call for Papers

Fifteenth ACM/SIGDA International Symposium on Field-Programmable Gate Arrays

Monterey Beach Hotel
Monterey, California
February 18-20, 2007

The ACM/SIGDA International Symposium on Field-Programmable Gate Arrays is the premier conference for presentation of advances in all areas related to FPGA technology. For FPGA 2007, we are soliciting original submissions describing novel research and developments in the following (and related) areas of interest:

- **FPGA Architecture:** Novel logic block architectures, combination of FPGA fabric and system blocks (DSP, processors, memories, etc.), design of routing fabric, I/O interfaces, new commercial architectures and architectural features.
- **FPGA Circuit Design:** Novel FPGA circuits and circuit-level techniques, impact of process and design technologies, methods for analyzing and improving issues with soft-errors, leakage, static and dynamic power, clocking, power grid, yield, manufacturability, reliability, test; studies on future device technologies (e.g. nano-scale, 3D gate) for FPGAs.
- **CAD for FPGAs:** Placement, routing, retiming, logic optimization, technology mapping, system-level partitioning, logic generators, testing and verification, CAD for FPGA-based accelerators, CAD for incremental FPGA design and on-line design mapping and optimization, CAD for modeling, analysis and optimization of timing and power.
- **High-level Abstractions and Tools for FPGAs:** General-purpose and domain-specific models, languages, tools, and techniques to facilitate the design, development, debugging, verification, and deployment of large-scale and high-performance FPGA-based applications and systems – e.g. DSP, networking or embedded system tools and methodologies.
- **FPGA-based and FPGA-like computing engines:** Compiled accelerators, reconfigurable computing, adaptive computing devices, systems and software, rapid-prototyping.
- **Design Studies:** Innovative uses of FPGA fabric for computation, exploitation of FPGA features and architectures, optimization of FPGA-based cores (e.g. arithmetic, DSP, security, embedded processors, memory interfaces, or other functions).
- **Applications:** Implementation of designs on FPGAs to achieve high-performance, low-power, or high-reliability. Novel design algorithms which take advantage of FPGA features. Application-domain studies to analyze or improve FPGA implementation for networking, DSP, embedded, audio/video, automotive, imaging and other relevant areas.
- **Panel Outlines:** Topic proposals for the traditional Monday night Panel Session at FPGA.

Authors are invited to submit an English language PDF of their paper (10 pages maximum) or panel proposal by **September 15, 2006**. Submission instructions and further information will be available at the conference website:

http://www.isfpga.org.

All papers should use the ACM formatting templates available at:

http://www.acm.org/sigs/pubs/proceed/template.html

Notification of acceptance will be sent by November 20, 2006. The authors of accepted papers will be required to submit the final camera-ready copy by December 18, 2006. A proceedings of the accepted papers will be published by ACM and included in the Annual ACM/SIGDA CD-ROM Compendium publication.

Last year, papers published at FPGA were invited to submit an extended version to a special issue of IEEE Transactions on CAD. This year we hope to make a similar arrangement with a high-quality journal.

Address questions to:

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