FPGA 2008: Call for Papers

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

Monterey Beach Hotel, Monterey, California
February 24-26, 2008

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 2008, 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 fabrics, 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 that 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.

New!

- **Workshop/Tutorial Proposals:** A new addition to FPGA is a Sunday afternoon workshop, which may take the format of a tutorial, panel, or a series of speakers. The purpose is to give an opportunity to explore topics that are timely and perhaps more open-ended than covered in the regular conference setting. Two topics of current interest are on **Benchmark Circuits for FPGA Research**, and a status check on **FPGAs in Parallel Computing**.

  Please email any comments or new topic proposals by **September 16, 2007** to the Workshop Chair, Guy Lemieux.

Authors are invited to submit English language PDF of their paper (10 pages maximum) or panel proposal by **September 16, 2007**. Submission should be made online at https://www.softconf.com/starts/fpga08/submit.html.

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 9, 2007. The authors of accepted papers will be required to submit the final camera-ready copy in December 7, 2007. 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 ACM Transactions on Reconfigurable Technology and Systems (http://trets.cse.sc.edu/). This year we hope to make an arrangement with a similar high-quality journal.

Address questions to:

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