First International Workshop on
FPGAs for Software Programmers (FSP 2014)

September 1, 2014, Munich, Germany

co-located with
International Conference on Field Programmable Logic and Applications (FPL)

Call for Papers

The aim of this workshop is to make FPGA and reconfigurable technology accessible to software programmers. Despite their frequently proven power and performance benefits, designing for FPGAs is mostly an engineering discipline carried out by highly trained specialists. With recent progress in high-level synthesis, a first important step towards bringing FPGA technology to potentially millions of software developers was taken. However, to make this happen, there are still important issues to be solved that are in the focus of this workshop.

The FSP Workshop aims at bringing researchers and experts from both academia and industry together to discuss and exchange the latest research advances and future trends. This includes high-level compilation and languages, design automation tools that raise the abstraction level when designing for (heterogeneous) FPGAs and reconfigurable systems and standardized target platforms. This will in particular put focus on the requirements of software developers and application engineers. In addition, a distinctive feature of the workshop will be its cross section through all design levels, ranging from programming down to custom hardware. Thus, the workshop is targeting all those who are interested in understanding the big picture and the potential of domain-specific computing and software-driven FPGA development. In addition, the FSP Workshop shall facilitate collaboration of the different domains.

Topics of the FSP Workshop include, but are not limited to:

- High-level synthesis and domain-specific languages (DSLs) for FPGAs and heterogeneous systems
- Mapping approaches and tools for heterogeneous FPGAs
- Support of hard IP blocks such as embedded processors and memory interfaces
- Development environments for software engineers (automated tool flows, design frameworks and tools, tool interaction)
- FPGA virtualization (design for portability, resource sharing, hardware abstraction)
- Design automation for multi-FPGA and heterogeneous systems
- Methods for leveraging (partial) dynamic reconfiguration to increase performance, flexibility, reliability, or programmability
- Operating system services for FPGA resource management
- Target hardware design platforms (infrastructure, drivers, etc.)
- Overlays (CGRAs, vector processors, ASIP- and GPU-like intermediate fabrics)
- Applications (embedded computing, signal processing, big data, bio informatics, database acceleration)
- Directions for collaborations (research proposals, networking, Horizon 2020)

Organization

General Co-Chairs

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Ghent University, Belgium

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NEC Corp., Japan

Markus Weinhardt
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Paper submission

Perspective authors are invited to submit original contributions (up to six pages) or extended abstracts describing work-in-progress or position papers (extended abstracts should not exceed two pages). Details about the submission process are available on the workshop web page.

Important dates

Submission deadline: June 30, 2014
Notification of acceptance: July 31, 2014
Camera-ready final version: August 15, 2014

For more information visit
http://www12.cs.fau.de/ws/fsp2014/

Publications

Accepted papers will be included in an ePrint proceedings volume with Open Access. Every accepted paper must have at least one author registered to the workshop by the time the camera-ready paper is due. In addition, selected authors will be invited to contribute a chapter for a book project.