

FCCM 2015

Call for Papers

The 23rd Annual International IEEE Symposium on Field Programmable Custom Computing Machines
Vancouver, British Columbia, Canada
May 3-5 2015
www.fccm.org

The IEEE Symposium on Field Programmable Custom Computing Machines is the original and premier forum for presenting and discussing new research related to computing that exploits the unique features and capabilities of FPGAs and other reconfigurable hardware. Over the past two decades, FCCM has been the place to present papers on architectures, tools, and programming models for field programmable custom computing machines as well as applications that use such systems. Papers on the traditional topics of FCCM as described below are solicited. Novel research in the general area of reconfigurable computing is also encouraged:

Architectures and Programming Models

- Architectures for high performance and/or low power configurable computing
- New spatial architectures with immense parallelism but different basic components than FPGAs
- System-level architectures for reconfigurable computing in either real-time or non real-time systems
- Heterogeneous architectures that integrate a mix of coarse, fine, special purpose, and general-purpose hardware
- Implications and effects of new technologies, including nanotechnology on reconfigurable computing (and vice versa)
- Security enhancements for reconfigurable computing

Languages and Compilers

- New languages and development environments to describe spatial or heterogeneous applications
- Tools to make run-time reconfiguration more accessible to application designers
- Compilation and CAD techniques for reconfigurable computing systems and other spatial computers

Run-Time Systems and Run-Time Reconfiguration

- Operating system techniques to manage run-time reconfiguration of resources in reconfigurable computing or spatial computing systems
- Run-time CAD algorithms to support the above techniques or improve fault tolerance/avoidance
- Use of reconfigurability to build evolvable or adaptable computing systems
- Novel uses of run-time reconfiguration in application-specific systems
- Implications of run-time reconfiguration on security

Applications

- Applications that use reconfigurability to customize hardware for scientific computation, mobile communications, medical image processing, data and communication security, network infrastructure and other embedded systems. These papers should describe novel use of some particular attribute of the reconfigurable device used, or discuss lessons that will help other users.
- Comparison of application implementations on different spatial hardware, such as GPUs, multi-core processors, and FPGAs

Submissions

FCCM will accept 8-page full papers for oral presentation, 4-page short papers for short oral or poster presentation. All submissions should be written in the English language. An online submission link will be available on the FCCM website starting in late December. Papers should use the formatting template linked at the FCCM website.

FCCM uses a blind reviewing system. Manuscripts must not identify authors or their affiliations. If authors can reference their own papers in such a way that they do not identify themselves as authors, they are encouraged to do so. References that clearly identify the authors (for example, "We build on our previous work..." should be shown as "Removed for blind review". *Papers that identify authors will not be considered.*

Best Paper Award and a Special Section for the Best FCCM15 Papers in ACM's TRETs

FCCM 2015 will continue the tradition of having a best paper award. We will also be inviting the authors of the best papers to extend their works to be considered for publication in a special section of ACM's Transactions on Reconfigurable Technology and Systems (TRETs) for FCCM 2015. Send in your best work for consideration!

Important Dates

Paper Title and Abstract Submission: **January 6, 2015**

Paper Submission: **January 6, 2015**

Notification of Acceptance: **March 2, 2015**

Camera-ready Copy: **March 28, 2015**

Conference: **May 3-5, 2015**

Organizing Committee

General Chair: [Lesley Shannon](#), Simon Fraser University

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Please direct questions about the program and submission of papers to David Andrews: dandrews@uark.edu