CALL FOR PAPERS

15th International Conference on
Application of Concurrency to System Design (ACSD 2015)

Brussels, Belgium, June 24-26, 2015

http://www.ulb.ac.be/di/verif/acsd2015/

CONFERENCE SCOPE

The conference aims at cross-fertilizing both theoretical and applied research about formal approaches (in a broad sense) to designing computer systems that exhibit some kind of concurrent behaviour. The following topics are of particular interest:

Concurrent systems on all design levels, from synchronous and asynchronous circuits, globally asynchronous locally synchronous systems, and multi-clock systems to high-performance architectures like many-core processors, networks on Chip, and data flow architectures up to ad-hoc, mobile, and wireless networks. Systems of systems, cyber-physical systems, and networks in biological systems are also of interest.

Implementation aspects like resource management, including task and communication scheduling, network-, memory-, and power-management, fault-tolerance, quality of service, scalability, load balancing, power proportionality. Moreover, consistency models for replicated data, including software and hardware memory models, DRAM scheduling, cache coherency, memory-aware algorithms. Real-time aspects, including hard real-time requirements, security and safety-critical issues, functional and timing verification.

Design principles for concurrent systems, in particular hardware/software co-design, platform-based design, component-based design, energy-aware design, refinement techniques, hardware/software abstractions, cross-layer optimization. Compositional design principles like modular synthesis, distributed simulation and implementation, distributed control, adaptivity, supervisory control.

Formal models of computation and concurrency for the above systems and problems, like data-flow models, communicating automata, Petri nets, process algebras, graph rewriting systems, state charts, MSCs, modal and temporal logics. Software engineering aspects, ranging from programming languages to algorithmic methods for system analysis and construction, including model checking, verification, and static analysis techniques as well as synthesis procedures.

Business process modelling, workflow execution, business process (de-)composition, inter-organizational and heterogeneous workflow systems, computer-supported collaborative work systems, web services.

Case studies of general interest, from industrial applications to consumer electronics and multimedia, automotive systems, (bio-)medical applications, internet and grid computing, to gaming applications.

PAPER SUBMISSION

ACSD seeks papers describing original work which has not been previously published and is not under review for publication elsewhere. All files must be prepared using the latest IEEE Computer Society conference proceedings guidelines (8.5" x 11" two-column format). Templates and further
instructions are available from the ACSD 2015 web site. The page limit for regular papers is 10 pages.

In addition to regular submissions, described above, there will be a tools section. Tool paper submissions are limited to 6 pages. They will be presented at the conference in an interactive session.

Conference proceedings will be published on IEEE Xplore Digital Library. Accepted tool papers will be included in the conference proceedings. Authors of accepted papers are expected to present their papers at the conference, and will be required to sign the IEEE copyright release forms. Several papers will be considered for publication in extended and revised form in a special issue of a journal.

All papers should be submitted via EasyChair:

https://www.easychair.org/conferences/?conf=acsd2015

IMPORTANT DATES

• abstract submission deadline: 15 January 2015 EXTENDED DEADLINE: 29 January 2015
• paper submission deadline: 25 January 2015 EXTENDED DEADLINE: 29 January 2015
• notification of acceptance: 26 March 2015
• camera-ready submission deadline: 16 April 2015
• conference: 24-26 June 2015

STEERING COMMITTEE

• Alex Yakovlev, UK (chair)
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