

CALL FOR PAPERS AND ANNOUNCEMENT

## **16th International Conference on Application of Concurrency to System Design (ACSD 2016)**

Toruń, Poland, June 19-24, 2016

<http://acsd2016.mat.umk.pl/>

### **VENUE**

ACSD 2016 will be organised in Toruń (Poland) by the Nicolaus Copernicus University, and will be held from 22nd to 24th June 2016. For more information see: <http://acsd2016.mat.umk.pl>

### **IMPORTANT DATES**

paper submission deadline:	25 January 2016
notification of acceptance:	15 March 2016
camera-ready submission deadline:	15 April 2016
conference:	22-24 June 2016

### **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, energy/power distribution, 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.

Algorithms and tools for concurrent systems, 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 systems, process (de-)composition, inter-organizational and heterogeneous workflow systems, systems for computer-supported collaborative work, web services.

Case studies of general interest, from industrial applications to consumer electronics and multimedia, automotive systems, (bio-)medical applications, neuromorphic applications, internet (of things) 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 2016 web site. The page limit for regular papers is 10 pages.

In addition to regular submissions, there will be a tools section. Tools will be presented at the conference in an interactive session. Related papers describe a tool, its functionality and interfaces as well as the underlying algorithms and implementation aspects. These tool papers are limited to 6 pages.

Conference proceedings will be published on IEEE Xplore Digital Library. Accepted regular and tool papers will be included in the conference proceedings. At least one authors of each accepted contribution is expected to present the paper or tool 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 have to be submitted via EasyChair: <https://www.easychair.org/conferences/?conf=acsd2016>

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