CALL FOR PAPERS AND ANNOUNCEMENT
18th International Conference on Application of Concurrency to System Design (ACSD 2018)
Bratislava, Slovakia
June 24-29, 2018
http://interes.institute/acsd2018/

The conference will be co-located with the 39th International Conference on Applications and Theory of Petri Nets and Concurrency (Petri Nets 2018).

IMPORTANT DATES: EXTENDED DEADLINE (The deadlines are end of day Anywhere on Earth - EOD AoE)

- submission deadline (abstracts): ~~January 25~~, February 8, 2018
- submission deadline (papers): ~~February 1~~, February 15, 2018
- notification of acceptance: ~~March 15~~, March 29, 2018
- camera-ready submission deadline: April 10, 2018
- conference: June 27-29, 2018

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. In particular, the following topics are of interest:

- 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
- Compositional design principles like modular synthesis, distributed simulation and implementation, distributed control, adaptivity, supervisory control
- 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
- Synchronous and asynchronous systems on all design levels: polychronous systems, endochronous systems, globally asynchronous locally synchronous systems
- Cyber-physical systems, hybrid systems, networked systems, and networks in biological systems
- High-performance computer architectures like many-core processors, networks on chip, graphics processing units, instruction-level parallelism, dataflow architectures, up to ad-hoc, mobile, and wireless networks
- Memory consistency models for multiprocessor and multicore architectures, replicated data, including software and hardware memory models, DRAM scheduling, cache coherency, memoryaware algorithms
- Real-time aspects, including hard real-time requirements, security and safety-critical issues, functional and timing verification
- 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
- Design principles for concurrent systems, in particular hardware/software co-design, platformbased design, component-based design, energy-aware design, refinement techniques, hardware/software abstractions, cross-layer optimization
- Business process modelling, workflow execution systems, process (de-)composition, interorganizational 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" × 11" two-column format). 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 submitted for inclusion to IEEE Xplore. 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 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://easychair.org/conferences/?conf=acsd2018

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