



# DSD 2017

## 20<sup>th</sup> Euromicro Conference on Digital System Design Vienna, Austria, Aug. 30th - Sept. 1st, 2017



### SPECIAL SESSION ON DESIGN OF CYBER-PHYSICAL SYSTEMS

#### SPECIAL SESSION SCOPE

Next-generation digital systems will be ever more tightly coupled with a non-digital world which is either a part of the overall information processing system (e.g., sensors, actuators, analog electronics, MEMS, power sources, thermal sources) or a part of the system being sensed, supervised or controlled. The so-called cyber-physical system (CPS) approach is needed. It raises challenges to address the heterogeneity in hybrid system design, and the integration of different design disciplines. The goal of CPS research is also to support better design of the CPS's digital parts.

Topics of interest include, but are not limited to, the following:

1. Multi-objective optimization, system design, co-design and design-space exploration for cyber-physical systems, network synthesis.
2. Modeling, simulation and verification of cyber-physical systems (e.g., multi-domain simulation techniques, FMI/FMU compositional analysis, analog/mixed-signal modeling, modeling and simulation of extra-functional properties, network modeling/simulation/verification, test and debug).
3. Formal methods for CPS (e.g., hybrid automata, verification, model checking, correct-by-construction control synthesis, abstraction and refinement).
4. Manufacturing of smart cyber-physical systems: new paradigms, platforms, tools.
5. Safety, dependability, privacy and security in cyber-physical systems.
6. Human-centric cyber-physical systems.
7. Design, simulation and verification of distributed, networked, intelligent embedded systems (e.g., IoT, sensor networks, intelligent information gathering, machine learning, supervisory control systems, predictive maintenance, energy harvesting and management, HW design for wireless protocols).
8. Applications of cyber-physical systems in manufacturing, transportation (e.g. aviation, automotive, traffic control, logistics), building automation, smart energy provisioning and storage, environmental monitoring, smart agriculture, lab-on-a-chip, robotics, etc.

#### SUBMISSION GUIDELINES

Authors are encouraged to submit their manuscripts to <https://easychair.org/conferences/?conf=dsd2017>. Should an unexpected web access problem be encountered, please contact the Program Chair by email ([dsd2017@easychair.org](mailto:dsd2017@easychair.org)).

Each manuscript should include the complete paper text, all illustrations, and references. The manuscript should conform to the IEEE format: single-spaced, double column, US letter page size, 10-point size Times Roman font, up to 8 pages. In order to conduct a blind review, no indication of the authors' names should appear in the manuscript, references included.

IEEE Conference Publishing Services (CPS) will publish accepted papers in the conference proceedings and the proceedings will be submitted to the IEEE Xplore Digital library and indexing services. Extended versions of selected best papers will be published in a special issue of the ISI indexed "Microprocessors and Microsystems: Embedded Hardware Design" Elsevier journal.

#### IMPORTANT DATES

Deadline for paper submission: **April 15th**  
Notification of acceptance: June 10th  
Camera ready papers: July 1st

#### MORE INFORMATION (WEB PAGES)

- DSD 2017: <http://dsd-seaa2017.ocg.at>
- Euromicro: [www.euromicro.org](http://www.euromicro.org)

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