

WATERS 2016

7th International Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems
<http://waters2016.inria.fr>

July 5, 2016. Toulouse, France. Held in conjunction with ECRTS'16.

The goal of the **WATERS** workshop series is to create a common ground and a community to share methodologies, software tools, best practices, data sets, application models, benchmarks and any other way to improve comparability of results in the current practice of research in real-time and embedded systems.

Important dates

26th May 2016
Submission deadline

7th June 2016
Acceptance notification

17th June 2016
Final version deadline

5th July 2016
Workshop

Workshop chairs

Martina Maggio
Lund University

Sophie Quinton
Inria Grenoble – Rhône-Alpes

Areas of interest include, but are not limited to:

- Tools and methods for the analysis of real-time systems
- Realistic case studies and reusable data sets
- Comparative evaluation of existing algorithms and techniques
- Modelling, analysis and simulation of, possibly mixed-criticality, real-time, distributed, and embedded systems running on multi-core, many-core, massively parallel, or distributed systems
- Modelling, analysis and simulation of the various components of the run-time environment, including the operating system, the hypervisor, or complex middleware components
- Instrumentation, tracing methods and overhead analysis, including proper accounting of the overheads due to various virtualization technologies
- Power consumption models and experimental data for real-time power-aware systems
- Simulation, instrumentation and analysis of complex distributed systems infrastructures such as Cloud Computing infrastructures, when supporting real-time and QoS-aware applications

Focus of the 2016 edition. This year, WATERS would like to focus more closely on the following topics.

- **Tool comparison:** Lack of a common ground for experimentation is still an issue in many areas of real-time and embedded systems analysis. This makes evaluation and comparison of tools and methods difficult. The 2015 edition of WATERS ended with a discussion about an open and common input format for tools for real-time systems. We would like to take this one step further and encourage people to present, discuss and compare the characteristics of specific tools, and their integration with existing tool chains.
- **Modeling methodologies:** In the spirit of the final discussion at WATERS'15, we would like to emphasize the need for comprehensive and complete models. We encourage submissions that compare modeling techniques and analyze them in view of a comprehensive model specification that could enable many different types of analysis and synthesis.

Verification challenge. Following the success of last year's verification challenge, we propose a new challenge this year for which authors may submit solutions. The 2016 verification challenge is proposed by Arne Hamann, Simon Kramer, Martin Lukasiewicz and Dirk Ziegenbein from Bosch GmbH. The purpose of the challenge is to share ideas, experiences and solutions to a concrete timing verification problem issued from real industrial case studies. A session will be devoted to the presentation of the solutions to the challenge. Authors of accepted submissions will have the opportunity to give a short talk during that session and present their solution to the ECRTS audience during the interactive demo session (see below). More information about this is available on the WATERS'16 website.

Demo session at the ECRTS main conference. Together with the Work-in-Progress poster session and reception, authors of contributions accepted at WATERS (regular contributions and challenge solutions) will have the opportunity to show demonstrations of their work to all ECRTS participants on July 6th. This is one of the most attractive and interactive events at the conference. All prospective authors are very much encouraged to consider this opportunity.

Submission instructions. For 2016, we experiment a more flexible submission format than in previous years, allowing both regular papers and short proposals for a technical presentation:

- Regular papers should follow the IEEE conference format (2 columns, 10 pt, single-line spacing) and not exceed 6 pages.
- Proposals for a technical presentation should consist of a one-page PDF file listing the title and a ~500 word abstract. If the technical presentation concerns a tool or a benchmark, it is essential to make these available to the reviewers.

All submitted contributions will be reviewed by the workshop program committee. The copyright remains with the authors. By submitting a contribution, the authors agree and confirm that, if accepted, at least one author will register for WATERS 2016 by the special registration deadline set in the notification of acceptance, and present the contribution at the workshop in person.

WATERS 2016 is a satellite workshop of the 28th Euromicro Conference on Real-Time Systems (ECRTS 2016, <http://ecrts16.ecrts.org/>), the premier European venue for presenting research into the broad area of real-time and embedded systems.

