WATERS 2015

6ᵗʰ International Workshop on Analysis Tools and Methodologies for Embedded and Real-time Systems
http://waters2015.inria.fr

July 7, 2015. Lund, Sweden. Held in conjunction with ECRTS'15.

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

24th April 2015
Submission deadline

22nd May 2015
Acceptance notification

12th June 2015
Final version deadline

7th July 2015
Workshop

Workshop chairs

Sophie Quinton
Inria Grenoble – Rhône-Alpes

Tullio Vardanega
University of Padua

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 2015 edition. This year, WATERS would like to focus more closely on the following topics.

- **Benchmarking:** 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. Therefore, we particularly encourage authors to share data that can be used for benchmarking. Real-life problems from the industry dealing with real-time are of course especially welcome. In addition, theoretical and practical results about test case generation, e.g. for schedulability analysis, are of interest. Finally, we also welcome surveys on currently existing benchmarks and test cases.
- **Case studies:** In parallel, we emphasize the need for sharing experience with real-life examples. Therefore, we encourage authors to submit case studies in which they may describe not only the results they have achieved but also possibly the difficulties they had in adapting their approach to practical applications.

Challenge. This year, we additionally propose a verification challenge for which authors may submit solutions. The 2015 challenge is an industrial case study proposed by THALES. Its purpose is to share ideas, experiences and solutions to a concrete timing verification problem issued from real industrial case studies. It also aims at promoting discussions, closer interactions, cross fertilization of ideas and synergies across the breadth of the real-time research community, as well as attracting industrial practitioners from different domains having a specific interest in timing verification. 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 and present their solution to the audience in an interactive demo session. More information is available on the WATERS'15 website.

Demo sessions. Prospective authors are much encouraged to consider this double opportunity.

- **At WATERS:** The authors of accepted papers will have the opportunity of showing demonstrations of their work in a dedicated hands-on session at the workshop.
- **At ECRTS:** Together with the Work-in-Progress poster session and reception, demonstrations and material can be made available to all ECRTS participants. This is one of the most attractive and interactive events at the conference.

Submission instructions. Submitted papers should follow the IEEE conference format (2 columns, 10 pt, single-line spacing) and should not exceed 6 pages in length. Papers must be submitted in PDF format. The papers will be reviewed by the workshop program committee and all accepted papers will be made available to all participants one week before the workshop so that contributions can be examined prior to the event. Papers should be submitted via *EasyChair* using the link provided on the workshop website. By submitting a paper, the authors agree and confirm that: neither this paper nor a version close to it is under submission or will be submitted elsewhere before notification by WATERS'15. If accepted, at least one author will register for WATERS'15 by the deadline set in the notification of acceptance, and present the paper at the workshop in person.

WATERS 2015 is a satellite workshop of the 27th Euromicro Conference on Real-Time Systems (ECRTS 2015, **http://control.lth.se/ecrts2015/)***, the premier European venue for presenting research into the broad area of real-time and embedded systems.*