

14th International Conference on Formal Modeling and Analysis of Timed Systems (FORMATS'16)

Québec City, Québec, Canada, August 24–26, 2016

colocated with CONCUR'16 and QEST'16

<http://formats2016.lsv.fr/>

Important Dates

Abstract Submission: April 15, 2016
 Paper Submission: April 22, 2016
 Notification: June 4, 2016
 Final paper due: June 11, 2016
 Conference: August 24–26, 2016

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Invited speakers

Scott Smolka, *U. Stony Brook, USA*
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Objectives. Control and analysis of the timing of computations is crucial to many domains of system engineering, be it, e.g., for ensuring timely response to stimuli originating in an uncooperative environment or for synchronizing components in VLSI. Reflecting this broad scope, timing aspects of systems from a variety of domains have been treated independently by different communities in computer science and control. Researchers interested in semantics, verification and performance analysis study models such as timed automata and timed Petri nets, the digital design community focuses on propagation and switching delays, while designers of embedded controllers have to take account of the time taken by controllers to compute their responses after sampling the environment, as well as of the dynamics of the controlled process during this span.

Timing-related questions in these separate disciplines do have their particularities. However, there is a growing awareness that there are basic problems that are common to all of them. In particular, all these sub-disciplines treat systems whose behaviour depends upon combinations of logical and temporal constraints; namely, constraints on the temporal distances between occurrences of events. Often, these constraints cannot be separated, as intrinsic dynamics of processes couples them, necessitating models, methods, and tools facilitating their combined analysis. Reflecting this fact, FORMATS'16 will feature a special session on hybrid discrete-continuous systems.

Topics. The aim of FORMATS is to promote the study of fundamental and practical aspects of timed systems, and to bring together researchers from different disciplines that share interests in modelling and analysis of timed systems and, as a generalization, hybrid systems. Typical topics include (but are not limited to):

Foundations and Semantics: Theoretical foundations of timed systems and languages; new models and logics or analysis and comparison of existing models (like automata, Petri nets, or process algebras involving quantitative time; hybrid automata; probabilistic automata and logics).

Methods and Tools: Techniques, algorithms, data structures, and software tools for analyzing or synthesizing timed or hybrid systems and for resolving temporal constraints (scheduling, worst-case execution time analysis, optimization, model checking, testing, constraint solving, etc.)

Applications: Adaptation and specialization of timing technology in application domains in which timing plays an important role (real-time software, embedded control, hardware circuits, and problems of scheduling in manufacturing and telecommunication).

Paper Submission. FORMATS'16 solicits high-quality papers reporting research results and/or experience reports related to the topics mentioned above. Submitted papers must contain original, unpublished contributions, not submitted for publication elsewhere. The papers should be submitted electronically in PDF, following the Springer LNCS style guidelines. Submissions should not exceed 15 pages in length, but may be supplemented with a clearly marked appendix, which will be reviewed at the discretion of the program committee. Each paper will undergo a thorough review process.

Papers are to be submitted electronically via the EasyChair online submission system:

<https://easychair.org/conferences/?conf=formats2016>

The proceedings of FORMATS'16 will be published by Springer in the Lecture Notes in Computer Science series. A special issue dedicated to FORMATS will be hosted in a topical journal, collecting the extensions of papers selected by quality and subject to additional revision.

Venue. FORMATS'16 takes place at Hôtel Château Laurier in Québec City, Canada, where it is colocated with CONCUR'16 and QEST'16.