FMCAD 2010

Formal Methods in Computer-Aided Design
Lugano, Switzerland
October 20 — 23

Call for Papers
International Conference on Formal Methods in Computer-Aided Design
Lugano, Switzerland
20-23 October 2010
http://fmcad10.iaik.tugraz.at/

IMPORTANT DATES

Abstract Submission: 5 May 2010
Paper Submission: 12 May 2010 (extended)
Author Notification: 7 July 2010
Final Version: 28 July 2010
Conference: 20-23 October 2010

CONFERENCE SCOPE

FMCAD 2010 is the tenth in a series of conferences on the theory and application of formal methods in hardware and system design and verification. FMCAD provides a leading international forum to researchers and practitioners in academia and industry for presenting and discussing novel methods, technologies, theoretical results, and tools for formally reasoning about computing systems, as well as open challenges therein. This year, FMCAD is privileged to have Joseph Sifakis, Founder and Director of VERIMAG Laboratory, a Turing Award 2007 winner, to deliver its keynote address on Scientific Challenges and Work Directions in Embedded Systems Design. The tutorial speakers are Ken McMillan, a Paris Kanellakis Award winner, senior researcher at Cadence Berkeley Labs, Warren Hunt, Professor at University of Texas at Austin, Sumit Gulwani, a researcher at Microsoft Research, USA, and Jin Yang, a senior staff research engineer at Intel Strategic CAD Labs.

NEW

FMCAD 2010 has two tracks (but no parallel sessions): the research track and the industrial track.

RESEARCH TRACK

Topics of interest:
Advancing industrial-strength technologies in Model Checking, Theorem Proving, Equivalence Checking, Abstraction and Refinement Techniques, Reduction and Abstraction Techniques, Compositional Methods, Decision Procedures, SMT solvers, Bit-Precise Reasoning, Word-Level Techniques, SAT- and BDD-based methods, Probabilistic Methods, and Combinations of Deductive Methods and Decision Procedures.

Applications of Formal Methods in Specification, Design and Verification

Topics relating to the application and applicability of Property-Based Verification, Equivalence Checking, Semi-formal Verification, Runtime Verification, Simulation and Test-case Generation, Coverage Analysis, Microcode Verification, Concurrent Systems, Timing Verification, and Formal Approaches to Performance and Power.

System-Level Design and Verification, especially for Embedded Systems, Software Verification, HW/SW Co-Design and Verification, Transaction-Level Verification.
Modeling and Specification Languages, Model-Based Design, Verification-Based Testing, Design Derivation and Transformation, Correct-by-Construction Methods.

INDUSTRIAL TRACK

This track is dedicated to industry users of formal methods, including work on real industrial-scale designs being done in universities and research organizations. We invite such users to describe their experience with formal methods, including evaluations of commercial tools, case studies of industrial-scale applications, experience reports on novel and challenging applications, or methodologies for the incorporation of formal or semi-formal methods into the industrial design flow. Finally, we invite tool presentations, of industrial-strength commercial tools as well as novel academic tools that are not yet industrial strength, but address a real industrial need. Tool presentations should describe the capabilities or novel features of the tool, or an innovative algorithm, a new approach, or original application methodology.

EXHIBITION

FMCAD 2010 will feature also an exhibition with limited free-of-charge booth space for which academic novelty is not a requirement. Note that since space is limited, we will not be able to accept every request for a booth, and that preference will be given to requests by authors of accepted tool presentations. EDA vendors are especially encouraged to submit a tool presentation and/or to request booth space in order to demo their tools.

SUBMISSIONS

Submissions must be made electronically in PDF format via EasyChair. More details will be provided on the FMCAD web site. The proceedings are planned to be published by IEEE and ACM and will be available online in the ACM Digital Library and at IEEE Xplore.

Research Track Submissions

Two categories of research papers can be submitted: regular papers (8 pages) containing original research, and short papers (4 pages) describing emerging results and work-in-progress.

Industrial Track Submissions

Submitters to the industrial track will have the option of submitting a regular paper (8 pages), a short paper (4 pages), or a deck of up to 25 slides (for tool presentations: 4 pages or 15 slides). Both papers and slide submissions will be reviewed. Regular and short papers will appear in the proceedings as usual, while authors of accepted slide presentations will be invited to write a one page abstract for the proceedings.

For exhibition space, submission is not required and an email request to the industrial track chairs is sufficient. However, due to limited space we will not be able to accept every request. We therefore strongly advise those interested in exhibition space to submit a tool presentation, as we will give preference for booth space to authors of accepted tool presentations.

Regular and short papers must use the IEEE Transactions format on letter-size paper using a 10-point font (see www.ieee.org/portal/pages/pubs/transactions/stylesheets.html).

Research Track papers must contain original research that has not been previously published, nor concurrently submitted for publication. For both research and industry submissions, any partial overlap with a published or concurrently submitted paper must be clearly indicated. (For slide decks, use an extra slide to discuss overlaps; this slide may be excluded from the final presentation.) By submitting their work, the authors agree to present it at the conference if selected. Authors are strongly encouraged to provide adequate access to their experimental data for verification. A small number of accepted papers will be considered for a distinguished paper award.

CHAIRS

Roderick Bloem, Graz University of Technology, Austria
Natasha Sharygina, University of Lugano, Switzerland and Carnegie Mellon University, USA

INDUSTRIAL TRACK CHAIRS

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Industrial track:

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Per Bjesse, Synopsys, Inc., USA

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