RV 2016

16th International Conference on Runtime Verification

September 23-30, Madrid, Spain
http://rv2016.imag.fr

Scope

Runtime verification is concerned with monitoring and analysis of software and hardware system executions. Runtime verification techniques are crucial for system correctness, reliability, and robustness; they are significantly more powerful and versatile than conventional testing, and more practical than exhaustive formal verification. Runtime verification can be used prior to deployment, for testing, verification, and debugging purposes, and after deployment for ensuring reliability, safety, and security and for providing fault containment and recovery as well as online system repair. Topics of interest to the conference include:

- specification languages;
- specification mining;
- program instrumentation;
- monitor construction techniques;
- logging, recording, and replay;
- runtime enforcement, fault detection, localization, containment, recovery and repair;
- program steering and adaptation;
- metrics and statistical information gathering;
- combination of static and dynamic analyses;
- program execution visualization;
- monitoring techniques for safety/mission-critical systems;
- monitoring distributed systems, cloud services, and big data applications;
- monitoring security and privacy policies.

Application areas of runtime verification include cyber-physical systems, safety/mission-critical systems, enterprise and systems software, autonomous and reactive control systems, health management and diagnosis systems, and system security and privacy.

Invited Speakers

The program of RV 2016 will feature invited talks from:
- Gul Agha (University of Illinois at Urbana-Champaign, USA),
- Oded Maler (CNRS and University of Grenoble-Alpes, France),
- Fred B. Schneider (Cornell University, USA).

Overview

RV 2016 will be held September 23-30 in Madrid, Spain. RV 2016 will feature the first summer school on Runtime Verification (September 23-25), two workshop days (September 26-25), and three conference days (September 28-30).

General Information on Submissions

All papers and tutorials will appear in the conference proceedings in an LNCS volume. Submitted papers and tutorials must use the LNCS/Springer style. At least one author of each accepted paper must attend RV 2016 to present the paper. Papers must be written in English and submitted electronically (in PDF format) using the EasyChair system. The below page limitations include all text and figures, but exclude references. Additional details omitted due to space limitations may be included in a clearly marked appendix that will be reviewed at the discretion of reviewers.

Research Papers Track

Research papers can be submitted in two categories: regular and short papers. Papers in both categories will be reviewed by at least 3 members of the Program Committee.

- **Regular Papers** (up to 15 pages) should present original unpublished results. Theoretical papers, system and application papers as well as case studies on runtime verification are all welcome. The Program Committee of RV 2015 will give a *best paper award*. A selection of accepted regular papers will be invited to appear in a special issue of the Springer Journal on *Formal Methods in System Design*.
- **Short Papers** (up to 6 pages) may present novel but not necessarily thoroughly worked out ideas, for example emerging runtime verification techniques and applications, or techniques and applications that establish relationships between runtime verification and other domains. Accepted short papers will be presented in special talk (15 minutes) and poster sessions.

Tool Papers Track

The aim of the RV 2016 tool track is to provide an opportunity for researchers and practitioners to show and to discuss the latest advances, experiences and challenges in devising and developing reliable software tools for runtime verification. All tool papers will be reviewed by at least 3 members of the Tool Committee. An author of each accepted tool paper should give a 15-20 minutes demonstration during the conference.

All tool papers must include information on tool availability, maturity, selected experimental results and it should provide a link to a website containing the theoretical background and user guide. Furthermore, we strongly encourage authors to make their tools and benchmarks available with their submission.

We encourage tool papers to include a script in an appendix (not included in the page count) describing how the demo will be conducted during the conference presentation with screenshots presenting step-by-step the tools capabilities, highlighting the main characteristics and the usage.

Tool papers can be submitted into two categories:

- **Regular Tool Papers** (up to 8 pages). A tool paper in this category should present a new tool, a new tool component or significant and novel extensions to existing tools supporting runtime verification. Each submission should be original and not published previously in a tool paper form.
- **Tool Exhibition Papers** (up to 4 pages). A tool paper in this category can have been previously published. A tool paper in this category should be oriented towards the tool usage and is an opportunity for the developers to present them at RV 2016.

Tutorial Track

Tutorials are two-to-three-hour presentations on a selected topic. Additionally, tutorial presenters will be offered to publish a paper of up to 20 pages in the LNCS conference proceedings.

A proposal for a tutorial must contain the subject of the tutorial, a proposed timeline, a note on previous similar tutorials (if applicable) and the differences to this incarnation, and a biography of the presenter. The proposal must be formatted according to the Springer LNCS guidelines and not exceed 2 pages. Tutorial proposals will be reviewed by the Program Committee.

Important Dates

Research and tool papers as well as tutorials will follow the following timeline:

Abstract deadline	**May 8, 2016**
Paper and tutorial deadline	**May 15, 2016**
Tutorial notification	**June 1, 2016**
Paper notification	**July 11, 2016**
Camera ready deadline	**August 8, 2016**
Summer school	**September 23-25, 2016**
Workshops and tutorials	**September 26-27, 2016**
Conference	**September 28-30, 2016**

Committees

Program Committee Chairs

- Yliès Falcone, Univ. Grenoble-Alpes and Inria, France
- Cesar Sanchez, IMDEA Software, Madrid, Spain

Tool Committee Chair

- Klaus Havelund, NASA Jet Propulsion Laboratory, USA

Local Organization Chair

- Juan E. Tapiador, Universidad Carlos III de Madrid, Spain

Program Committee

- Erika Ábráham, RWTH Aachen University, Germany
- Howard Barringer, The University of Manchester, UK
- Ezio Bartocci, TU Wien, Austria
- Andreas Bauer, NICTA & Australian National University, Australia
- Saddek Bensalem, Univ. Grenoble Alpes, France
- Eric Bodden, Fraunhofer SIT and Technische University Darmstadt, Germany
- Borzoo Bonakdarpour, McMaster University, Canada
- Laura Bozzelli, Technical University of Madrid (UPM), Spain
- Juan Caballero, IMDEA Software Institute, Spain
- Wei-Ngan Chin, National University of Singapore, Singapore

- Christian Colombo, University of Malta, Malta
- Jyotirmoy Deshmukh, Toyota Technical Center, USA
- Alexandre Donzé, UC Berkeley EECS Department, USA
- Yliès Falcone, Univ. Grenoble Alpes and Inria, France
- Bernd Finkbeiner, Saarland University, Germany
- Adrian Francalanza, University of Malta, Malta
- Vijay Garg, The University of Texas at Austin, USA
- Patrice Godefroid, Microsoft Research, USA
- Susanne Graf, Univ. Grenoble Alpes and CNRS, France
- Radu Grosu, Vienna University of Technology, Austria
- Sylvain Hallé, Universit du Qubec Chicoutimi, Canada
- Klaus Havelund, NASA Jet Propulsion Laboratory, USA
- Johan Jaffar, National University of Singapore, Singapore
- Thierry Jéron, Inria Rennes Bretagne Atlantique, France
- Johannes Kinder, Royal Holloway University of London, UK
- Felix Klaedtke, NEC Europe Ltd., Germany
- Kim G. Larsen, Aalborg University, Denmark
- Axel Legay, Inria Rennes Bretagne Atlantique, France
- Martin Leucker, University of Lbeck, Germany
- Benjamin Livshits, Microsoft Research, USA
- Joao Lourenço, Universidade Nova de Lisboa, Portugal
- Rupak Majumdar, MPI-SWS, Germany
- Leonardo Mariani, University of Milano Bicocca, Italy
- David Naumann, Stevens Institute of Technology, USA
- Dejan Nickovic, Austrian Institute of Technology, Austria
- Gordon Pace, University of Malta, Malta
- Doron Peled, Bar Ilan University, Israel
- Lee Pike, Galois, Inc., USA
- Grigore Roşu, University of Illinois at Urbana-Champaign, USA
- Gwen Salaün, Univ. Grenoble Alpes and Inria, France
- Cesar Sanchez, IMDEA Software Institute, Spain
- Sriram Sankaranarayanan, University of Colorado Boulder, USA
- Gerardo Schneider, University of Gothenburg, Sweden
- Scott Smolka, Stony Brook University, USA
- Oleg Sokolsky, University of Pennsylvania, USA
- Bernhard Steffen, University of Dortmund, Germany
- Scott Stoller, Stony Brook University, USA
- Volder Stolz, University of Oslo, Norway
- Jun Sun, Singapore University of Technology and Design, Singapore
- Juan Tapiador, Universidad Carlos III de Madrid, Spain
- Serdar Taşıran, Koc Univ., Turkey
- Michael Whalen, University of Minnesota, USA
- Eugen Zalinescu, ETH Zurich, Switzerland
- Lenore Zuck, University of Illinois at Chicago, USA

Tool Committee

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- Ezio Bartocci, TU Wien, Austria
- Martin Leucker, University of Lübeck, Germany
- Gordon Pace, University of Malta, Malta
- Giles Reger, The University of Manchester, UK
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