

CALL FOR PAPERS

International Conference on Runtime Verification (RV 2010)

November 1 – 4, 2010

Sliema, Malta

<http://www.rv2010.org>

Runtime verification (RV) is concerned with monitoring and analysis of software or hardware system executions. The field is often referred to under different names, such as runtime verification, runtime monitoring, runtime checking, runtime reflection, runtime analysis, dynamic analysis, symbolic dynamic analysis, trace analysis, log file analysis, etc. RV can be used for many purposes, such as program understanding, systems usage understanding, security or safety policy monitoring, debugging, testing, verification and validation, fault protection, behavior modification (e.g., recovery), etc. A running system can be abstractly regarded as a generator of execution traces, i.e., sequences of relevant states or events. Traces can be processed in various ways, e.g., checked against formalized specifications, analyzed with special algorithms, visualized, etc. Topics of interest include, but are not limited to:

- program instrumentation techniques
- specification languages for writing monitors
- extraction of monitors from specifications; APIs for writing monitors
- programming language constructs for monitoring
- model-based monitoring and reconfiguration
- the use of aspect oriented programming for dynamic analysis
- algorithmic solutions to minimize runtime monitoring impact
- combination of static and dynamic analysis; full program verification based on runtime verification
- intrusion detection, security policies, policy enforcement
- log file analysis
- model-based test oracles
- observation-based debugging techniques
- fault detection and recovery, model-based integrated health management and diagnosis
- program steering and adaptation
- dynamic concurrency analysis
- dynamic specification mining
- metrics and statistical information gathered during runtime
- program execution visualization

The RV series of events started in 2001, as an annual workshop. The RV'01 to RV'05 proceedings were published in ENTCS. Since 2006, the RV proceedings have been published in LNCS. Starting with year 2010, RV is an international conference. Links to past RV events can be found at the permanent URL <http://runtime-verification.org>.

Invited speakers

- Mike Barnett, Microsoft Research, USA
- Rance Cleaveland, University of Maryland, USA
- Matthew Dwyer, University of Nebraska, USA
- Martin Odersky, EPFL, Switzerland
- Wim de Pauw, IBM, USA
- R. Sekar, Stony Brook University, USA

Talk titles are available on RV 2010 web page.

Paper submission

RV will have two research paper categories: regular and short papers. Papers in both categories will be reviewed by the conference Program Committee.

- Regular papers (up to 15 pages) should present original unpublished results. Applications of runtime verification are particularly welcome. A Best Paper Award (300 Euro) will be offered. Selected papers will be published in an issue of *Formal Methods in System Design*.
- Short papers (up to 5 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 short talk (5-10 minutes) and poster sessions.

In addition to short and regular papers, proposals for tutorials and tool demonstrations are welcome. Proposals should be up to 2 pages long.

- Tutorial proposals on any of the topics above, as well as on topics at the boundary between RV and other domains, are welcome. Accepted tutorials will be allocated up to 15 pages in the conference proceedings. Tutorial presentations will be at least 2 hours.
- Tool demonstration proposals should briefly introduce the problem solved by the tool and give the outline of the demonstration. Tool papers will be allocated 5 pages in the conference proceedings. A Best Tool Award (200 Euro) will be offered.

Submitted tutorial and tool demonstration proposals will be evaluated by the corresponding chairs, with the help of selected reviewers.

All accepted papers, including tutorial and tool papers, will appear in the LNCS proceedings. Submitted papers must use the LNCS style. At least one author of each accepted paper must attend RV'10 to present the paper. Papers must be submitted electronically using the EasyChair system. A link to the electronic submission page is available on the RV'10 web page.

Important dates

May 1, 2010	Submission of tutorial proposals	PASSED
May 15, 2010	Notification for tutorial proposals	PASSED
June 8, 2010	Submission of regular and short papers	!!EXTENDED!!
June 15, 2010	Submission of tool demonstration proposals	
July 13, 2010	Notification for regular, short, and tool papers	
August 17, 2010	Camera-ready versions of accepted papers are due	

Organizers

General chairs:

Howard Barringer (University of Manchester, UK)
Klaus Havelund (NASA JPL, USA)
Insup Lee (University of Pennsylvania, USA)

Programme committee chairs:

Grigore Rosu (University of Illinois at Urbana-Champaign, USA)
Oleg Sokolsky (University of Pennsylvania, USA)

Local organization chair:

Gordon Pace (University of Malta, MT)

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Bernd Finkbeiner (Saarland University, DE)

Tool demonstrations chair:

Nikolai Tillmann (Microsoft Research, USA)

Publicity chair:

Ylies Falcone (INRIA Rennes, FR)

Programme Committee

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