



# CRTS 2011

[www.rapitasystems.com/crts2011](http://www.rapitasystems.com/crts2011)

In conjunction with **RTSS2011**

The 32nd IEEE Real-Time Systems Symposium

November 29 - December 2, 2011

Vienna, Austria <http://www.rtss.org/>

## 4th Workshop on Compositional Theory and Technology for Real-Time Embedded Systems

Vienna, Austria, November 29th, 2011

Co-located with RTSS 2011

**Topics of interest:** The increasing complexity of real-time embedded systems requires advanced methodologies that can reduce the cost of their design and analysis, while ensuring that requirements on functional correctness, real-time behaviour, and performance are met. Compositional theories and technologies facilitate the decomposition of a complex system into components, as well as their integration via interfaces. Component interfaces hide the internal details of the components, thereby reducing integration complexity. A system is said to be *composable* if the properties established and validated for components in isolation hold once the components are integrated to form the system.

Topics of interest to CRTS include (but are not limited to):

- **Composition of single processor, multiprocessor, and distributed systems**
- **Composition of multi-criticality and multi-mode systems**
- **Composition of policies, services, and system layers**
- **Composition of validation and verification techniques**
- **Interface models, interface theories, and integration techniques for real-time components**
- **Compositional schedulability analysis, execution time analysis, and performance analysis**
- **Compositional formal methods**
- **Tradeoffs between optimality, associativity, and complexity in compositional theory**
- **Practical issues in composition including performance penalties and overheads**
- **Experimental and implementation frameworks for compositional theory**
- **Decomposition of requirements for component-based development**

CRTS invites **papers** that describe state-of-the-art research, present work-in-progress, or suggest open problems covering one or more of the topics of interest to the workshop. Submissions should not exceed **8 pages** in two-column, single-space, 10pt format, and should be made electronically via: <https://www.softconf.com/c/crts2011/> 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 CRTS 2011, and if accepted, at least one author will register for the CRTS 2011 workshop by the special registration deadline set in the notification of acceptance, and present the paper at the workshop in person. Please note that papers that do not fall within the

scope of the workshop will not be accepted. Submissions will be refereed for quality and relevance. Submissions exceeding the page limit may be rejected without review.

**Practical demonstrations** of prototype tools or applications employing compositional techniques are also invited. Demonstration abstracts are limited to **2 pages** and should be submitted to the Open Demos Session of Real-Time Techniques and Technologies, which will take place following the workshop.

See <http://webpages.cister.isep.ipp.pt/~smp/RTSS@Work/>

CRTS 2011 is sponsored by PRECISE (Penn Research in Embedded Computing and Integrated Systems) and Rapita Systems Ltd., who are providing a **prize for the best paper**.

### Program Chairs

Robert Davis

University of York, UK

Linh Thi Xuan Phan

University of Pennsylvania, USA

### Program Committee

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### Organising Committee

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KAIST, South Korea

Oleg Sokolsky

University of Pennsylvania, USA

### Important Dates:

Submission deadline:

**16<sup>th</sup> Sept 2011**  
**(No extensions)**

Notification of acceptance:

**14<sup>th</sup> Oct 2011**

Early registration:

**21<sup>st</sup> Oct 2011**

CRTS Workshop:

**29<sup>th</sup> Nov 2011**