



Essen, Germany, March 23, 2015

RESACS

1st Intl. Workshop on Requirements Engineering for Self-Adaptive and Cyber Physical Systems

Call for Papers

Over the last ten years research on self-adaptive systems (SAS) and recently research on cyber physical systems (CPS) have attracted the attention of the research community. These types represent novel categories of software-intensive systems insofar that they possess significantly different properties than traditional information systems or embedded systems. For example, their highly connected and context-aware nature gives rise to changes in their runtime behaviour, stressing the need for runtime adaptation and reorganization, which must be considered during the requirements phase. This poses new and unforeseen challenges for requirements engineering such that networked self-adaptive systems can be systematically engineered.

Scope and Topics

The First International Workshop on Requirements Engineering for Self-Adaptive and Cyber Physical Systems (RESACS) seeks original reports of novel ideas, emerging trends, and elaborations on the current state of practice and state of the art on any topic of requirements engineering under special consideration of self-adaptiveness and cyber physicality of systems.

Topics include, but are not limited to:

- Methods for Assessing the Requirements of SAS and CPS
- Context Analysis and Domain Modeling of SAS and CPS
- Tools and Approaches for the Specification of SAS and CPS
- Tools and Approaches for Assessing The Performance of SAS and CPS
- Approaches to Reuse Components of SAS and CPS
- Design Space Exploration and Communication Strategies of CPS
- Requirements Satisfaction Monitoring at Runtime for SAS
- Requirements-based Performance Analysis and Improvement
- Runtime Adaptation and Decision Making
- Dealing with Runtime Uncertainty during Requirements Engineering
- Ad-hoc networking of cyber physical entities and services
- Requirements-based Quality Assurance for SAS and CPS
- Benefits and Application Areas of SAS and CPS

Submission

We accept original manuscripts in American or British English with strict adherence to the **Springer LNCS** format for the following categories:

- **Full Papers (up to 15 pages):**
New Methods & Approaches, Transfer of Existing Approaches, Empirical Validation, Case Studies, Industry & Experience Reports
- **Short Papers (up to 8 pages):**
Problem Statements, Vision Papers, Position Papers, New Ideas and Directions, Initial Evaluations
- **Poster Papers (up to 4 pages):**
Tools, Meta-Modelling Approaches, Very Initial Research Ideas without Evaluation

Springer LNCS style guidelines are available at <http://goo.gl/30WESG>. Manuscripts that do not adhere to the LNCS style guide will be rejected without review.

Please submit your original manuscripts using the **EasyChair Submission System**: <https://easychair.org/conferences/?conf=resacs2015>

Important Dates

Paper Submission	Jan 16 th , 2015
Paper Notification	Feb 6 th , 2015
Camera Ready Submission	Feb 20 th , 2015
Workshop	Mar 23th, 2015

Publications

Workshop proceedings will appear in an indexed format. At this point, the publisher and indexing platform is still to be determined.

Workshop Format

In the tradition of RESACS' mother conference REFSQ, we seek a highly interactive workshop format featuring the presenter-discussant paradigm. For every accepted manuscript, it is expected that at least one author will attend the entire workshop and present their research in panel. For each presented manuscript, a discussant is selected who is asked to review the manuscript and prepare a short summary presentation (1 slide). This format is intended to provoke highly constructive discussions among the presenters and the audience in order to jointly identify properties of SAS and CPS, what these properties entail for requirements engineering, and guide the workshop participants' future research.

Organisers

Marian Daun – *University of Duisburg-Essen, Germany*
Itzel Morales Ramirez – *Fondazione Bruno Kessler, Italy*
Cristina Palomares – *Universitat Politècnica de Catalunya, Spain*
Bastian Tenbergen – *University of Duisburg-Essen, Germany*

Programme Committee

Raian Ali – *Bournemouth University, UK*
Ottmar Bender – *Airbus Defence and Space, Germany*
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Workshop Contact

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