SEAMS 2012
7th International Symposium on Software Engineering for Adaptive and Self-Managing Systems

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http://2012.seams-symposia.org   http://www.seams2012.cs.uvic.ca

Call for Papers

The increasing complexity, distribution, and dynamism of many software-intensive systems are imposing self-managing capabilities as a key requirement. These systems must be able to adapt themselves at run-time to cope with changes in the environment in which they operate, variability of resources, new user needs, intrusions, and faults. The goal is to preserve operation and react to changes with no (or limited) human intervention.

Solutions to complement software systems with self-managing and self-adaptive capabilities haven been proposed by researchers in many different areas, including software architecture, fault-tolerant computing, robotics, control systems, programming languages, run-time program analysis and verification, and biologically-inspired computing. This symposium focuses on the software engineering aspects, including the methods, techniques, and tools that can be used to support self-adaptive, self-managing, self-healing, self-optimizing, and self-configuring software systems.

The objective is to bring together researchers and practitioners from many of these diverse areas to investigate, discuss, and examine thoroughly the fundamental principles, state of the art, and critical challenges of self-adaptive and self-managing systems.

Topics of Interest

We are interested in submissions from both industry and academia on all topics related to self-adaptive and self-managing systems. These include, but are not limited to:

- requirements elicitation techniques for self-adaptation
- formal notations for modeling and analyzing self-adaptation
- programming language support for self-adaptation
- properties of self-adaptive systems
- reuse support for self-adaptive systems (e.g., patterns, designs, code)
- design and architectural support for self-adaptation
- feedback control for self-adaptive systems
- algorithms for self-adaptation
- integration mechanisms for self-adaptive systems
- self-repairing programs
- automated patch generation
- evaluation and assurance for self-* systems
- verification and validation of self-adaptive and self-managing software
- frameworks for analyzing self-adaptive and self-managing software
- testing of self-adaptive and self-managing systems
- decision-making strategies for self-adaptive and self-organizing systems
- user-trust of self-adaptive and self-managing systems
- model problems and exemplars

The following application areas are of particular interest: mobile applications, cloud computing, resource provisioning and optimization, autonomic computing, feedback control of computing systems, problem determination including logging, analysis and diagnostics, smart user interfaces, service-oriented systems, dependable computing, autonomous robotics.

Paper Submission Details

We are soliciting two types of papers: long papers (up to 10 pages) and position papers for new ideas (up to 6 pages). Long papers should either clearly describe the technical contribution and how the work has been validated, or describe how an existing technique has been applied to real-world examples. New idea papers provide an opportunity to describe novel and promising ideas and/or techniques that might not have been fully validated. All submitted papers will be reviewed by at least three program committee members. Papers must not have been previously published or concurrently submitted elsewhere. The accepted papers will appear in the symposium proceedings that will be published as ACM and IEEE digital libraries.

Further Information
Symposia-related email should be addressed to: seams2012@seams-symposia.org