

## CALL FOR PAPERS ICSE 2010 SEAMS

### Software Engineering for Adaptive and Self-Managing Systems (SEAMS)

#### Two-Day ICSE Workshop: May 3-4, 2010 Cape Town, South Africa

#### THEME

With the rapid growth of web services and the continuous evolution from software-intensive systems to socio-technical ecosystems, the management complexity of these modern, decentralized, distributed computing systems presents significant challenges for businesses and often exceeds the capabilities of human operators. End-users increasingly demand from businesses that they provide software systems that are versatile, resilient, dependable, robust, service-oriented, meshable, interoperable, continuously available, decentralized, self-healing, configurable, or self-optimizing.

One of the most promising approaches to achieving some of these properties is to equip software systems with feedback control to address the management of inherent system dynamics. The resulting self-adapting and self-managing computing systems are better able to cope with and even accommodate changing environments, shifting requirements, and computing-on-demand needs.

#### TOPICS OF INTEREST

The goal of this symposium is to bring together researchers and practitioners from many of these diverse areas to discuss the fundamental principles, state of the art, and critical challenges of self-adaptive and self-managing systems. Specifically, we intend to focus on the software engineering aspects to support dynamical adaptive and self-managing behaviour. In this 5th workshop, we will look at results achieved in self-adaptability and experimental systems to compare approaches and results.

Topics of interest include, but are not limited to:

- feedback control and architecture patterns for self-adaptation and self-management;
- models and algorithms for software self-management;
- integration mechanisms for self-adaptive and self-managing systems;
- formal notations for modeling and analyzing software self-adaptation;
- methods for engineering user-trust of self-adaptive and self-managing systems;
- methods to instrument existing systems to observe self-managing behaviour over long periods of time;
- dynamical verification and validation of self-managing software;
- evaluation and assurance for self-adaptive systems;
- decision algorithms for self-adaptive systems;
- exemplars for benchmarking.

The following application areas are of particular interest: autonomic computing; problem determination including logging, analysis and diagnostics; mobile computing; dependable computing; autonomous robotics; adaptable user interfaces; service-oriented applications.

We strongly encourage submissions about engineering self-adaptive computing systems from components.

#### **PAPER SUBMISSION DETAILS**

We invite

- position papers and progress reports describing ongoing work or new ideas,
- research papers and experience reports describing validated research results,
- survey papers,

all within the scope of the workshop.

Papers should be between 5-10 pages long and must not have been previously published or submitted elsewhere. Accepted papers will be published in the ACM and IEEE Digital Libraries under SEAMS 2010 Workshop Proceedings as part of the ICSE 2010 Workshop publications. Please submit papers for SEAMS 2010 electronically using SEAMS 2010 electronic submission web site which is powered by CyberChairPROv7. Please follow the ICSE 2010 paper format instructions.

#### **IMPORTANT DATES**

Submission deadline: 15 January 2010

Author notification: 19 February 2010

Camera ready copy: 28 February 2010

#### **SYMPOSIUM ORGANIZATION**

##### **General Chair**

Rogério de Lemos, University of Coimbra (Portugal) and University of Kent (U.K.)

##### **Program Chair**

Mauro Pezzè, University of Lugano (Switzerland) and University of Milano Bicocca (Italy)

##### **Program Committee**

Luciano Baresi, Politecnico di Milano, Italy

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Mauro Pezzè, University of Lugano, Switzerland, and University of Milan Bicocca, Italy  
Jeremy Rolia, HP Labs, USA  
Onn Shehory, IBM Haifa Research Labs, Israel

#### **MORE INFORMATION**

<http://www.inf.usi.ch/seams>

<http://www.hpi.uni-potsdam.de/giese/public/selfadapt>