Call for Papers
Self-adaptation and self-management are key requirements in many modern and emerging software systems, including the industrial internet of things, cyber-physical systems, cloud computing, and mobile computing. These systems must be able to adapt themselves at run time to preserve their operation in the presence of uncertain changes in their operating environment, resource variability, new user needs, intrusions, and faults.

Solutions to complement software systems with self-managing and self-adaptive capabilities have been proposed by researchers from different areas including software architecture, fault-tolerant computing, programming languages, robotics, and run time program analysis and verification. Additionally, solutions have been proposed in related areas like biologically-inspired computing, artificial intelligence, machine learning, control systems, and agent-based systems. The SEAMS symposium focuses on applying software engineering to these solutions, including methods, techniques, and tools that can be used to support self-* properties like self-adaptation, self-management, self-healing, self-optimization, and self-configuration.

The objective of SEAMS 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 engineering self-adaptive and self-managing systems.

Topics of Interest: All topics related to engineering self-adaptive and self-managing systems, including:

- **Foundational Concepts**
  - self-* properties
  - feedback control
  - algorithms for self-adaptation
  - decision-making
  - dealing with uncertainty
  - runtime aspects
  - problem determination (e.g., logging, analysis, diagnosis)
  - adaptive autonomy

- **Languages**
  - formal notations for modeling and analyzing self-* properties
  - programming language support for self-adaptation

- **Constructive methods**
  - requirements elicitation techniques
  - reuse support (e.g., patterns, designs, code)
  - design and architectural support
  - enhancing systems with self-adaptive features

- **Analytical Methods for Self-Adaptation and -Management**
  - evaluation and assurance
  - verification and validation
  - frameworks for their analysis and testing

- **Application Areas**
  - Internet of things
  - Cyber-physical systems
  - Cloud computing
  - Mobile computing
  - Autonomous robotics
  - Service-oriented systems
  - Dependable computing
  - Smart user interfaces

- **Artifacts**
  - model problems and exemplars
  - resources, metrics, or software that can be used to compare self-adaptive approaches
  - experiences with deployed self-adaptive and self-managing systems solving science, engineering, business, or society problems

*There is a specific session to be dedicated to artifacts that may be useful for the community as a whole. Please see http://www.disim.univaq.it/seams2015/ for more details.*

After the symposium, a set of selected papers will be invited to submit to the ACM Transactions on Autonomous and Adaptive Systems (TAAS).

**Paper Submission Details**
We are soliciting three types of papers: long papers (10 pages for the main text, inclusive of figures, tables, appendices, etc.; references may be included on up to two additional pages), position papers for new ideas (6 pages + 1 references) and artifact papers (4 pages + 1 reference). Long papers should clearly describe innovative and original research or explain how existing techniques have been applied to real-world examples. Position papers should describe novel and promising ideas and/or techniques that may not be fully validated. Artifacts must describe why and how the accompanying artifact may be useful for the broader community. All submitted papers and artifacts 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 in the ACM and IEEE digital libraries. Papers must conform to IEEE formatting guidelines (see ICSE 2015 style guidelines), and submitted via EasyChair.

**Further Information**
Symposia-related email should be addressed to: seams2015@seams-symposia.org

**Important Dates:**
Abstract Submission: 9 January, 2015
Notification: 18 February, 2015
Camera ready: 27 February, 2015

**General Chair**
Paola Inverardi, Italy

**Program Chair**
Bradley Schmerl, USA

**Program Committee**
Jesper Andersson, Sweden
Nelly Bencomo, k e
Yuriy Brun, USA
Radu Calinescu, UK
Javier Cámara, USA
Betty Cheng, USA
Myra Cohen, USA
Rogério de Lemos, UK
Gregor Engels, Germany
Antonio Filieri, Italy
David Garlan, USA
Carlo Ghezzi, Italy
Holger Giese, Germany
Hassan Gomaa, USA
Alessandra Gorla, Germany
Seok-Won Lee, South Korea
Jeff Magee, UK
Sam Malek, USA
Hausi Müller, Canada
John Mylopoulos, Italy
Bashar Nuseibeh, UK
Patrizio Pelliccione, Sweden
Mauro Pezzè, Switzerland
Vitor Silva Souza, Brazil
Ladan Tahvildari, Canada
Norha Villegas, Colombia
Danny Weyns, Sweden

**Steering Committee**
Luciano Baresi, Italy
Nelly Bencomo, UK
Gregor Engels, Germany
Rogério de Lemos, UK
David Garlan, USA
Paola Inverardi, Italy
Marin Litoiu (Chair), Canada
John Mylopoulos, Italy
Hausi A. Müller, Canada
Bradley Schmerl, USA

**Publicity Chair**
Romina Spalazzese, Sweden