ICSE
4th International Workshop on
Software Engineering for Systems-of-Systems
Austin, Texas, USA
Monday, May 16, 2016

IMPORTANT DATES

Abstract deadline: Feb. 3, 2016
Submission deadline: Feb. 5, 2016
Notification: Feb. 18, 2016
Camera-ready copy: Feb. 27, 2016
Workshop date: May 16, 2016

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SCOPE

Systems-of-Systems (SoS) have become increasingly complex and are frequently used in highly distributed, dynamic, and open environments. SoS have emerged as a new class of evolving software systems, where constituent systems (themselves systems in their own right) work cooperatively in order to fulfill specific missions. SoS are characterized by managerial and operational independence, geographic distribution, evolutionary development, and creation of emergent behavior. These characteristics have therefore raised substantial challenges to software engineering researchers and practitioners. SoS is becoming a hotspot, from both the research and the industrial viewpoints, in particular, related to crucial classes of applications such as safety-critical or mission-critical SoS. Furthermore, SoS are increasingly involved in applications that address societal needs such as environmental monitoring, distributed energy grids management, emergency coordination and crisis management, global traffic control, and smart cities. In this context, the research topic of software engineering for SoS needs to receive more attention and research efforts, considering that the software part of SoS is becoming increasingly larger and more complex. Software engineering theories and tools are needed to adequately design, implement, operate, and even evolve such dynamic, complex software-intensive SoS. This workshop series is the first that addresses specifically this new perspective. The main goal of SESoS is to provide a forum for software engineering researchers and practitioners to exchange ideas and experiences, analyze research and development issues, discuss promising solutions, and propose inspiring visions for the future.

TOPICS

The workshop will focus on discussing and establishing the theoretical foundations for the SoS Software Engineering domain, to pave the way for a more structured community effort. For this, the workshop will focus on the following (and similar) themes:

- SoS Analysis & Architecture
  - Requirements engineering
  - Architectural description
  - Architectural evaluation
  - Architectural evolution
- SoS Model-Based Engineering
  - Modeling and simulation
  - Model driven engineering
  - Models at runtime
- SoS Construction and Evolution
  - Techniques and technologies
  - Service-orientation
  - Component frameworks
  - Evolutionary development
- SoS Experience
  - Industrial perspectives
  - Successful case studies
- SoS General Issues
  - Characteristics of SoS
  - Quality in SoS
  - SoS development processes
  - Acquisition and project management
  - Verification and validation of SoS
- Future perspective, challenges, and directions of SoS research and/or development

SUBMISSION

Two types of submissions are invited:
- Regular paper (up to seven pages): sound technical contributions from both academia and industry; and
- Position paper (up to four pages): new ideas, positions, or perspectives of research that are not fully validated.
All papers submitted to the workshop must be unpublished original work and must not be simultaneously under review or submitted elsewhere. All papers will be judged on the basis of their clarity, relevance, originality, and contribution. All submissions must be in English, formatted according to the ICSE 2016 Format and Submission Guidelines and submitted in either PDF or Postscript format through online upload to the workshop submission website at:
http://sesos2016.icmc.usp.br/

PUBLICATION OF PAPERS

The accepted papers will be published in the ICSE workshop proceedings, through the **ACM Digital Library.** SESoS is technically co-sponsored by **ACM SIGSOFT and ACM SIGPLAN (*).**

(*) SESoS 2013, SESoS 2014, and SESoS 2015 were technically co-sponsored by **ACM SIGSOFT and ACM SIGPLAN.**