FACS 2016

The 13th International Conference on

FORMAL ASPECTS OF COMPONENT SOFTWARE

BESANÇON, FRANCE

OCTOBER 19-21, 2016

femto-st
SCIENCES &
TECHNOLOGIES

PROGRAM CHAIRS

- Olga Kouchnarenko, University of Burgundy-Franche-Comté, France
- Ramtin Khosravi, University of Tehran, Iran

SCOPE

The component-based software development approach has emerged as a promising paradigm to cope with the complexity of present-day software systems by bringing sound engineering principles into software engineering. However, many challenging conceptual and technological issues still remain in component-/service-based software development theory and practice. Moreover, the advent of cloud computing, cyber-physical systems, and of the Internet of things has brought to the fore new dimensions, such as quality of service, reconfiguration and robustness to withstand inevitable faults, which require established concepts to be revisited and new ones to be developed in order to meet the opportunities offered by those architectures.

FACS 2016 is concerned with how formal methods can be used to make component-based and service-oriented software development succeed. Formal methods have provided a foundation for component-based software by successfully addressing challenging issues such as mathematical models for components, composition and adaptation, or rigorous approaches to verification, deployment, testing, and certification.

TOPICS

The conference seeks to address the applications of formal methods in all aspects of software components and services, with a particular focus on cyber-physical systems and the Internet of things.

Specific topics include, but are not limited to:

- Formal models for software components and their interaction
- Formal aspects of services, service oriented architectures, and business processes
- Formal methods and modeling languages for components and services
- Model based and GUI based testing of components and services
- Composition and deployment: models, calculi, languages
- Component/service re-engineering and reuse
- Models for QoS and other extra-functional properties (e.g., trust, compliance, security) of components and services
- Industrial or experience reports, and case studies
- Update and reconfiguration of component and service architectures
- Component systems evolution and maintenance
- Autonomic components and self-managed applications
- Formal and rigorous approaches to software adaptation and self-adaptive systems

Application areas include cyber-physical systems, as well as real-time, safety-critical, secure and/or embedded systems.

SUBMISSIONS

We solicit high-quality submissions reporting on:

- A - original research contributions (18 pages max);
- B - applications and experiences (18 pages max);
- C - surveys, comparisons, and state-of-the-art reports (18 pages max);
- D - tool papers (6 pages max);

In addition, we solicit submissions to the Doctoral Track of FACS 2016, in the form of abstracts (3 pages max) concisely capturing work in progress, related topic, context, research questions, envisaged contributions,
and partial results.

All submissions must be original, unpublished, and not submitted concurrently for publication elsewhere.

Papers should be formatted according to the guidelines for Springer LNCS papers.

Revised versions of accepted papers will be published as a volume in the Springer's Lecture Notes in Computer Science series.

A special issue of the Science of Computer Programming journal will be devoted to extended versions of selected papers from FACS 2016.

IMPORTANT DATES

Abstract submission deadline : June 24, 2016
Paper submission deadline : July 1, 2016
Notification : August 24, 2016
Final version due : September 7, 2016

Workshop proposal deadline : June 5, 2016
Notification for workshops : June 19, 2016
Doctoral Track submission deadline : September 1, 2016
Doctoral Track notification : September 9, 2016