

Message from the Workshop Chairs

JSOS SESoS/WDES 2017

Welcome to SESoS/WDES 2017, the ICSE Joint 5th International Workshop on Software Engineering for Systems-of-Systems and 11th Workshop on Distributed Software Development, Software Ecosystems and Systems-of-Systems, held on May 23rd in Buenos Aires, Argentina, and co-located with the 39th International Conference on Software Engineering (ICSE 2017).

This joint workshop encompassing SESoS and WDES intends to put together researchers and practitioners of Systems-of-Systems (SoS), Software Ecosystems (SECO), and Distributed Software Development (DSD), aiming at discussing research in each of these areas as well as promoting interaction and integration among these areas, which are to some extent closely related, but sometimes individually investigated, to support the development and evolution of complex software systems.

In particular, SESoS has focused on SoS, since they have become increasingly complex and are frequently used in highly distributed, dynamic, and open environments. SoS have emerged as a class of evolving software systems, where constituent systems work cooperatively to fulfill specific missions. SoS are characterized by operational and managerial independence, distribution, evolutionary development, and emergent behavior. These characteristics have raised substantial challenges to software engineering researchers and practitioners. In this context, SESoS series has been the first one to address this new perspective specifically. After four successful previous editions, two of them co-located with ECSA, the European Conference of Software Architecture, and the other two co-located with ICSE, it holds great promise for advancing the state of the art and practice.

In parallel, WDES is a traditional Brazilian workshop that has also focused on SoS, besides SECO and DSD. SECO consists of a set of software solutions that enable, support, and automate activities and transactions performed by actors in the associated social and/or business ecosystem, and organizations that provide these solutions. Such solutions can be seen as components of a software-intensive system and together create a common technological platform. SECO has become an important research topic in Software Engineering, since it addresses social and technical issues along with technical aspects of the software development process. SECO has been increasingly investigated for the past 10 years. In turn, DSD is an approach of development that aims at using distributed resources to reduce cost and reach new IT markets. The distribution of development teams, along with the inherent difficulties of coordination and communication, often lead to low-productive development processes.

Inherent problems and challenges of Software Engineering are then amplified and become more critical either in SoS and SECO due to their distributed nature (or DSD-based). In DSD literature, several industrial cases, models and techniques, and tertiary studies have been reported by the international community towards supporting the impact of time zones, diversity of culture and communication, or distance. To cope with such difficulties, technological, organizational, and social solutions have been proposed and can be applied to the development and evolution of complex systems.

The main goal of SESoS/WDES 2017 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. In this joint edition, following the conclusions of SESoS 2013-2016 and WDES 2007-2016, this joint workshop focus on discussing and establishing the theoretical foundations for Software Engineering to develop and evolve complex software systems, to pave the way for a more structured community effort.

We are happy to report that a community involving researchers and practitioners of SoS, SECO, and DSD has emerged and continues to grow and mature, addressing a larger amount of themes and their

intersections. To reflect its role as a maturing forum as well as to cover its three main research areas, SESoS/WDES 2017 expanded the Program Committee to 48 members.

SESoS/WDES 2017 received 16 submissions in total: 10 regular papers (seven pages) and six position papers (four pages). Each paper received three reviews from the Program Committee. After the reviewing process and the final analysis of the Steering Committee, eight papers were accepted as regular paper and three as position paper. The acceptance decisions were made based on the Program Committee's discussions on the content, quality, and potential of each paper. There will be an award for the best papers and invitation to submit an extended version to a journal special issue. Additionally, five papers will be presented as posters, since they present potential ideas for the SESoS/WDES community.

SESoS/WDES 2017 will be organized in four technical sessions and a poster session: Systems-of-Systems, MDE Ecosystem and Architecture, Domain Specific Ecosystems, Software Ecosystem Health, and Poster Exhibition. We will focus on stimulating the forthcoming discussions during the workshop. We will also have an invited speaker session and a Joint Panel ICGSE and SESoS/WDES 2017: "Putting together Systems-of-Systems, Software Ecosystems and Distributed Software Development: What Comes Next?".

We are very grateful to all authors who submitted their works for consideration by SESoS/WDES 2017. We would also like to thank the Steering Committee members for their support, and the Program Committee members for their effort on the paper review and selection process. Their efforts made possible for us to elaborate a high quality technical program for SESoS/WDES 2017. Last, but not least, we would like to thank the ICSE organization, and particularly the Workshop Chairs, namely Romain Robbes and Liliana Pasquale, for their help during the whole process.

We welcome the paper's presenters and participants, whom we would like to invite to actively take part in discussions and integration moments provided by the joint workshop.

Welcome to Buenos Aires, Argentina. Enjoy the joint workshop!

Elisa Yumi Nakagawa, Flavio Oquendo, Paris Avgeriou and Rodrigo Santos
JSOS SESoS/WDES 2017 Co-chairs