Message from the SESoS 2018 Chairs

These are the proceedings of the 6th International Workshop on Software Engineering for Systems-of-Systems (SESoS 2018). After five successful previous editions, two of them co-located with ECSA, the European Conference of Software Architecture, we are now proud to present the sixth edition co-located with ICSE, the International Conference on Software Engineering, which is currently in its 40th edition as the premier worldwide conference for software engineering research.

This edition is back to Europe after the fifth edition held in Buenos Aires, Argentina (May 2017) and the fourth edition held in Austin, Texas, United States (May 2016). In the past, the first edition was held in Montpellier, France (July 2013, co-located with ECOOP and ECMFA alongside with ECSA), the second in Vienna, Austria (August 2014), while the third was in Florence, Italy (May 2015, the first ICSE edition).

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 their constituents (systems themselves in their own right) work cooperatively in order to fulfil specific missions. It has already been established that SoS are characterized by managerial and operational independence, geographic distribution, evolutionary development, and the creation of emergent behavior. These characteristics have raised substantial challenges to software engineering researchers and practitioners.

Therefore, SoS are becoming ever more important both for industry and academia. 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. Software engineering theories and tools are needed to adequately design, implement, operate, and even evolve such dynamic, complex software-intensive SoS.

This workshop series has been the first one to address this new perspective specifically. 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 visions for the future. The sixth edition of the workshop focuses on discussing and establishing the foundations (adaptivity and reconfiguration models, and interoperability management) for the SoS Software Engineering domain, to pave the way for a more structured community effort.

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