# Message from the Chairs of SEAMS 2018

Modern and emerging software-intensive systems, such as industrial Internet of Things, Cyber-Physical Systems, Cloud and mobile computing, have to operate without interruption. Self-adaptation and self-management enable these systems to adapt themselves at runtime to preserve and optimize their operation in the presence of uncertain changes in their operating environment, resource variability, new user needs, attacks, intrusions, and faults.

Approaches to complement software-intensive systems with self-managing and self-adaptive capabilities are an important area of research and development, offering solutions that leverage advances in fields such as software architecture, fault-tolerant computing, programming languages, robotics, run-time program analysis and verification, among others. Additionally, research in this field is informed by related areas such as control systems, machine learning, artificial intelligence, agent-based systems, and biologically-inspired computing. The SEAMS symposium focuses on applying software engineering to these approaches, including methods, techniques, processes and tools that can be used to support self-* properties like self-protection, self-healing, self-optimization, and self-configuration.

The objective of SEAMS is to bring together researchers and practitioners from diverse areas to investigate, discuss, and examine the fundamental principles, the state of the art, and critical challenges of engineering self-adaptive and self-managing systems.

Over its 13 editions, SEAMS has evolved to become the focal point for software engineering research in self-adaptive and self-managing systems. Bringing together researchers and practitioners, it continues to provide a setting in which innovative and original research are presented, new emerging results are discussed and results are presented about how novel techniques have been applied to real-world cases. Additionally, the conference offers opportunities to present and promote artifacts that help to provide a common basis for comparison and for further research. Artifacts include model problems and exemplars, publically available tools, frameworks, and data repositories.

This year's edition, SEAMS solicited contributions for a special track on "security and adaptivity." The track invited short submissions in which the authors provide an argumentation either in favor or against the statement "security is not just another quality attribute in self-adaptive systems." In addition, the symposium solicited doctoral project papers offering PhD students an opportunity to present an overview of their dissertation research in the area of self-adaptive and self-managing systems and obtain feedback from experts in the field.

This year, the SEAMS organizers received 79 submissions, from which 11 long research papers, 9 short papers, 4 extended abstracts, 3 artifact papers, and 2 doctoral project papers were selected. The selection process was informed by at least 3 reviews per paper, followed by a moderated discussion among the program committee (PC) members. The PC were encouraged to take an inclusive view when dealing with papers on the margins of the traditional scope of SEAMS, and as a result of this papers from communities such as agent-based systems, networking, and Programmable Logic Controllers found their way into the program – and are most welcome.

This year's symposium also continued to see a trend of receiving papers describing applications and exemplars of adaptive and self-managing systems, and we hope that these will serve as a community resource for comparative evaluation of SEAMS research in the years to come. In designing the program for the symposium, we have focused on grouping papers with shared or related themes, mixing in the process research papers and other types of papers in the same sessions.

We are very pleased with Danny Hughes of VersaSense as keynote speaker this year. During his time at Lancaster University, Danny was actively working on adaptive systems, in particularly in the context of sensor networks. After joining KU Leuven, he actively started working on Internet of Things. In 2016, he co-launched VersaSense, an industrial Internet of Things company and spin-off of KU Leuven. His keynote promises to provide a network expert insider's reflection on the need for self-adaptive software in Internet of Things, where he can draw on extensive experiences with real-world applications of the demand for self-adaptation in this rapidly growing domain.

We hope the SEAMS 2018 program provides a rich and challenging set of research contributions that reflect the strength of the field, and that inspires new researchers to work on emergent and open research questions. Assembling this program would not have been possible without the dedicated work and expertize of the 40 PC members. Special thanks to our Artifacts Chair, Tomas Bures, for soliciting a high-quality set of artifact submissions. A special thanks also to Raffaela Mirandola for managing the Doctoral Projects Track and to David Garlan for taking care of the Security and Adaptability Track.

Thanks also to Thomas Vogel and Ingrid Nunes, the Publicity and Web Co-Chairs, for their excellent dissemination work and for setting up the SEAMS 2018 website and keeping it continuously up to date. Thanks also to our Proceedings Chair, Gabriel Moreno, for orchestrating the assembly of the proceedings. And, thanks to Jan Bosch for his support on local things in Gothenburg, Sweden. Finally, thanks to our respective institutions – Linnaeus University and Katholieke Universiteit Leuven – for administrative and logistical support.

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