

Preface

The papers in this volume were presented at the 19th International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), held November 5–8, 2017, in Boston, Massachusetts, USA.

SSS is an international forum for researchers and practitioners in the design and development of distributed systems with a focus on systems that are able to provide guarantees on their structure, performance, and/or security in the face of an adverse operational environment.

Research in distributed systems is now at a crucial point in its evolution, marked by the importance and variety of dynamic distributed systems such as peer-to-peer networks, large-scale sensor networks, mobile ad hoc networks, and cloud computing. Moreover, new applications such as grid and Web services, distributed command and control, and a vast array of decentralized computations in a variety of disciplines has driven the need to ensure that distributed computations are self-stabilizing, performant, safe, and secure.

SSS started as the Workshop on Self-Stabilizing Systems (WSS), the first two of which were held in Austin in 1989 and in Las Vegas in 1995. Starting in 1995, the workshop began to be held biennially; it was held in Santa Barbara (1997), Austin (1999), and Lisbon (2001). As interest grew and the community expanded, in 2003 the title of the forum was changed to the Symposium on Self-Stabilizing Systems (SSS). SSS was organized in San Francisco in 2003 and in Barcelona in 2005. As SSS broadened its scope and attracted researchers from other communities, significant changes were made in 2006. It became an annual event, and the name of the conference was changed to the International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS). From then, SSS conferences were held in Dallas (2006), Paris (2007), Detroit (2008), Lyon (2009), New York (2010), Grenoble (2011), Toronto (2012), Osaka (2013), Paderborn (2014), Edmonton (2015), and Lyon (2016).

This year the program was organized into three tracks reflecting major trends related to self-* systems: (1) Stabilizing Systems: Theory and Practice, (2) Distributed Computing and Communication Networks, and (3) Computer Security and Information Privacy.

We received 68 submissions from 19 countries. Each submission was reviewed by at least three Program Committee members with the help of external reviewers; with the average number of reviews per paper reaching 3.8. Out of the 68 submitted papers, 29 were selected for presentation as regular papers. The symposium also included eight brief announcements. Selected papers from the symposium will be published in a special issue of Information and Computation journal and the Algorithms journal.

On behalf of the Program Committee, we would like to thank all the authors who submitted their work to SSS. Special thanks to the track Program Committee chairs, Panagiota Fatourou, Chryssis Georgiou, Sergio Rajsbaum, Elad Michael Schiller, Ari Trachtenberg, and Arkady B. Yerukhimovich for the great work that they put in

making the symposium a success. We sincerely acknowledge the tremendous time and effort that the Program Committee members have put in for the symposium. We are grateful to the external reviewers for their valuable and insightful comments and to EasyChair for tremendously simplifying the review process and the generation of the proceedings. We also thank the general chairs, Jorge Cobb and Shlomi Dolev, for their effort in putting together the symposium and the invaluable advice. Special thanks to Timi Budai for her continuous work supporting the organization of SSS from the beginning to the end. We gratefully acknowledge the publicity chairs, Joel P. Rybicki, Iosif Salem, and Elad M. Schiller, finance chair, Mayank Varia, local organization chair, Ari Trachtenberg, and the Organizing Committee members for their time and invaluable effort that greatly contributed to the success of this symposium.

November 2017

Paul Spirakis
Philippas Tsigas

Stabilization, Safety, and Security of Distributed
Systems

19th International Symposium, SSS 2017, Boston, MA,
USA, November 5–8, 2017, Proceedings

Spirakis, P.; Tsigas, P. (Eds.)

2017, XIII, 496 p. 82 illus., Softcover

ISBN: 978-3-319-69083-4