SSS 2023

25th International Symposium on Stabilization, Safety, and Security of Distributed Systems
October 2-4, 2023, Institute for Future Technologies (NJIT-BGU Partnership), 101 Hudson Street, Jersey City, New Jersey, USA

`https://www.cs.bgu.ac.il/` SSS2023

Dates: First Submission Deadline **April 6, 2023**; First Acceptance Notification **May 11, 2023**; First Camera-ready copy due 21, 2023; Second Submission Deadline **June 18, 2023**; Second Acceptance Notification **July 23, 2023**; Second Camera-ready copy due **August 1, 2023**

Keynote Speakers:
Moti Yung - Principal Research Scientist at Google and Colombia University, CS Adjunct Faculty.
Alfred Spector - Visiting Scholar at MIT.
Maurice Herlihy - An Wang Professor of Computer Science, Brown University.

Chairs and Conference Committee: Lelia Blin, Track A. Co-Chair *Sorbonne Université - LIP6, France*; Pandu Rangan Chandrasekaran, Track C. Co-Chair *Indian Institute of Technology, India*; Reza Curtmola, Track C. Co-Chair *NJIT, USA*; Shlomi Dolev, General Co-Chair *Ben-Gurion University, Israel*; Paola Flocchini, Track D. Co-Chair *University of Ottawa, Canada*; Sharad Mehrotra, Track E. Co-Chair *University of California at Irvine, USA*; Achour Mostefaoui, Track B. Co-Chair *Nantes Université, France*; Michel Raynal, Track B. Co-Chair *IRISA, France*; Nicola Santoro, Track D. Co-Chair *Carleton University, Canada*; Baruch Schieber, General Co-Chair *New Jersey Institute of Technology, USA*; Shantanu Sharma, Track E. Co-Chair *New Jersey Institute of Technology, USA*; Yuichi Sudo, Track A. Co-Chair *Hosei University, Japan*; Moti Yung, Track C. Co-Chair *Colombia University and Google, USA*

Steering Committee: Anish Arora, *Ohio State University, USA*; Shlomi Dolev, *Ben-Gurion Univ., Israel*; Sandeep Kulkarni, *Michigan State University, USA*; Toshimitsu Masuzawa, *Osaka University, Japan*; Franck Petit, *Sorbonne Université, France*; Sébastien Tixeuil, **Chair** *Sorbonne Université, France*; Elad Michael Schiller, *Chalmers University of Technology, Sweden*

Advisory Committee: Sukumar Ghosh, *University of Iowa, USA*; Mohamed Gouda, *University of Texas at Austin, USA*; Ted Herman, *University of Iowa, USA*

Submissions. There are two types of submissions: regular papers and brief announcements. 1. A regular submission must not exceed 15 pages (including the title, abstract, figures, and references). 2. A brief announcement submission must not exceed 5 pages and should not include any appendix.

Additional necessary details for an expert to verify the main claims of the submission may be included in a clearly marked appendix if extra space is needed.

Any submission deviating from these guidelines will be rejected without consideration of its merits. It is recommended that a regular submission begins with a succinct statement of the problem being addressed, a summary of the main results or conclusions, a brief explanation of their significance, a brief statement of the key ideas, and a comparison with related work, all tailored to a non-specialist. Technical development of the work, directed to the specialist, should follow. Papers outside of the conference scope will be rejected without review. For the second round only, if requested by the authors on the cover page, a regular submission that is not selected for a regular presentation will also be considered for the brief announcement format. This will not affect consideration of the paper for a regular presentation.

Scope. 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. The symposium encourages submissions of original contributions on fundamental research and practical applications concerning topics in the five symposium tracks:

● **Track A. Self-stabilizing Systems:** Self-stabilizing systems; Self-stabilizing protocols and algorithms; Practically-stabilizing systems; Variants of self-stabilization; Topological stabilization; Autonomic Computing; Stabilization and self-* properties in hardware, software, and middleware design; and Self-stabilizing software-defined infrastructure.

● **Track B. Distributed and Concurrent Computing: Foundations, Fault-Tolerance and Scalability** Distributed, concurrent, and fault-tolerant algorithms; Synchronization protocols; Shared and transactional memory; Graph-theoretic concepts for communication networks; Formal methods, validation, verification, and synthesis; Social networks; Game-theory and economical aspects of distributed computing; Randomization in distributed computing; High-performance, cluster, cloud and grid computing; Network security and privacy; Blockchain technologies and cryptocurrencies; and Applied cryptography

● **Track C. Cryptography and Security** Cryptographic designs. implementation analysis, and construction methods; Secure multi-party computation and cryptographic distributed protocols; Privacy-enhancing technologies and anonymity; Post-quantum and information theoretic cryptography and security; Secure software and secure programming methodologies; Formal methods, semantics and verification of secure systems; Fault tolerance, reliability, availability of distributed secure systems; Game-theoretic approaches to secure computing; Communication and internet: security, authentication and identification; Cybersecurity for hardware components, mobile, cyber-physical systems, and internet of things; Cybersecurity of corporations (applications, end points, and cloud); Security and privacy for web applications; Security of edge and fog computing; and Cryptocurrency and Blockchains.

● **Track D. Dynamic, Mobile, and Nature-Inspired Computing** Mobile agents; Autonomous mobile robots; Mobile sensor networks; Mobile ad-hoc networks; Population protocols; Dynamic networks, time-varying graphs, evolving graphs; Nature-inspired computing; Programmable particles, nanoscale robots, biological systems, and related new models.

● **Track E. Distributed Databases** Distributed transactions; Blockchain technologies; Pervasive, mobile and IoT data management; Distributed database architecture; Edge computing architectures; Distributed query processing and optimization; Federated analytics and learning; Cloud data management; Security and privacy in databases; and Interoperability across systems.

Paper Submissions Papers are to be submitted electronically through EasyChair `https://easychair.org/conferences/?conf=sss2023` Each submission must be an original work written in English, in PDF format and must conform to the formatting instructions of Springer LNCS series `https://www.springer.com/gp/computer-science/lncs/conference-proceedings-guide`

Double-blind Review All submissions must be anonymous. We use a somewhat relaxed implementation of double-blind peer review: you are free to disseminate your work through arXiv and other online repositories and give presentations on your work as usual. However, please make sure you do not mention your own name or affiliation in the submission, and please do not include obvious references in the text that reveal your identity. A reviewer who has not previously seen the paper should be able to read it without accidentally learning the identity of the authors. Please feel free to ask the PC chairs if you have any questions about the double-blind policy of SSS 2022.

Publication. Regular papers and brief announcements will be included in the conference proceedings. Conference proceedings will be published by Springer in the LNCS conference series. Extended and revised versions of selected papers will be considered for a special issue of the journal *Theoretical Computer Science (TCS)*.

Best Papers Awards. Prizes will be given to the best regular paper and best student regular paper. A regular paper is eligible for the best student paper if at least one of its authors is a full-time student at submission time. Authors should clearly indicate whether their submission is eligible to be considered for the best student paper award (e.g., using a (thanks) in the title). The PC may decline to confer awards or may split awards.