

SSS 2025 Program

Best papers are given 30 minutes for their presentation, including Q&A. Regular and invited papers are given 25 minutes and BA papers are given 10 minutes.

October 8 (Wednesday)

19:00 Welcome Reception

October 9 (Thursday)

8:45-9:15 Registration

9:15-9:30 Opening

9:30-10:30 Keynote 1

Sonia Ben Mokhtar. *On the Safety and Security of Decentralised Machine Learning*

10:30-11:00 Coffee Break

11:00-12:15 Session I (Safety and Security)

Hao Lu, Jian Liu, and Kui Ren. *Byzantine Reliable Broadcast in Wireless Networks*

Mélanie Cambus and Darya Melnyk. *Centroid Approximation with Multidimensional Approximate Agreement Protocols*

Ajay Kshemkalyani and Anshuman Misra. *Deterministic Causal Order under Byzantine Sybil Tolerance: Techniques and Limitations*

12:15-13:50 Lunch

13:50-15:30 Session II (Moving and Computing)

Avisek Sharma, Satakshi Ghosh, and Buddhadeb Sau. *Gathering of Asynchronous Robots on Circle with Limited Visibility using Finite Communication*

Serafino Cicerone, Alessia Di Fonso, Gabriele Di Stefano, and Alfredo Navarra. *Gathering in Non-Vertex-Transitive Graphs under Round Robin*

Bibhuti Das, Barun Gorain, Kaushik Mondal, Krishnendu Mukhopadhyaya, and Supantha Pandit. *Optimal Dispersion of Silent Robots in a Ring*

Prabhat Kumar Chand, Manish Kumar, and Anisur Rahaman Molla. *Computing Tree Structures in Anonymous Graphs via Mobile Agents*

15:30-16:00 Coffee Break

16:00-17:15 Session III (Stabilization)

Haruki Kanaya, Ryota Eguchi, Taisho Sasada, Fukuhito Ooshita, and Michiko Inoue. *Time- and Space-Optimal Silent Self-Stabilizing Exact Majority in Population Protocols*

Stéphane Devismes, Swan Dubois, François Malenfer, Franck Petit, and Mouna Safir. *Self-Stabilizing Mutual Exclusion in Dynamic Networks with Bounded Temporal Diameter*

Yung-Fu Chen, Sen Lin, and Anish Arora. *Knowledge-Guided Machine Learning for Stabilizing Near-Shortest Path Routing*

17:15 Business meeting

October 10 (Friday)

8:45-9:30 Registration

9:30-10:30 Session IV (Best Papers)

Caterina Feletti, Paola Flocchini, and Nicola Santoro. *On the Computational Power of Mobile Robots under Sequential Schedulers (Best paper)*

Ramesh Adhikari, Costas Busch, and Pavan Poudel. *A Poly-Log Approximation for Transaction Scheduling in Fog-Cloud Computing and Beyond (Best Student Paper)*

10:30-11:00: Coffee Break

11:00-12:15 Session V (Blockchain)

Parwat Singh Anjana and Srivatsan Ravi. *Block Transactional Memory: A Complexity Study*

Ramesh Adhikari, Costas Busch, and Dariusz R. Kowalski. *Near-Optimal Stability for Distributed Transaction Processing in Blockchain Sharding*

Arivarasan Karmegam, Gabina Luz Bianchi, Margarita Capretto, Martin Ceresa, Antonio Fernández Anta, and César Sanchez. *Setchain Algorithms for Blockchain Scalability (Invited Paper)*

12:15-13:50 **Lunch**

13:50-15:30 **Session VI (Memory and Objects)**

Nischay Ranjan, Rohit Kapoor, and Sathya Peri. *NestedBTO: A Timestamp-Based STM protocol for Closed Nested Transactions with Opacity Guarantees*

Guillermo Toyos-Marfurt and Petr Kuznetsov. *Space-Time Trade-off in Bounded Iterated Memory*

Vincent Kowalski, Achour Mostefaoui, Matthieu Perrin, and Jolan Riallo. *On the Equivalence of Snapshot/Append Objects and Broadcast Abstractions under Byzantine Failures (Invited Paper)*

Ajay D. Kshemkalyani, Manaswini Piduguralla, Sathya Peri, and Anshuman Misra. *Improving the Hu-Toueg Construction of a Byzantine Linearizable SWMR Register*

15:30-16:00 **Coffee Break**

16:00-18:00 **Sightseeing**

18:00 **Banquet Dinner**

October 11 (Saturday)

8:45-9:30 **Registration**

9:30-10:30 **Keynote 2**

John Augustine. *Resilient Distributed Computing on External Data*

10:30-11:00: **Coffee Break**

11:00-12:05 **Session VII (Quantum, Cryptography, and Consensus)**

Pierre Jobic, Aurélien Mayoue, and Sara Tucci-Piergiovanni. *Label Leakage in Regression Federated Learning using Cryptographic Tools*

Shlomi Dolev, Avraham Yagudaev, and Moti Yung. *PQ-STAR: Post-Quantum Stateless Auditable Rekeying (Brief Announcement)*

Quentin Bramas. *Consensus in Systems with Eventual Quiescence (Brief Announcement)*

Sucharita Jayanti and Maurice Herlihy. *Cross-Chain Consensus (Brief Announcement)*

Sanyam Kaul, Manaswini Piduguralla, Gayathri Shreeya Patnala, and Sathya Peri. *Dependency-Aware Execution Mechanism in Hyperledger Fabric Architecture (Brief Announcement)*

12:05-13:35 Lunch

13:35-15:00 Session VIII (Shapes and Routes)

Irina Kostitsyna, David Liedtke, and Christian Scheideler. *Distributed Rhombus Formation for Sliding Squares (Invited Paper)*

Nada Almkali, Siddharth Gupta, Othon Michail, and Andreas Padalkin. *Efficient Distributed Algorithms for Shape Reduction via Reconfigurable Circuits*

Qingyun Ji, Darya Melnyk, Arash Pourdamghani, and Stefan Schmid. *Towards Demand-Aware Peer Selection with XOR-based Routing (Invited Paper)*

Omer Asher, Yefim Dinitz, Shlomi Dolev, Li-on Raviv, and Baruch Schieber. *The Steiner Shortest Path Tree Problem (Brief Announcement)*

15:00-15:30 Coffee Break

15:30-16:40 Session IX (Robots and Search)

Shota Naito, Tsukasa Ninomiya, and Koichi Wada. *Beyond Pairwise Comparisons: Unveiling Structural Landscape of Mobile Robot Models*

Serafino Cicerone, Alessia Di Fonso, Gabriele Di Stefano, and Alfredo Navarra. *On the Impact of Unlimited Computational Power in OBLOT: Consequences for Synchronous Robots on Graphs (Brief Announcement)*

Tanvir Kaur, Ashish Saxena, Partha Sarathi Mandal, and Kaushik Mondal. *Black Hole Search by Scattered Agents on Time-Varying Dynamic Graphs*

François Bonnet, Quentin Bramas, and Anissa Lamani. *Searching for an Eventually-Emerging Black Hole in Rings (Brief Announcement)*

16:40 Closing