

Monday**July 23**

16:30 Jennifer Welch Jubliee
 18:30 Welcome reception

Main Auditorium, Windsor Building
 Picture Gallery, Founder's Building

All PODC sessions take place in the Main Auditorium of the Windsor Building

All PODC coffee breaks and lunches take place in the Windsor Building Foyer

Tuesday**July 24**

Registration Windsor Building Foyer Registration desk will be open throughout the day

Session 1A Persistent memory**Chair: Ittay Eyal**

8:30

Keynote:

Overview of Persistent Memory in Distributed Systems Architecture – Past, Present, Future

Rob Peglar

9:30

Nesting-Safe Recoverable Linearizability: Modular Constructions for Non-Volatile Memory
 Recoverable Mutual Exclusion Under System-Wide Failures

Hagit Attiya, Ohad Ben-Baruch, Danny Hendler

Deterministic Abortable Mutual Exclusion with Sublogarithmic Adaptive RMR Complexity

Adam Alon, Adam Morrison

Brief Announcement: Persistent Multi-Word Compare-And-Swap

Matej Pavlovic, Alex Kogan, Virendra J. Marathe, Tim Harris

10:35 Break

Session 1B Shared memory theory**Chair: Dan Alistarh**

11:05

Separating Lock-Freedom from Wait-Freedom

Hagit Attiya, Armando Castaneda, Danny Hendler., Matthieu Perrin

Passing Messages while Sharing Memory

Marcos K. Aguilera, Naama Ben-David, Irina Calciu, Rachid Guerraoui, Erez Petrank, Sam Toueg

Revisionist Simulations: A New Approach to Proving Space Lower Bounds

Faith Ellen, Rati Gelashvili, Leqi Zhu

On the Classification of Deterministic Objects via Set Agreement Power

David Yu Cheng Chan, Vassos Hadzilacos, Sam Toueg

Brief Announcement: Specification and Implementation of Replicated List: The Jupiter Protocol Revisited

Hengfeng Wei, Yu Huang, Jian Lu

12:30 Lunch

Session 1C Wireless networks**Chair: Janna Burman**

14:00

Leveraging Indirect Signaling for Topology Inference and Fast Broadcast

Magnus M. Halldorsson, Tigran Tonoyan

The Energy Complexity of Broadcast

Yi-Jun Chang, Varsha Dani, Thomas P. Hayes, Qizheng He, Wenzheng Li, Seth Pettie

Deterministic Digital Clustering of Wireless Ad Hoc Networks

Tomasz Jurdzinski, Dariusz R. Kowalski, Michal Rozanski, Grzegorz Stachowiak

Brief Announcement: Broadcast in radio networks: time vs. energy tradeoffs

Marek Klonowski, Dominik Pajak

15:05 Break

Session 1D Graph algorithms**Chair: Peter Robinson**

15:30

Round- and Message-Optimal Distributed Graph Algorithms

Bernhard Haeupler, D. Ellis Hershkowitz, David Wajc

Improved Massively Parallel Computation Algorithms for MIS, Matching, and Vertex Cover

Mohsen Ghaffari, Themis Gouleakis, Christian Konrad, Slobodan Mitrović, Ronitt Rubinfeld

Distributed Spanner Approximation

Keren Censor-Hillel, Michal Dory

Distributed Approximation of Minimum k -edge-connected Spanning Subgraphs

Michal Dory

	Brief Announcement: Distributed Minimum Vertex Coloring and Maximum Independent Set in Chordal Graphs	Christian Konrad, Viktor Zamaraev
	Brief Announcement: Simple and Local Independent Set Approximation	Ravi B. Boppana, Magnus M. Halldorsson, Dror Rawitz
17:00	Happy hour	
17:30	Business meeting	

Wednesday July 25

Registration Windsor Building Foyer Registration desk will be open throughout the day

Session 2A Approximation and leader election Chair: Yuval Emek

8:30	Keynote: Data Summarization and Distributed Computation	Graham Cormode
9:30	The Convergence of Stochastic Gradient Descent in Asynchronous Shared Memory	Dan Alistarh, Christopher De Sa, Nikola Konstantinov
	Optimal Gossip Algorithms for Exact and Approximate Quantile Computations	Bernhard Haeupler, Jeet Mohapatra, Hsin-Hao Su
	On Local Distributed Sampling and Counting	Weiming Feng, Yitong Yin
10:30	Break	

Session 2B Routing and leader election Chair: Mohsen Ghaffari

11:00	A Deterministic Distributed Algorithm for Exact Weighted All-Pairs Shortest Paths in $\tilde{O}(n^{\frac{3}{2}})$ Rounds	Udit Agarwal, Vijaya Ramachandran, Valerie King, Matteo Pontecorvi
	Near-Optimal Distributed Routing with Low Memory	Michael Elkin, Ofer Neiman
	Fair Leader Election for Rational Agents in Asynchronous Rings and Networks	Assaf Yifrach, Yishay Mansour
	Leader Election in Well-Connected Graphs	Seth Gilbert, Peter Robinson, Suman Sourav
	Brief Announcement: Beeping a Time-Optimal Leader Election	Fabien Dufoulon, Janna Burman, Joffroy Beauquier
	Brief Announcement: Graph Exploration Using Constant-Size Memory and Storage	Naoki Kitamura, Kazuki Kakizawa, Yuya Kawabata, Taisuke Izumi
12:30	Lunch	

Session 2C Security, blockchains, replication Chair: Gregory Chockler

14:00	Atomic Cross-Chain Swaps	Maurice Herlihy
	Interactive Distributed Proofs	Gillat Kol, Rotem Oshman, Raghuvansh R. Saxena
	Brief Announcement: Asynchronous Secure Distributed Computing with Transferrable Non-equivocation Revisited	Rishabh Bhaduria, Ashish Choudhury
	Brief Announcement: Sustainable Blockchains through Proof of eXercise	Ali Shoker
	Brief Announcement: Partially Replicated Causally Consistent Shared Memory: Lower Bounds and An Algorithm	Zhuolun Xiang, Nitin H. Vaidya
	Brief Announcement: Optimal Record and Replay under Causal Consistency	Russell L. Jones, Muhammad S. Khan, Nitin H. Vaidya
	Brief Announcement: MUSIC: Multi-Site Entry Consistency for Geo-Distributed Services	Bharath Balasubramanian, Richard Schlichting, Pamela Zave
15:05	Break	

Session 2D Consensus Chair: Chryssis Georgiou

15:30	Co-best student paper: Silence	Guy Goren, Yoram Moses
	Almost-Surely Terminating Asynchronous Byzantine Agreement Revisited	Laasya Bangalore, Bangalore; Ashish Choudhury, Arpita Patra
	Nearly-Tight Analysis for 2-Choice and 3-Majority Consensus Dynamics	Mohsen Ghaffari, Johannes Lengler
	Sublinear Message Bounds for Randomized Agreement	John Augustine, Anisur Rahaman Molla, Gopal Pandurangan
	Tight Bounds for Asymptotic and Approximate Consensus	Matthias Függer, Thomas Nowak, Manfred Schwarz

17:10 Break
 18:00 Banquet reception Founder's Quad
 18:30 Banquet and Award Ceremony Founder's Dining Hall

Thursday

July 26

Registration Windsor Building Foyer Registration desk will be open throughout the day

Session 3A Congest

Chair: Idit Keidar

8:30 **Keynote:** Barriers due to Congestion and Two Ways to Deal With Them
 9:30 Sublinear-Time Quantum Computation of the Diameter in CONGEST Networks
 Property Testing of Planarity in the CONGEST Model
 Congested Clique Algorithms for the Minimum Cut Problem

Keren Censor-Hillel
 Francois Le Gall, Frederic Magniez
 Reut Levi, Moti Medina, Dana Ron
 Mohsen Ghaffari, Krzysztof Nowicki

10:30 Break

Session 3B Concurrency

11:00 Locking Timestamps Versus Locking Objects
 Relaxed Schedulers Can Efficiently Parallelize Sequential Algorithms
Co-best student paper: An Asynchronous Computability Theorem for Fair Adversaries
 Population stability: regulating size in the presence of an adversary
 Brief Announcement: 2D-Stack: A scalable lock-free stack design that continuously relaxes semantics for better performance
 Brief Announcement: Performance Prediction for Coarse-Grained Locking
 Brief Announcement: Automatic log enhancement for fault diagnosis

Marcos K. Aguilera, Tudor David, Rachid Guerraoui, Junxiong Wang
 Dan Alistarh, Trevor Brown, Justin Kopinsky, Giorgi Nadiradze
 Petr Kuznetsov, Thibault Rieutord, Yuan He
 Shafi Goldwasser, Rafail Ostrovsky, Alessandra Scafuro, Adam Sealton
 Adones Rukundo, Aras Atalar, Philippas Tsigas
 Vitaly Aksenov, Dan Alistarh, Petr Kuznetsov
 Jia Tong, Li Ying, Wu Zhonghai

12:35 Lunch

Session 3C Coloring

Chair: Magnús Halldórsson

14:05 Distributed coloring in sparse graphs with fewer colors
 Improved Distributed Delta-Coloring
Best paper: Locally-Iterative Distributed (Delta + 1)-Coloring below Szegedy-Vishwanathan Barrier, and Applications to Self-Stabilization and to Restricted-Bandwidth Models

Pierre Aboulker, Marthe Bonamy, Nicolas Bousquet, Louis Esperet
 Mohsen Ghaffari, Juho Hirvonen, Fabian Kuhn, Yannic Maus
 Leonid Barenboim, Michael Elkin, Uri Goldenberg

15:05 Break

Session 3D Graphs and population protocols

Chair: Michael Elkin

15:30 Lower Bounds for Searching Robots, some Faulty Distributed Uniformity Testing
 Minor Excluded Network Families Admit Fast Distributed Algorithms
 Brief Announcement: Population Protocols Are Fast
 Brief Announcement: Space-Optimal Naming in Population Protocols
 Brief Announcement: A Local Stochastic Algorithm for Separation in Heterogeneous Self-Organizing Particle Systems

Andrey Kupavskii, Emo Welzl
 Orr Fischer, Uri Meir, Rotem Oshman
 Bernhard Haeupler, Jason Li, Goran Zuzic
 Adrian Kosowski, Przemysław Uznański
 Janna Burman, Joffroy Beauquier, Devan Sohler
 Sarah Cannon, Joshua J. Daymude, Cem Gokmen, Dana Randall, Andréa W. Richa

16:45 Closing remarks