

**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	<b>Keynote:</b> 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	<b>Co-best student paper:</b> 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