### Monday July 24

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>16:30</td>
<td>Jennifer Welch Jubilee Main Auditorium, Windsor Building</td>
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<tr>
<td>18:30</td>
<td>Welcome reception Picture Gallery, Founder's Building</td>
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**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 by Rob Peglar
- **9:30** Nesting-Safe Recoverable Linearizability: Modular Constructions for Non-Volatile Memory by Hagit Attiya, Ohad Ben-Baruch, Danny Hendler
- Recoverable Mutual Exclusion Under System-Wide Failures by Wojciech Golab, Danny Hendler
- Deterministic Abortable Mutual Exclusion with Sublogarithmic Adaptive RMR Complexity by Adam Alon, Adam Morrison
- Brief Announcement: Persistent Multi-Word Compare-And-Swap by Matej Pavlovic, Alex Kogan, Virendra J. Marathe, Tim Harris

#### Session 1B Shared memory theory Chair: Dan Alistarh
- **11:05** Separating Lock-Freedom from Wait-Freedom by Hagit Attiya, Armando Castaneda, Danny Hendler, Matthieu Perrin
- Passing Messages while Sharing Memory by Marcos K. Aguilera, Naama Ben-David, Irina Calciu, Rachid Guerraoui, Erez Petrank, Sam Toueg
- Revisionist Simulations: A New Approach to Proving Space Lower Bounds by Faith Ellen, Rati Gelashvili, Leqi Zhu
- On the Classification of Deterministic Objects via Set Agreement Power by David Yu Cheng Chan, Vassos Hadzilacos, Sam Toueg

#### Session 1C Wireless networks Chair: Janna Burman
- **14:00** Leveraging Indirect Signaling for Topology Inference and Fast Broadcast by Magnus M. Halldorsson, Tigran Tonoyan
- The Energy Complexity of Broadcast by Yi-Jun Chang, Varsha Dani, Thomas P. Hayes, Qizheng He, Wenzheng Li, Seth Pettie
- Deterministic Digital Clustering of Wireless Ad Hoc Networks by Tomasz Jurzdzinski, Dariusz R. Kowalski, Michal Rozanski, Grzegorz Stachowiak
- Brief Announcement: Broadcast in radio networks: time vs. energy tradeoffs by Marek Klonowski, Dominik Pajak

#### Session 1D Graph algorithms Chair: Peter Robinson
- **15:30** Round- and Message-Optimal Distributed Graph Algorithms by Bernhard Haeupler, D. Ellis Hershkowitz, David Wajc
- Improved Massively Parallel Computation Algorithms for MIS, Matching, and Vertex Cover by Mohsen Ghaffari, Themis Gouleakis, Christian Konrad, Slobodan Mitrovic, Ronitt Rubinfeld
- Distributed Spanner Approximation by Keren Censor-Hillel, Michal Dory
- Distributed Approximation of Minimum $k$-edge-connected Spanning Subgraphs by 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
Windsor Building Foyer

17:30 Business meeting
Main Auditorium, Windsor Building

Wednesday

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

Session 2A Approximation and Learning
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 $\tilde{O}(n^{3/2})$ 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
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

Tight Bounds for Asymptotic and Approximate Consensus
Matthias Függer, Thomas Nowak, Manfred Schwarz
### Thursday, July 26

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>17:10</td>
<td>Break</td>
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<tr>
<td>18:00</td>
<td>Banquet reception</td>
<td>Founder's Quad</td>
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<tr>
<td>18:30</td>
<td>Banquet and Award Ceremony</td>
<td>Founder's Dining Hall</td>
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<tr>
<td>17:10</td>
<td>Registration desk will be open throughout the day</td>
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#### Session 3A: Congest

**Chair:** Idit Keidar

**Keynote:** Barriers due to Congestion and Two Ways to Deal With Them

- Keren Censor-Hillel

**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

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

**10:30** Break

#### Session 3B: Concurrency

**Chair:** Magnús Halldórsson

**11:00**
- Locking Timestamps Versus Locking Objects
- Relaxed Schedulers Can Efficiently Parallelize Sequential Algorithms

- Marcos K. Aguilera, Tudor David, Rachid Guerraoui, Junxiong Wang
- Dan Alistarh, Trevor Brown, Justin Kopinsky, Giorgi Nadiradze

- 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

- Petr Kuznetsov, Thibault Rieutord, Yuan He
- Shafi Goldwasser, Rafail Ostrovsky, Alessandra Scafuro, Adam Sealfon
- Adones Rukundo, Aras Atalar, Philippas Tsagis
- 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

- Pierre Aboulker, Marthe Bonamy, Nicolas Bousquet, Louis Esperet
- Mohsen Ghaffari, Juho Hirvonen, Fabian Kuhn, Yannic Maus

- Best paper: Locally-Iterative Distributed (Delta + 1)-Coloring below Szegedy-Vishwanathan Barrier, and Applications to Self-Stabilization and to Restricted-Bandwidth Models

- 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, Przemyslaw Uznanski
- Janna Burman, Joffroy Beauquier, Devan Sohier
- Sarah Cannon, Joshua J. Daymude, Cem Gokmen, Dana Randall, Andréa W. Richa

**16:45** Closing remarks