PODC 2013 Program

Sunday 21 July
18:00 – 20:00  Reception

Monday 22 July
08:55 – 09:00   Welcome Address
09:00 – 10:00   Keynote Address

Distributed Computing: An Empirical Approach
Michael Merritt

10:00 – 10:20   Coffee break

10:20 – 11:35  Session 1: Concurrent Data Structures and Objects  (Chair: Michel Raynal)

10:20  On Deterministic Abortable Objects
Vassos Hadzilacos and Sam Toueg

10:45  Pragmatic Primitives for Non-blocking Data Structures
Trevor Brown, Faith Ellen and Eric Ruppert

11:10  The SkipTrie: Low-Depth Concurrent Search without Rebalancing
Rotem Oshman and Nir Shavit

11:35 – 12:39  Session 2: Routing and Distributed Algorithms  (Chair: James Aspnes)

11:35  Compact Routing Schemes with Improved Stretch (Best paper award)
Shiri Chechik

12:00  Optimal Deterministic Routing and Sorting on the Congested Clique
Christoph Lenzen

12: 25  BA: Fair Maximal Independent Sets in Trees
Jeremy Fineman, Calvin Newport and Tonghe Wang

12: 32  BA: Threshold Load Balancing in Networks
Martin Hoefer and Thomas Sauerwald

12:39 – 02:00  Lunch break

02:00 – 03:40  Session 3: Byzantine Agreement  (Chair: Keren Censor-Hillel)

02:00  Fast Byzantine Agreement (Best student paper award)
Nicolas Braud-Santoni, Rachid Guerraoui and Florian Huc

02:25  Byzantine Vector Consensus in Complete Graphs
Nitin Vaidya and Vijay Garg

02:50  Fast Byzantine Agreement in Dynamic Networks
John Augustine, Gopal Pandurangan and Peter Robinson

03:15  Synchronous Byzantine Agreement with Nearly a Cubic Number of Communication Bits
Dariusz Kowalski and Achour Mostefaoui

03:40 – 04:00  Coffee break
04:00 – 5:04  Session 4: Distributed Algorithms and Their Complexity (Chair: Philipp Woelfel)

04:00  How to Meet Asynchronously at Polynomial Cost
Yoann Dieudonne, Andrzej Pelc and Vincent Villain

04:25  On the Complexity of Universal Leader Election
Shay Kutten, Gopal Pandurangan, David Peleg, Peter Robinson and Amitabh Trehan

04:50  BA: A Simple Stretch 2 Distance Oracle
Rachit Agarwal and Brighten Godfrey

04:57  BA: Pareto Optimal Solutions to Consensus and Set Consensus
Armando Castaneda, Yannai A. Gonczarowski and Yoram Moses

05:04 – 05:53  Session 5: Brief Announcements (Chair: Phillip Gibbons)

05:04  BA: Self-Stabilizing Resource Discovery Algorithm
Seda Davtyan, Kishori Konwar and Alexander Shvartsman

05:11  BA: Parameterized Model Checking of Fault-tolerant Distributed Algorithms by Abstraction
Annu John, Igor Konnov, Ulrich Schmid, Helmut Veith and Josef Widder

05:18  BA: On Minimum Interaction Time for Continuous Distributed Interactive Computing
Lu Zhang, Xueyan Tang and Bingsheng He

05:25  BA: Deterministic Self-Stabilizing Leader Election with O(log log n)-bits
Lelia Blin and Sebastien Tixeuil

05:32  BA: Freedom not Fear: Scalable Anonymous Communication with Byzantine Adversary
Josh Karlin, Joud Khoury, Jared Saia and Mahdi Zamani

05:39  BA: Brokerage and Closure in A Strategic Model of Social Capital
Raissa D'Souza and Samuel Johnson

05:46  BA: Techniques for Programmatically Troubleshooting Distributed Systems
Sam Whitlock, Scott Shenker and Colin Scott

06:00 – 07:00  Yehuda Afek 60th Birthday celebration

07:00 – 08:00  Business meeting

Tuesday 23 July

09:00 – 10:00  Keynote Address

Distributed Computing Theory for Wireless Networks and Mobile Systems (Athena Lecture)
Nancy Lynch

10:00 – 10:20  Coffee break

10:20 – 11:35  Session 6: Distributed Algorithms and Their Complexity  (Chair: Fabian Kuhn)

10:20  Stone Age Distributed Computing
Yuval Emek and Roger Wattenhofer

10:45  Feedback from nature: an optimal distributed algorithm for maximal independent set selection
Alex Scott, Peter Jeavons and Lei Xu

11:10  What can be decided locally without identifiers?
Pierre Fraigniaud, Mika Göös, Amos Korman and Jukka Suomela
11:35 – 12:39  Session 7: Fault Tolerance in Distributed Systems  (Chryssis Georgiou)

11:35  Round-based Synchrony Weakened by Message Adversaries vs. Asynchrony Enriched with Failure Detectors  
Michel Raynaud and Julien Stainer

12:00  Highly Dynamic Distributed Computing with Byzantine Failures  
Rachid Guerraoui, Florian Huc and Anne-Marie Kermarrec

12:25  BA: Constructing Fault-Tolerant Overlay Networks for Topic-based Publish/Subscribe  
Chen Chen, Roman Vitenberg and Hans-Arno Jacobsen

12:32  BA: Byzantine Agreement with a Strong Adversary in Polynomial Expected Time  
Valerie King and Jared Saia

12:39 – 02:00  Lunch break

02:00 – 03:40  Session 8: Renaming and Mutual Exclusion  (Chair: Eric Ruppert)

02:00  Upper Bound on the Complexity of Solving Hard Renaming (Best student paper award)  
Hagit Attiya, Armando Castaneda, Maurice Herlihy and Ami Paz

02:25  Randomized Loose Renaming in O(\log \log n) Time  
Dan Alistarh, James Aspnes, George Giakkoupis and Philipp Woelfel

02:50  Byzantine Renaming in Synchronous Systems with t < N  
Oksana Denysyuk and Luis Rodrigues

03:15  An O(1)-Barriers Optimal RMRs Mutual Exclusion Algorithm  
Hagit Attiya, Danny Hendler and Smadar Levy

03:40 – 04:00  Coffee break

04:00 – 05:40  Session 9: Social and Peer to Peer Networks and Mobile Robots  (Chair: Darek Kowalski)

04:00  Fair and Resilient Incentive Tree Mechanisms  
Yuezhou Lv and Thomas Moscibroda

04:25  What’s a Little Collusion Between Friends?  
Edmund Wong and Lorenzo Alvisi

04:50  A Distributed Algorithm for Gathering Many Fat Mobile Robots in the Plane  
Chrysovalandis Agathangelou, Chryssis Georgiou and Marios Mavronicolas

05:15  Stable and Scalable Universal Swarms  
Ji Zhu, Stratis Ioannidis, Nidhi Hegde and Laurent Massoulie

*** Conference banquet ***

Wednesday 24 July

09:00 – 10:00  Keynote Address

Programming Models for Extreme-Scale Computing  
Marc Snir

10:00 – 10:20  Coffee break

10:20 – 11:35  Session 10: Byzantine Agreement and Self-Stabilization  (Chair: Danny Hendler)

10:20  Early-Deciding Consensus is Expensive  
Christoph Lenzen and Danny Dolev

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10:45  On the Complexity of Asynchronous Agreement Against Powerful Adversaries
      Allison Lewko and Mark Lewko

11:10  Introducing Speculation in Self-Stabilization - An Application to Mutual Exclusion
      Swan Dubois and Rachid Guerraoui

11:35 – 12:39  Session 11: Shared and Transactional Memory (Chair: Panagiota Fatourou)

11:35  Leaplist: Lessons Learned in Designing TM-Supported Range Queries
      Hillel Avni, Nir Shavit and Adi Suissa

12:00  A Programming Language Perspective on Transactional Memory Consistency
      Hagit Attiya, Alexey Gotsman, Sandeep Hans and Noam Rinetzky

12:25  BA: An Asymmetric Flat-Combining Based Queue Algorithm
      Michael Gorelik and Danny Hendler

12:32  BA: Resettable Objects and Efficient Memory Reclamation for Concurrent Algorithms
      Zahra Aghazadeh, Wojciech Golab and Philipp Woelfel

12:39 – 02:00  Lunch break

02:00 – 03:40  Session 12: Radio and Wireless Networks (Chair: Luis Rodrigues)

02:00  Broadcast in Radio Networks with Collision Detection
      Mohsen Ghaffari, Bernhard Haeupler and Majid Khazzabian

02:25  Maximal Independent Sets in Multichannel Radio Networks
      Sebastian Daum, Mohsen Ghaffari, Seth Gilbert, Fabian Kuhn and Calvin Newport

02:50  The Cost of Radio Network Broadcast for Different Models of Unreliable Links
      Mohsen Ghaffari, Nancy Lynch and Calvin Newport

03:15  Connectivity and Aggregation in Multihop Wireless Networks
      Marijke Bodlaender, Magnus M. Halldorsson and Pradipta Mitra

03:40 – 04:00  Coffee break

04:00 – 05:54  Session 13: Sensor Network, Graph algorithms and System Security (Chair: Seth Gilbert)

04:00  The Multi-Agent Rotor-Router on the Ring: A Deterministic Alternative to Parallel Random Walks
      Ralf Klasing, Adrian Kosowski, Dominik Pajak and Thomas Sauerwald

04:25  Efficient Distributed Source Detection with Limited Bandwidth
      Christoph Lenzen and David Peleg

04:50  Distributed Local Algorithms for Barrier Coverage using Relocatable Sensors
      Mohsen Efekhari, Evangelos Kranakis, Danny Krizanc, Oscar Morales-Ponce, Lata Narayanan, Jaroslav Opatrný and Sunil Shende

05:15  Delegation of Computation with Verification Outsourcing: Curious Verifiers
      Gang Xu, George Amariucai and Yong Guan

05:40  BA: A Shorter and Stronger Proof of an \(\Omega(D\log(n/D))\) Lower Bound for Broadcast in Radio Networks
      Calvin Newport

05:47  BA: A local constant-factor approximation algorithm for MDS problem in anonymous network
      Wojciech Wawrzyniak