

Program

31st ACM Symposium on PARALLELISM IN ALGORITHMS AND ARCHITECTURES (SPAA)

Phoenix, AZ, USA

22-24 June 2019

<https://spaa.acm.org>

Saturday, 22 June

	8:15 - 9:00	Continental Breakfast
Session 1 Chair: Tau Scharidl	9:00 - 9:25	Yossi Azar, Yuval Emek, Rob van Stee and Danny Vainstein: The Price of Clustering in Bin-Packing with Applications to Bin-Packing with Delays
	9:25 - 9:50	Gal Beniamini and Oded Schwartz: Faster Matrix Multiplication via Sparse Decomposition
	9:50 - 10:15	David Eppstein and Vijay Vazirani: NC Algorithms for Perfect Matching and Maximum Flow in One-Crossing-Minor-Free Graphs
	10:15 - 10:40	Mahdi Boroujeni and Saeed Seddighin: Improved MPC Algorithms for Edit Distance and Ulam Distance
	10:40 - 10:50	Alessandro Epasto, Vahab Mirrokni and Morteza Zadimoghaddam: Brief Announcement: Scalable diversity maximization via small-size composable core-sets
	10:50 - 11:00	Tal Wagner: Brief Announcement: Eccentricity Heuristics through Sublinear Analysis Lenses
	11:00 - 11:20	Coffee break
	11:20 - 12:30	SPAA Plenary talk: Guy Even
	12:30 - 14:00	Lunch break
Session 2 Chair: Minming Li	14:00 - 14:25	Giuseppe F. Italiano, Silvio Lattanzi, S. Mirrokni and Nikos Parotsidis: Dynamic Algorithms for the Massively Parallel Computation Model
	14:25 - 14:50	Soheil Behnezhad, Laxman Dhulipala, Hossein Esfandiari, Jakub Łącki, Vahab Mirrokni and Warren Schudy: Massively Parallel Computation via Remote Memory Access
	14:50 - 15:15	John Augustine, Mohsen Ghaffari, Robert Gmyr, Kristian Hinnenthal, Fabian Kuhn, Jason Li and Christian Scheideler: Distributed Computation in Node-Capacitated Networks
	15:15 - 15:25	Ali Pourmiri and Fahimeh Ramezani: Brief Announcement: Ultra-Fast Asynchronous Randomized Rumor Spreading
	15:30 - 16:00	Afternoon break
Session 3 Chair: Andrea Richa	16:00 - 16:25	Andrzej Pelc and Ram Narayan Yadav: Using Time to Break Symmetry: Universal Deterministic Anonymous Rendezvous
	16:25 - 16:50	Leszek Gasieniec, Grzegorz Stachowiak and Przemysław Uznański: Almost logarithmic-time space optimal leader election in population protocols
	16:50 - 17:15	Nicolas Rivera, Thomas Sauerwald, Alexandre Stauffer and John Sylvester: The dispersion time of random walks on finite graphs
	17:15 - 17:40	Nan Kang and Nicolas Rivera: Best-of-Three Voting in Dense Graphs
	18:00 - 20:00	SPAA business meeting

Sunday, 23 June

	8:15 - 9:00	Continental Breakfast
Session 4 Chair: Nicolas Rivera	9:00 - 9:25	Mosharaf Chowdhury, Samir Khuller, Manish Purohit, Sheng Yang and Jie You: Near Optimal Coflow Scheduling in Networks
	9:25 - 9:50	Kilian Grage, Klaus Jansen and Kim-Manuel Klein: An EPTAS for machine scheduling with bag-constraints
	9:50 - 10:15	Dan Alistarh, Giorgi Nadiradze and Nikita Koval: Efficiency Guarantees for Parallel Incremental Algorithms under Relaxed Schedulers
	10:15 - 10:40	Max A. Deppert and Klaus Jansen: Near-Linear Approximation Algorithms for Scheduling Problems with Batch Setup Times
	10:40 - 10:50	Kyle Singer, Kunal Agrawal and I-Ting Angelina Lee: Brief Announcement: Reduced I/O Latency with Futures
	10:50 - 11:00	Tingzhe Zhou, Pantea Zardoshti and Michael Spear: Brief Announcement: Optimizing Persistent Transactions
	11:00 - 11:20	Coffee break
Session 5 Chair: L. Gasieniec	11:20 - 11:45	Faith Ellen, Barun Gorain, Avery Miller and Andrzej Pelc: Constant-Length Labeling Schemes for Deterministic Radio Broadcast
	11:45 - 12:10	Haimin Chen and Chaodong Zheng: Fast and Resource Competitive Broadcast in Multi-channel Radio Networks
	12:10 - 12:35	Bogdan Chlebus, Elijah Hradovich, Tomasz Jurdzinski, Marek Klonowski and Dariusz Kowalski: Energy Efficient Adversarial Routing in Shared Channels
	12:35 - 14:00	Lunch break
Session 6 Chair: Lars Nagel	14:00 - 14:25	Vipul Harsh, Laxmikant Kale and Edgar Solomonik: Histogram Sort with Sampling
	14:25 - 14:50	Omar Obeya, Endrias Kahssay, Edward Fan and Julian Shun: Theoretically-Efficient and Practical Parallel In-Place Radix Sorting
	14:50 - 15:15	Pankaj Khanchandani and Roger Wattenhofer: The Arvy Distributed Directory Protocol
	15:15 - 15:25	Lin Chen, Minming Li, Guohui Lin and Kai Wang: Brief Announcement: Approximation of Scheduling with Calibrations on Multiple Machines
	15:30 - 16:00	Afternoon break
Session 7 Chair: Yan Gu	16:00 - 16:25	Naama Ben-David, Guy Blelloch, Yihan Sun and Yuanhao Wei: Multiversion Concurrency with Bounded Delay and Precise Garbage Collection
	16:25 - 16:50	Naama Ben-David, Guy Blelloch, Michal Friedman and Yuanhao Wei: Delay-Free Concurrency on Faulty Persistent Memory
	17:15 - 18:30	Turing Lecture

Monday, 24 June

	8:15 - 9:00	Continental Breakfast
Session 8 Chair: Faith Ellen	9:00 - 9:25	Michael A. Bender, Alexander Conway, Martin Farach-Colton, William Jannen, Yizheng Jiao, Rob Johnson, Eric Knorr, Sara McAllister, Nirjhar Mukherjee, Prashant Pandey, Donald E. Porter, Jun Yuan and Yang Zhan: Small Refinements to the DAM Can Have Big Consequences for Data-Structure Design
	9:25 - 9:50	Panagiota Fatourou, Elias Papavasileiou and Eric Ruppert: Persistent Non-Blocking Binary Search Trees Supporting Wait-Free Range Queries
	9:50 - 10:15	Michael Feldmann and Christian Scheideler: Skeap & Seap: Scalable Distributed Priority Queues for constant and arbitrary Priorities
	10:15 - 10:40	Jiwon Choe, Amy Huang, Tali Moreshet, Maurice Herlihy and R. Iris Bahar: Concurrent Data Structures with Near-Data-Processing: An Architecture-Aware Implementation
	10:40 - 10:50	William Wang and Stephan Diestelhorst: Brief Announcement: Persistent Atomics for Implementing Durable Lock-Free Data Structures for Non-Volatile Memory
	10:50 - 11:00	Nathan Beckmann, Phillip B. Gibbons, Bernhard Haeupler and Charles McGuffey: Brief Announcement: Writeback Aware Caching
	11:00 - 11:20	Coffee break
	11:20 - 12:30	FCRC Plenary Talk
	12:35 - 14:00	Lunch break
Session 9 Chair: Michael Bender	14:00 - 14:25	Christoph Lenzen, Merav Parter and Eylon Yogev: Parallel Balanced Allocations: The Heavily Loaded Case
	14:25 - 14:50	Davide Bilò, Tobias Friedrich, Pascal Lenzen and Anna Melnichenko: Geometric Network Creation Games
	14:50 - 15:15	Michael Elkin and Ofer Neiman: Linear-Size Hopsets with Small Hopbound, and Constant-Hopbound Hopsets in RNC
	15:15 - 15:25	Rohan Yadav and Umut Acar: Brief Announcement: Work Efficient Parallel Graph Isomorphism
	15:30 - 16:00	Afternoon break
Session 10 Chair: Michael Elkin	16:00 - 16:25	Emmanuelle Anceaume, Antonella Del Pozzo, Romaric Ludinard, Maria Potop-Butucaru and Sara Tucci-Piergiovanni
	16:25 - 16:50	Rathish Das, Shih-Yu Tsai, Sharmila Duppala, Jayson Lynch, Esther Arkin, Rezaul Chowdhury, Joseph Mitchell and Steven Skiena: Data Races and the Discrete Resource-time Tradeoff Problem with Resource Reuse over Paths
	16:50 - 17:15	Diego Didona, Panagiota Fatourou, Rachid Guerraoui, Jingjing Wang and Willy Zwaenepoel: Distributed Transactional Systems Cannot Be Fast
	17:15 - 17:40	Umut Acar, Daniel Anderson, Guy Blelloch and Laxman Dhulipala: Parallel Batch-Dynamic Graph Connectivity
	17:40 - 17:50	Kristian Hinnenthal, Christian Scheideler and Martijn Struijs: Brief Announcement: Fast Distributed Algorithms for LP-Type Problems of Bounded Dimension
	17:50 - 18:00	Chenglong Li, Tao Li, Junnan Li, Hui Yang and Baosheng Wang: Brief Announcement: A Memory Optimized Architecture for Multi-Field Packet Classification