

SPAA 2017 Schedule

Day 0: Sunday, July 23rd

Rm 310, Marvin Center

18:00 - 20:00 RECEPTION

Day 1: Monday, July 24th

Rm 309, Marvin Center

8:30 - 8:40 OPENING

8:40 - 9:40 KEYNOTE LECTURE 1

Piotr Indyk. Beyond P vs. NP: Quadratic-Time Hardness For Big Data Problems

Continental Ballroom, 3rd floor Marvin Center

9:40 - 10:00 COFFEE BREAK

Rm 309, Marvin Center

10:00 - 11:55 SESSION 1 Session Chair: Friedhelm Meyer auf der Heide

10:00 - 10:46 Sepehr Assadi and Sanjeev Khanna. Randomized Composable Coresets for Matching and Vertex Cover (Best Paper Award)

10:46 - 11:09 Mohammadhossein Bateni, Hossein Esfandiari and Vahab Mirrokni. Almost Optimal Streaming Algorithms for Coverage Problems

11:09 - 11:32 Alessandro Epasto, Vahab Mirrokni and Morteza Zadimoghaddam. Bicriteria Distributed Submodular Maximization in a Few Rounds

11:32 - 11:55 Susanne Albers. On Energy Conservation in Data Centers

Continental Ballroom, 3rd floor Marvin Center

12:00 - 13:30 LUNCH

Rm 309, Marvin Center

13:30 - 15:20 SESSION 2 Session Chair: Michael Goodrich

13:30 - 13:53 Hamidreza Jahanjou, Erez Kantor and Rajmohan Rajaraman. Asymptotically Optimal Approximation Algorithms for Coflow Scheduling

13:53 - 14:16 Runtian Ren and Xueyan Tang. Online Flexible Job Scheduling for Minimum Span

14:16 - 14:39 Vincent Chau, Minming Li, Samuel Mccauley and Wang Kai. Minimizing Total Weighted Flow Time with Calibrations

14:39 - 15:02 Yossi Azar and Danny Vainstein. Tight Bounds for Clairvoyant Dynamic Bin Packing

15:02 - 15:14 Brief Announcement: Kunal Agrawal, Jing Li, Kefu Lu and Benjamin Moseley. Scheduling Parallelizable Jobs Online to Maximize Throughput

15:14 - 15:26 Brief Announcement: Mehrnoosh Shafiee and Javad Ghaderi. A New Improved Bound for Coflow Scheduling

Continental Ballroom, 3rd floor Marvin Center

15:20 - 15:40 COFFEE BREAK

Rm 309, Marvin Center

15:40 - 17:41 SESSION 3 Session Chair: Hossein Bateni

15:40 - 16:03 Jason Li and Ryan O'Donnell. Bounding laconic proof systems by solving CSPs in parallel

16:03 - 16:26 Elaye Karstadt and Oded Schwartz. Matrix Multiplication, a Little Faster

16:26 - 16:49 Edgar Solomonik, Grey Ballard, James Demmel and Torsten Hoefler. A communication-avoiding parallel algorithm for the symmetric eigenvalue problem

16:49 - 17:12 Peter Kling, Alexander Mäcker, Sören Riechers and Alexander Skopalik. Sharing is Caring: Multiprocessor Scheduling with a Sharable Resource

17:12 - 17:24 Brief Announcement: Soheil Behnezhad, Mahsa Derakhshan, Hossein Esfandiari, Elif Tan and Hadi Yami. Graph Matching in Massive Datasets

17:24 - 17:36 Brief Announcement: David Eppstein and Michael Goodrich. Using Multi-Level Parallelism and 2-3 Cuckoo Filters for Faster Set Intersection Queries and Sparse Boolean Matrix Multiplication

18:00 - 19:30 BUSINESS MEETING

Day 2: Tuesday, July 25th

Continental Ballroom, 3rd floor Marvin Center

8:40 - 9:40 KEYNOTE LECTURE 2
Guy Blelloch. Some Sequential Algorithms are Almost Always Parallel.

Grand Ballroom, 3rd floor Marvin Center

9:40 - 10:00 COFFEE BREAK

Rm 309, Marvin Center

10:00 - 11:56 SESSION 4 Session Chair: Susanne Albers
10:00 - 10:46 Sudipto Guha, Yi Li and Qin Zhang. Distributed Partial Clustering (Best Paper Award)
10:46 - 11:09 Pierre Fraigniaud and Dennis Olivetti. Distributed Detection of Cycles
11:09 - 11:32 He Sun and Luca Zanetti. Distributed Graph Clustering by Load Balancing
11:32 - 11:55 Costas Busch, Maurice Herlihy, Miroslav Popovic and Gokarna Sharma. Fast Scheduling in Distributed Transactional Memory

Grand Ballroom, 3rd floor Marvin Center

12:00 - 13:30 LUNCH

Rm 309, Marvin Center

13:30 - 15:20 SESSION 5 Session Chair: Keren Censor-Hillel
13:30 - 13:53 Cooper Anderton and Maxwell Young. Is Our Model for Contention Resolution Wrong?
13:53 - 14:16 Timothy Kaler, Yuxiong He and Sameh Elnikety. Optimal Reissue Policies For Reducing Tail-Latency
14:16 - 14:39 Yoann Dieudonne and Andrzej Pelc. Impact of Knowledge on Election Time in Anonymous Networks
14:39 - 15:02 Haoyu Wang, Haiying Shen and Guoxin Liu. Swarm-based Incast Congestion Control in datacenter Serving Web Applications
15:02 - 15:14 Brief Announcement: Antje Bjelde, Max Klimm and Daniel Schmand. Approximation Algorithms for Unsplittable Resource Allocation Problems with Diseconomies of Scale
15:14 - 15:26 Brief Announcement: Chuanyou Li and Xueyan Tang. Towards Fault-Tolerant Bin Packing for Online Cloud Resource Allocation

Grand Ballroom, 3rd floor Marvin Center

15:20 - 15:40 COFFEE BREAK

Rm 309, Marvin Center

15:40 - 17:35 SESSION 6 Session Chair: Frank Dehne
15:40 - 16:03 Zhiyu Liu, Irina Calciu, Maurice Herlihy and Onur Mutlu. Concurrent Data Structures for Near-Memory Computing
16:03 - 16:26 Riko Jacob and Nodari Sitchinava. Lower Bounds in the Asymmetric External Memory Model
16:26 - 16:49 Tingzhe Zhou, Victor Luchangco and Michael Spear. Hand-Over-Hand Transactions with Precise Memory Reclamation
16:49 - 17:12 Stefan Dobrev, Manuel Lafond, Lata Narayanan and Jaroslav Opatrny. Optimal Local Buffer Management for Information Gathering with Adversarial Traffic
17:12 - 17:24 Brief Announcement: Umut Acar, Vitaly Aksenov and Sam Westrick. Parallel Dynamic Tree Contraction via Self-Adjusting Computation
17:24 - 17:36 Brief Announcement: Yuan Tang, Ronghui You and Shiyi Wang. STAR (Space-Time Adaptive and Reductive) Algorithms for Dynamic Programs with more than $O(1)$ Dependency

Bobby Van's Grill, 1201 New York Ave BANQUET

18:30 - 21:00 Bar Service (house wine and beer)
19:00 Dinner service begins

Day 3: Wednesday, July 26th

Continental Ballroom, 3rd floor Marvin Center

8:40 - 9:40 KEYNOTE LECTURE 3
Maurice Herlihy. Blockchains and the Future of Distributed Computing.

Grand Ballroom, 3rd floor Marvin Center

9:40 - 10:00 COFFEE BREAK

Rm 309, Marvin Center

10:00 - 11:55 SESSION 7 Session Chair: Mohsen Ghaffari

- 10:00 - 10:23 Shahbaz Khan. Near Optimal Parallel Algorithms for Dynamic DFS in Undirected Graphs
- 10:23 - 10:46 Laxman Dhulipala, Guy Blelloch and Julian Shun. Julienne: A Framework for Parallel Graph Algorithms using Work-efficient Bucketing
- 10:46 - 11:09 Colin Cooper, Tomasz Radzik and Nicolás Rivera. Improved Cover Time Bounds for the Coalescing-Branching Random Walk on Graphs
- 11:09 - 11:32 Björn Feldkord and Friedhelm Meyer Auf der Heide. The Mobile Server Problem
- 11:32 - 11:44 Brief Announcement: Tobias Friedrich, Sven Ihde, Christoph Keßler, Pascal Lenzner, Stefan Neubert and David Schumann. Efficient Best Response Computation for Strategic Network Formation under Attack
- 11:44 - 11:56 Brief Announcement: Gokarna Sharma, Costas Busch and Supratik Mukhopadhyay. Complete Visibility for Oblivious Robots in Linear Time

Grand Ballroom, 3rd floor Marvin Center

12:00 - 13:30 LUNCH

Rm 309, Marvin Center

13:30 - 15:20 SESSION 8 Session Chair: Boaz Patt-Shamir

- 13:30 - 13:53 Marcin Bienkowski, Jan Marcinkowski, Maciej Pacut, Stefan Schmid and Aleksandra Spyra. Online Tree Caching
- 13:53 - 14:16 Rezaul Chowdhury, Pramod Ganapathi, Yuan Tang and Jesmin Jahan Tithi. Provably Efficient Scheduling of Cache-Oblivious Wavefront Algorithms
- 14:16 - 14:39 Richard Cole and Vijaya Ramachandran. Bounding Cache Miss Costs of Multithreaded Computations Under General Schedulers
- 14:39 - 14:51 Brief Announcement: Rohit Atre. How to discover parallelism in sequential programs?
- 14:51 - 15:03 Brief Announcement: Pedro Ramalhete and Andreia Correia. Hazard Eras - Non-Blocking Memory Reclamation
- 15:03 - 15:15 Brief Announcement: Tingzhe Zhou, Victor Luchangco and Michael Spear. Extending Transactional Memory with Atomic Deferral
- 15:15 - 15:27 Brief Announcement: Ellis Giles, Kshitij Doshi and Peter Varman. Hardware Transactional Storage Class Memory

Grand Ballroom, 3rd floor Marvin Center

15:30 - 15:50 COFFEE BREAK & CLOSING OF SPAA