Tuesday July 10

Track A — Sun 1 chair *D. Marx*	Track A — Sun 2 chair *J. Suomela*	Track B — Earth chair *A. Muscholl*	Track A — Jupiter chair *E. Ben-Sasson*	
J. Chuzhoy, D. H. K. Kim, R. Nimavat: Improved Approximation for Node-Disjoint Paths in Grids with Sources on the Boundary	*T. Johnson, M. T. Goodrich, W. E. Devanny, J. J. B. Vial, D. Eppstein:* Optimally Sorting Evolving Data	~~*M. Skrzypczak*~~ **rescheduled on Thu 11:40**	*C. Rösner, M. Schmidt:* Privacy preserving clustering with constraints	10:00 – 10:20
A. Schmid, J. M. Schmidt: Computing Tutte Paths	*M. Charikar, O. Geri, M. Kim, W. Kuszmaul:* On Estimating Edit Distance: Alignment, Dimension Reduction, and Embeddings	*M. Raskin:* A superpolynomial lower bound for the size of non-deterministic complement of an unambiguous automaton	*E. Boyle, A. Jain, M. Prabhakaran, C.-H. Yu:* The Bottleneck Complexity of Secure Multiparty Computation	10:25 – 10:45
P. Sankowski: NC Algorithms for Weighted Planar Perfect Matching and Related Problems	*P. Gawrychowski, P. Uznański:* Towards Unified Approximate Pattern Matching for Hamming and L_1 Distance	*G. Douéneau-Tabot:* On the complexity of infinite advice strings	*D. Micciancio, J. Sorrell:* Ring packing and amortized FHEW bootstrapping	10:50 – 11:10
J. Fox, T. Roughgarden, C. Seshadhri, F. Wei, N. Wein: Finding Cliques in Social Networks: A New Distribution-Free Model	*P. Gawrychowski, G. Landau, W.-K. Sung and O. Weimann:* A Faster Construction of Greedy Consensus Tree	*M. E. Descotte, D. Figueira, G. Puppis:* Resynchronizing Classes of Word Relations	*A. Romashchenko, M. Zimand:* An operational characterization of mutual information in algorithmic information theory	11:15 – 11:35
A. Louis, R. Venkat: Semi-random Graphs with Planted Sparse Vertex Cuts: Algorithms for Exact and Approximate Recovery	*B. Dudek, P. Gawrychowski:* Edit Distance between Unrooted Trees in Cubic Time	Best student paper of track B *S. Winter:* Uniformization Problems for Synchronizations of Automatic Relations on Words	*B. Berger, Z. Brakerski:* BA: Zero-Knowledge Protocols for Search Problems *N. Agarwal, S. Anand, M. Prabhakaran:* BA: On Secure m-Party Computation, Commuting Permutation Systems and Unassisted Non-Interactive MPC	11:40 – 12:00

Track A — Sun 1 chair *P. Sankowski*	Track A — Sun 2 chair *M. Jerrum*	Track B — Earth chair *D. Sannella*	Track A — Jupiter chair *E. Ben-Sasson*	
M. Grohe, D. Neuen, P. Schweitzer, D. Wiebking: An improved isomorphism test for bounded-tree-width graphs	*J. Byrka, P. Skowron, K. Sornat:* Proportional Approval Voting, Harmonic k-median, and Negative Association	*S. Staton, D. Stein, H. Yang, N. Ackerman, C. Freer, D. Roy:* The Beta-Bernoulli process and algebraic effects	*B. Haeupler, A. Shahrasbi, M. Sudan:* Synchronization Strings: List Decoding for Insertions and Deletions	13:30 – 13:50
H. Dell, M. Grohe, G. Rattan: Lovász Meets Weisfeiler and Leman	*L. Elisa Celis, D. Straszak, N. K. Vishnoi:* Ranking with Fairness Constraints	*A. Aguirre, G. Barthe, J. Hsu, A. Silva:* Almost Sure Productivity	*B. Haeupler, A. Shahrasbi, E. Vitercik:* Synchronization Strings: Channel Simulations and Interactive Coding for Insertions and Deletions	13:55 – 14:15
A. Kolla, I. Koutis, V. Madan, A. K. Sinop: Spectrally Robust Graph Isomorphism	*J. Chen, B. Li, Y. Li, P. Lu:* BA: Bayesian Auctions with Efficient Queries *D. Graf, K. Labib, P. Uznański:* BA: Hamming distance completeness and sparse matrix multiplication	*L. Daviaud, R. Lazić, M. Jurdziński, F. Mazowiecki, G. Perez, J. Worrell:* When is Containment Decidable for Probabilistic Automata?	*S. Raskhodnikova, N. Varma:* BA: Erasure-Resilience Versus Tolerance to Errors ~~*J. Blocki, et al.:*~~ **cancelled**	14:20 – 14:40
chair *P. Sankowski*	chair *R. Williams*	chair *P.-L. Curien*	chair *P. Golovach*	
D. Chakrabarty, M. Negahbani: Generalized Center Problems with Outliers	*S. Liu:* Chain, Generalization of Covering Code, and Deterministic Algorithm for k-SAT	*S. Kiefer:* On Computing the Total Variation Distance of Hidden Markov Models	*E. Ben-Sasson, I. Bentov, Y. Horesh, M. Riabzev:* Fast Reed-Solomon Interactive Oracle Proofs of Proximity	14:50 – 15:10
B. Gamlath, S. Huang, O. Svensson: Semi-Supervised Algorithms for Approximately Optimal and Accurate Clustering	*A. Bogdanov:* Small bias requires large formulas	*S. Almagor, D. Chistikov, J. Ouaknine, J. Worrell:* O-Minimal Invariants for Linear Loops	*T. Gur, Y. Liu, R. Rothblum:* An Exponential Separation Between MA and AM Proofs of Proximity	15:15 – 15:35
D. Chakrabarty, Ch. Swamy: Interpolating between k-Median and k-Center: Approximation Algorithms for Ordered k-Median	*A. Abboud, K. Bringmann:* Tighter Connections Between Formula-SAT and Shaving Logs	*J. Gajarský, S. Kreutzer, J. Nešetřil, P. Ossona de Mendez, M. Pilipczuk, S. Siebertz, S. Toruńczyk:* First-order interpretations of bounded expansion classes	*R. Gurjar, T. Thierauf, N. Vishnoi:* Isolating a Vertex via Lattices: Polytopes with Totally Unimodular Faces	15:40 – 16:00

Wednesday July 11

Track A — Sun 1 chair *D. Marx*	Track A — Sun 2 chair *S. Venkatasubramanian*	Track B — Earth chair *A. Kučera*	Track C — Jupiter chair *G. Mertzios*	
J. Chen, D. Hermelin, M. Sorge, H. Yedidsion: How hard is it to satisfy (almost) all roommates?	*P. Bose, P. Carmi, V. Dujmovic, S. Mehrabi, F. Montecchiani, P. Morin, L. Schultz:* Geodesic Obstacle Representation of Graphs	*G. Sénizergues, A. Weiss:* The isomorphism problem for finite extensions of free groups is in PSPACE	*T. Harks, M. Hoefer, A. Huber, M. Surek:* Efficient Black-Box Reductions for Separable Cost Sharing	10:00 – 10:20
J. Jeong, E. J. Kim, S.-I. Oum: Finding branch-decompositions of matroids, hypergraphs, and more	*P. Agarwal, H. Kaplan, M. Sharir:* Union of hypercubes and 3d Minkowski sums with random sizes	*I. Klimann:* To Infinity and Beyond	*V. Bilò, L. Moscardelli, C. Vinci:* Uniform Mixed Equilibria in Network Congestion Games with Link Failures	10:25 – 10:45
E. Eiben, I. Kanj: How to navigate through obstacles?	*T. Biedl, A. Biniaz, R. Cummings, A. Lubiw, F. Manea, D. Nowotka, J. Shallit:* Rollercoasters and Caterpillars	*S.-K. Ko, R. Niskanen, I. Potapov:* On the Identity Problem for the Special Linear Group and the Heisenberg Group	*G. Christodoulou, M. Gairing, Y. Giannakopoulos, P. Spirakis:* The Price of Stability of Weighted Congestion Games	10:50 – 11:10
F. Reidl, M. Wahlström: Parameterized Algorithms for Zero Extension and Metric Labelling Problems	*T. M. Chan, Y. Nekrich, S. Rahul, K. Tsakalidis:* Orthogonal Point Location and Rectangle Stabbing Queries in 3-d	*A. Grandjean, B. Hellouin de Menibus, P. Vanier:* Aperiodic Points in $\mathbb{Z}^2$-subshifts	*R. Colini-Baldeschi, M. Klimm, M. Scarsini:* Demand-Independent Optimal Tolls	11:15 – 11:35
M. Xiao, H. Nagamochi: BA: Bounded-Degree Bipartition is Fixed-Parameter Tractable *A. Babay, M. Dinitz, Z. Zhang:* BA: Characterizing Demand Graphs for (Fixed-Parameter) Shallow-Light Steiner Network	*N. Mamano, D. Eppstein, M. Goodrich, G. Barequet:* Stable-Matching Voronoi Diagrams: Combinatorial Complexity and Algorithms	*M. Hoyrup, D. Nava Saucedo, D. Stull:* Semicomputable geometry	*T. Kesselheim, B. Kodric:* Price of Anarchy for Mechanisms with Risk-Averse Agents	11:40 – 12:00

Track A — Sun 1 chair ~~*D. M.*~~ *F. Eisenbrand*	Track A — Sun 2 chair ~~*G. F. I.*~~ *M. Farach-Colton*	Track B — Earth chair *S. Lasota*	Track A — Jupiter chair *M. Jerrum*	
F. Fomin, P. Golovach, F. Panolan: Parameterized Low-Rank Binary Matrix Approximation	*Z. Huang, Z. G. Tang, X. Wu, Y. Zhang:* Online Vertex-Weighted Bipartite Matching: Beating $1 - 1/e$ with Random Arrivals	*W. Czerwiński, P. Hofman, G. Zetzsche:* Unboundedness problems for languages of vector addition systems	*P. Gregor, S. Jäger, T. Mütze, J. Sawada, K. Wille:* Gray codes and symmetric chains	13:30 – 13:50
M. Lampis: Finer Tight Bounds for Coloring on Clique-Width	*A. Gupta, R. Mehta, M. Molinaro:* Maximizing Profit with Convex Costs in the Random-order Model	*J. Leroux:* Polynomial Vector Addition Systems With States	*R. Arnon-Friedman, H. Yuen:* Noise-tolerant testing of high entanglement of formation	13:55 – 14:15
D. Lokshtanov, Ramanujan M. S., S. Saurabh, R. Sharma, M. Zehavi: BA: Treewidth Modulator: Emergency Exit for DFVS *S. Chaplick, M. De, A. Ravsky, J. Spoerhase:* BA: Approximation Schemes for Geometric Coverage Problems	*B. Feldkord, M. Feldotto, A. Gupta, G. Guruganesh, A. Kumar, S. Riechers, D. Wajc:* Fully-Dynamic Bin Packing with Little Repacking	*S. Datta, A. Mukherjee, N. Vortmeier, T. Zeume:* Reachability and Distances under Multiple Changes	*Ch. Nirkhe, U. Vazirani, H. Yuen:* Approximate low-weight check codes and circuit lower bounds for noisy ground states	14:20 – 14:40
chair ~~*H. K.*~~ *G. F. Italiano*	chair *M. Halldórsson*	chair *J.-F. Raskin*	chair *B. Patt-Shamir*	
M. Koutecký, A. Levin, S. Onn: A Parameterized Strongly Polynomial Algorithm for Block Structured Integer Programs	*H. Fu, J. Li, P. Xu:* A PTAS for a Class of Stochastic Dynamic Programs	*J. Fearnley, M. Gairing, M. Mnich, R. Savani:* Reachability Switching Games	*A. Bar-On, I. Dinur, O. Dunkelman, R. Hod, N. Keller, E. Ronen, A. Shamir:* Tight Bounds on Online Checkpointing Algorithms	14:50 – 15:10
~~*A. Bhaskara, et al.*~~ **rescheduled** *F. Eisenbrand, C. Hunkenschröder, K.-M. Klein:* Faster Algorithms for Integer Programs with Block Structure	*T. Soma, Y. Yoshida:* A New Approximation Guarantee for Monotone Submodular Function Maximization via Discrete Convexity	*L. Clemente, S. Lasota:* Binary reachability of timed pushdown automata via quantifier elimination	*B. Gärtner, T. D. Hansen, P. Hubáček, K. Král, H. Mosaad, V. Slívová:* ARRIVAL: Next Stop in CLS	15:15 – 15:35
	R. Ostrovsky, Y. Rabani, A. Yousefi: Strictly Balancing Matrices in Polynomial Time Using Osborne's Iteration	*M. Fränzle, M. Shirmohammadi, M. Swaminathan, J. Worrell:* Costs and Rewards in Priced Timed Automata	*M. Carmosino, R. Impagliazzo, M. Sabin:* Fine-Grained Derandomization: From Problem-Centric Complexity to Resource-Centric Complexity	15:40 – 16:00

Thursday July 12

Track A — Sun 1 chair *S. Solomon*	Track A — Sun 2 chair *P. Pudlák*	Track B — Earth chair *M. Benedikt*	Track C — Jupiter chair *M. Gairing*	
P. Gawrychowski, A. Karczmarz: Improved Bounds for Shortest Paths in Dense Distance Graphs	~~*S. Chillara, et al.*~~ **rescheduled** *M. Forbes, S. Ghosh, N. Saxena:* Towards blackbox identity testing of log-variate circuits	*A. Blumensath, F. Wolf:* Bisimulation Invariant Monadic-Second Order Logic in the Finite	*S. Dehghani, S. Ehsani, M. Hajiaghayi, V. Liaghat, S. Seddighin:* Greedy Algorithms for Online Survivable Network Design	10:00 – 10:20
R. Duan, K. Lyu, Y. Xie: Single-Source Bottleneck Path Algorithm Faster than Sorting for Sparse Graphs	~~*M. Forbes, et al.*~~ **rescheduled** *A. Bhangale:* NP-hardness of coloring 2-colorable hypergraph with poly-logarithmically many colors	*Ramanujan M. S., D. Lokshtanov, S. Saurabh, M. Zehavi:* Reducing CMSO Model Checking to Highly Connected Graphs	*B. Aronov, G. Bar-On, M. Katz:* Resolving SINR Queries in a Dynamic Setting	10:25 – 10:45
T. Bläsius, C. Freiberger, T. Friedrich, M. Katzmann, F. Montenegro-Retana, M. Thieffry: Efficient Shortest Paths in Scale-Free Networks with Underlying Hyperbolic Geometry	*L. Duraj, G. Gutowski, J. Kozik:* A note on two-colorability of nonuniform hypergraphs	*A. Atserias, S. Kreutzer, M. Noy:* On Zero-One and Convergence Laws for Graphs Embeddable on a Fixed Surface	*M. M. Halldórsson, G. Kortsarz, P. Mitra, T. Tonoyan:* Spanning Trees With Edge Conflicts and Wireless Connectivity	10:50 – 11:10
R. Duan, H. Ren: Approximating All-Pair Bounded-Leg Shortest Path and APSP-AF in Truly-Subcubic Time	*Z. Dvořák, K.-I. Kawarabayashi:* Additive non-approximability of chromatic number in proper minor-closed classes	*D. Kuske, N. Schweikardt:* Gaifman normal forms for counting extensions of first-order logic	*E. C. Akrida, G. Mertzios, P. Spirakis, V. Zamaraev:* Temporal Vertex Covers and Sliding Time Windows	11:15 – 11:35
R. Duan, Y. Gu, L. Zhang: Improved Time Bounds for All Pairs Non-decreasing Paths in General Digraphs	~~*A. Bhangale:*~~ **rescheduled** *S. Chillara, N. Limaye, S. Srinivasan:* A Quadratic Size-Hierarchy Theorem for Small-Depth Multilinear Formulas	*M. Skrzypczak:* Unambiguous languages exhaust the index hierarchy	*M. Bateni, S. Behnezhad, M. Derakhshan, M. Hajiaghayi, V. Mirrokni:* BA: MapReduce Algorithms For Massive Trees *R. B. Basat, G. Einziger, R. Friedman:* BA: Give Me Some Slack: Efficient Network Measurements	11:40 – 12:00

Track A — Sun 1 chair ~~*S. L.*~~ *D. Marx*	Track A — Sun 2 chair *M. Koucký*	Track B — Earth chair *S. Staton*	Track C — Jupiter chair *G. Christodoulou*	
A. Conway, M. Farach-Colton, P. Shilane: Optimal Hashing in External Memory	*S. Ganguly, D. Woodruff:* High Probability Frequency Moment Sketches	Best paper of track B *D. Nowotka, A. Saarela:* An optimal bound on the solution sets of one-variable word equations and its consequences	*F. Chierichetti, S. Haddadan:* On the Complexity of Sampling Vertices Uniformly from a Graph	13:30 – 13:50
A. Aamand, M. B. T. Knudsen, M. Thorup: Power of d Choices with Simple Tabulation	*A. Blum, V. Braverman, A. Kumar, H. Lang, L. Yang:* Approximate Convex Hull of Data Streams	*M. Ganardi, D. Hucke, M. Lohrey:* Randomized sliding window algorithms for regular languages	*S. A. Amiri, S. Dudycz, S. Schmid, S. Wiederrecht:* Congestion-Free Rerouting of Flows on DAGs	13:55 – 14:15
D. Kane, S. Lovett, S. Moran: Generalized comparison trees for point-location problems	*S. Golan, T. Kopelowitz, E. Porat:* Towards Optimal Approximate Streaming Pattern Matching by Matching Multiple Patterns in Multiple Streams	*T. Place, M. Zeitoun:* Separating without any ambiguity	*O. Kupferman, G. Vardi:* The Unfortunate-Flow Problem	14:20 – 14:40
S. Walzer: Load Thresholds for Cuckoo Hashing with Overlapping Blocks	*V. Braverman, E. Viola, D. P. Woodruff, L. Yang:* Revisiting Frequency Moment Estimation in Random Order Streams	*A. Amarilli, C. Paperman:* Constrained Topological Sorting		14:45 – 15:05

Awards session:

15:45 – 16:15 ICALP Best Paper Awards
Appointment of EATCS Fellows
EATCS Distinguished Dissertation Award: *Bas Ketsman, Ilya Razenshteyn, Aviad Rubinstein*

16:15 – 16:45 Presburger Award: *Alexander Mądry*

16:45 – 17:15 EATCS Award: *Noam Nisan*

17:15 – 17:45 Gödel Prize: *Oded Regev*

Friday July 13

Track A — Sun 1 chair ~~*M. F.-C.*~~ *S. Leonardi*	Track A — Sun 2 chair *Z. Dvořák*	Track A — Earth chair *A. Bogdanov*	Track C — Jupiter chair *A. Schwarzmann*	
M. Charikar, S. Solomon: Fully Dynamic Almost-Maximal Matching: Breaking the Polynomial Worst-Case Time Barrier *M. Arar, S. Chechik, S. Cohen, C. Stein, D. Wajc:* Dynamic Matching: Reducing Integral Algorithms to Approximately-Maximal Fractional Algorithms	*Z. K. Koh, L. Sanità:* Stabilizing Weighted Graphs	*U. Feige, B. Patt-Shamir, S. Vardi:* On the Probe Complexity of Local Computation Algorithms	*S. Bouchard, Y. Dieudonne, A. Lamani:* Byzantine Gathering in Polynomial Time	10:00 – 10:20
M. Gupta, A. Singh: Generic Single Edge Fault Tolerant Exact Distance Oracle	*L. S. Chandran, D. Issac, Y. K. Cheung:* Spanning Tree Congestion and Computation of Generalized Győri-Lovász Partition	*H. Fichtenberger, R. Levi, Y. Vasudev, M. Wötzel:* A Sublinear Tester for Outerplanarity (and Other Forbidden Minors) With One-Sided Error *C. Lenzen, R. Levi:* A Centralized Local Algorithm for the Sparse Spanning Graph Problem	*M. Parter:* $(\Delta+1)$ Coloring in the Congested Clique Model	10:25 – 10:45
K. Onak, B. Schieber, S. Solomon, N. Wein: Fully Dynamic MIS in Uniformly Sparse Graphs	*A. Aamand, N. Hjuler, J. Holm, E. Rotenberg:* One-Way Trail Orientations	~~*F. Eisenbrand, et al.*~~ **rescheduled** *A. Bhaskara, S. Daruki, S. Venkatasubramanian:* Sublinear Algorithms for MAXCUT and Correlation Clustering	*F. Mallmann-Trenn, C. Musco, C. Musco:* Eigenvector Computation and Community Detection in Asynchronous Gossip Models	10:50 – 11:10
S. Har-Peled, P. Indyk, S. Mahabadi: Approximate Sparse Linear Regression	*A. Adamaszek, M. Mnich, K. Paluch:* New Approximation Algorithms for $(1,2)$-TSP	*I. Diakonikolas, T. Gouleakis, J. Peebles, E. Price:* Sample-Optimal Identity Testing with High Probability	*O. Grossman, B. Haeupler, S. Mohanty:* Improved Algorithms for the Noisy Broadcast Model under Erasures	11:15 – 11:35
V. Nakos, X. Shi, D. P. Woodruff, H. Zhang: Improved Algorithms for Adaptive Compressed Sensing	*D. Bilò:* New algorithms for Steiner tree reoptimization	*A. Bhattacharyya, S. Ghoshal, Karthik C. S. and P. Manurangsi:* Parameterized Intractability of Even Set and Shortest Vector Problem from Gap-ETH	*E. Ben-Sasson, E. Saig:* BA: Collaborative Discovery: A study of Guru-Follower dynamics *S. Das, D. Dereniowski, P. Uznański:* BA: Energy Constrained Depth First Search	11:40 – 12:00

Track A — Sun 1 chair ~~*F. E.*~~ *D. Štefankovič*	Track A — Sun 2 chair *P. Golovach*	Track A — Earth chair *M. Koucký*	Track C — Jupiter chair *M. Mosteiro*	
H. Guo, M. Jerrum: Perfect Simulation of the Hard Disks Model by Partial Rejection Sampling	*S.-W. Cheng, Y. Mao:* Restricted Max-Min Fair Allocation	*K. Hayashi:* A Polynomial Time Algorithm to Compute Geodesics in CAT(0) Cubical Complexes	*M. Ando, A. Lysyanskaya, E. Upfal:* Practical and Provably Secure Onion Routing	13:30 – 13:50
P. Gawrychowski, L. Markin, O. Weimann: A Faster FPTAS for #Knapsack	*A. Gupta, A. Kumar, J. Li:* Non-Preemptive Flow-Time Minimization via Rejections	*M. Backens:* A complete dichotomy for complex-valued Holant^c	*S. Patel, G. Persiano, K. Yeo:* CacheShuffle: A Family of Oblivious Shuffles	13:55 – 14:15
chair *C. Kaklamanis* and *D. Marx*				
Best paper of track C *D. Kowalski, M. A. Mosteiro:* Polynomial Counting in Anonymous Dynamic Networks with Applications to Anonymous Dynamic Algebraic Computations				14:45 – 15:05
Best student paper of track A *S. Garg:* Quasi-PTAS for Scheduling with Precedences using LP Hierarchies				15:10 – 15:30
Best paper of track A *H. Guo, M. Jerrum:* A polynomial-time approximation algorithm for all-terminal network reliability				15:35 – 15:55