

9th Innovations in Theoretical Computer Science

ITCS 2018, January 11–14, 2018, Cambridge, MA, USA

Edited by

Anna R. Karlin



Editor

Anna R. Karlin
Allen School of Computer Science and Engineering
University of Washington
karlin@cs.washington.edu

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■ Contents

Preface	
<i>Anna R. Karlin</i>	0:viii

Regular Papers

Barriers for Rank Methods in Arithmetic Complexity	
<i>Klim Efremenko, Ankit Garg, Rafael Oliveira, and Avi Wigderson</i>	1:1–1:19
A Complexity Trichotomy for k -Regular Asymmetric Spin Systems Using Number Theory	
<i>Jin-Yi Cai, Zhiguo Fu, Kurt Girstmair, and Michael Kowalczyk</i>	2:1–2:22
Quantum Query Algorithms are Completely Bounded Forms	
<i>Srinivasan Arunachalam, Jop Briët, and Carlos Palazuelos</i>	3:1–3:21
A Complete Characterization of Unitary Quantum Space	
<i>Bill Fefferman and Cedric Yen-Yu Lin</i>	4:1–4:21
Matrix Completion and Related Problems via Strong Duality	
<i>Maria-Florina Balcan, Yingyu Liang, David P. Woodruff, and Hongyang Zhang</i> ..	5:1–5:22
A Quasi-Random Approach to Matrix Spectral Analysis	
<i>Michael Ben-Or and Lior Eldar</i>	6:1–6:22
Non-Negative Sparse Regression and Column Subset Selection with L_1 Error	
<i>Aditya Bhaskara and Silvio Lattanzi</i>	7:1–7:15
Spectrum Approximation Beyond Fast Matrix Multiplication: Algorithms and Hardness	
<i>Cameron Musco, Praneeth Netrapalli, Aaron Sidford, Shashanka Ubaru, and David P. Woodruff</i>	8:1–8:21
Size, Cost, and Capacity: A Semantic Technique for Hard Random QBFs	
<i>Olaf Beyersdorff, Joshua Blinkhorn, and Luke Hinde</i>	9:1–9:18
Stabbing Planes	
<i>Paul Beame, Noah Fleming, Russell Impagliazzo, Antonina Kolokolova, Denis Pankratov, Toniann Pitassi, and Robert Robere</i>	10:1–10:20
A Candidate for a Strong Separation of Information and Communication	
<i>Mark Braverman, Anat Ganor, Gillat Kol, and Ran Raz</i>	11:1–11:13
Information Value of Two-Prover Games	
<i>Mark Braverman and Young Kun Ko</i>	12:1–12:15
Equilibrium Selection in Information Elicitation without Verification via Information Monotonicity	
<i>Yuqing Kong and Grant Schoenebeck</i>	13:1–13:20
Optimizing Bayesian Information Revelation Strategy in Prediction Markets: the Alice Bob Alice Case	
<i>Yuqing Kong and Grant Schoenebeck</i>	14:1–14:20

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An Axiomatic Study of Scoring Rule Markets <i>Rafael Frongillo and Bo Waggoner</i>	15:1–15:20
On Price versus Quality <i>Avrim Blum and Yishay Mansour</i>	16:1–16:12
Pseudo-Deterministic Proofs <i>Shafi Goldwasser, Ofer Grossman, and Dhiraj Holden</i>	17:1–17:18
Simple Doubly-Efficient Interactive Proof Systems for Locally-Characterizable Sets <i>Oded Goldreich and Guy N. Rothblum</i>	18:1–18:19
Zero-Knowledge Proofs of Proximity <i>Itay Berman, Ron D. Rothblum, and Vinod Vaikuntanathan</i>	19:1–19:20
Minimum Circuit Size, Graph Isomorphism, and Related Problems <i>Eric Allender, Joshua A. Grochow, Dieter van Melkebeek, Christopher Moore, and Andrew Morgan</i>	20:1–20:20
Foundations of Homomorphic Secret Sharing <i>Elette Boyle, Niv Gilboa, Yuval Ishai, Huijia Lin, and Stefano Tessaro</i>	21:1–21:21
Convergence Results for Neural Networks via Electrodynamics <i>Rina Panigrahy, Ali Rahimi, Sushant Sachdeva, and Qiuyi Zhang</i>	22:1–22:19
Accelerated Extra-Gradient Descent: A Novel Accelerated First-Order Method <i>Jelena Diakonikolas and Lorenzo Orecchia</i>	23:1–23:19
Alternating Minimization, Scaling Algorithms, and the Null-Cone Problem from Invariant Theory <i>Peter Bürgisser, Ankit Garg, Rafael Oliveira, Michael Walter, and Avi Wigderson</i>	24:1–24:20
Further Limitations of the Known Approaches for Matrix Multiplication <i>Josh Alman and Virginia Vassilevska Williams</i>	25:1–25:15
Local Decoding and Testing of Polynomials over Grids <i>Srikanth Srinivasan and Madhu Sudan</i>	26:1–26:14
Relaxed Locally Correctable Codes <i>Tom Gur, Govind Ramnarayan, and Ron D. Rothblum</i>	27:1–27:11
Entropy Samplers and Strong Generic Lower Bounds For Space Bounded Learning <i>Dana Moshkovitz and Michal Moshkovitz</i>	28:1–28:20
Pseudorandom Generators for Low-Sensitivity Functions <i>Pooya Hatami and Avishay Tal</i>	29:1–29:13
Scheduling with Explorable Uncertainty <i>Christoph Dürr, Thomas Erlebach, Nicole Megow, and Julie Meißner</i>	30:1–30:14
A Local-Search Algorithm for Steiner Forest <i>Martin Groß, Anupam Gupta, Amit Kumar, Jannik Matuschke, Daniel R. Schmidt, Melanie Schmidt, and José Verschae</i>	31:1–31:17

Quasipolynomial Representation of Transversal Matroids with Applications in Parameterized Complexity <i>Daniel Lokshantov, Pranabendu Misra, Fahad Panolan, Saket Saurabh, and Meirav Zehavi</i>	32:1–32:13
Selection Problems in the Presence of Implicit Bias <i>Jon Kleinberg and Manish Raghavan</i>	33:1–33:17
Fine-grained I/O Complexity via Reductions: New Lower Bounds, Faster Algorithms, and a Time Hierarchy <i>Erik D. Demaine, Andrea Lincoln, Quanquan C. Liu, Jayson Lynch, and Virginia Vassilevska Williams</i>	34:1–34:23
Fast and Deterministic Constant Factor Approximation Algorithms for LCS Imply New Circuit Lower Bounds <i>Amir Abboud and Aviad Rubinfeld</i>	35:1–35:14
ETH-Hardness of Approximating 2-CSPs and Directed Steiner Network <i>Irit Dinur and Pasin Manurangsi</i>	36:1–36:20
Towards a Unified Complexity Theory of Total Functions <i>Paul W. Goldberg and Christos H. Papadimitriou</i>	37:1–37:20
Edge Estimation with Independent Set Oracles <i>Paul Beame, Sariel Har-Peled, Sivaramakrishnan Natarajan Ramamoorthy, Cyrus Rashtchian, and Makrand Sinha</i>	38:1–38:21
Computing Exact Minimum Cuts Without Knowing the Graph <i>Aviad Rubinfeld, Tselil Schramm, and S. Matthew Weinberg</i>	39:1–39:16
Approximate Clustering with Same-Cluster Queries <i>Nir Ailon, Anup Bhattacharya, Ragesh Jaiswal, and Amit Kumar</i>	40:1–40:21
Graph Clustering using Effective Resistance <i>Vedat Levi Alev, Nima Anari, Lap Chi Lau, and Shayan Oveis Gharan</i>	41:1–41:16
Lattice-based Locality Sensitive Hashing is Optimal <i>Karthekeyan Chandrasekaran, Daniel Dadush, Venkata Gandikota, and Elena Grigorescu</i>	42:1–42:18
Differential Privacy on Finite Computers <i>Victor Balcer and Salil Vadhan</i>	43:1–43:21
Finite Sample Differentially Private Confidence Intervals <i>Vishesh Karwa and Salil Vadhan</i>	44:1–44:9
Resilience: A Criterion for Learning in the Presence of Arbitrary Outliers <i>Jacob Steinhardt, Moses Charikar, and Gregory Valiant</i>	45:1–45:21
Recovering Structured Probability Matrices <i>Qingqing Huang, Sham M. Kakade, Weihao Kong, and Gregory Valiant</i>	46:1–46:14
Learning Discrete Distributions from Untrusted Batches <i>Mingda Qiao and Gregory Valiant</i>	47:1–47:20
Competing Bandits: Learning Under Competition <i>Yishay Mansour, Aleksandrs Slivkins, and Zhiwei Steven Wu</i>	48:1–48:27

Limits for Rumor Spreading in Stochastic Populations <i>Lucas Boczkowski, Ofer Feinerman, Amos Korman, and Emanuele Natale</i>	49:1–49:21
Making Asynchronous Distributed Computations Robust to Channel Noise <i>Keren Censor-Hillel, Ran Gelles, and Bernhard Haeupler</i>	50:1–50:20
Distance-Preserving Graph Contractions <i>Aaron Bernstein, Karl Däubel, Yann Disser, Max Klimm, Torsten Mütze, and Frieder Smolny</i>	51:1–51:14
Local Algorithms for Bounded Degree Sparsifiers in Sparse Graphs <i>Shay Solomon</i>	52:1–52:19
Proofs of Proximity for Distribution Testing <i>Alessandro Chiesa and Tom Gur</i>	53:1–53:14
Efficient Testing without Efficient Regularity <i>Lior Gishboliner and Asaf Shapira</i>	54:1–54:14
Agnostic Learning by Refuting <i>Pravesh K. Kothari and Roi Livni</i>	55:1–55:10
A Homological Theory of Functions: Nonuniform Boolean Complexity Separation and VC Dimension Bound Via Algebraic Topology, and a Homological Farkas Lemma <i>Greg Yang</i>	56:1–56:16
Long Term Memory and the Densest K -Subgraph Problem <i>Robert Legenstein, Wolfgang Maass, Christos H. Papadimitriou, and Santosh S. Vempala</i>	57:1–57:15
Toward a Theory of Markov Influence Systems and their Renormalization <i>Bernard Chazelle</i>	58:1–58:18
Learning Dynamics and the Co-Evolution of Competing Sexual Species <i>Georgios Piliouras and Leonard J. Schulman</i>	59:1–59:3

■ Preface

The papers in this volume were presented at the 9th Innovations in Theoretical Computer Science (ITCS 2018) conference. The conference was held at the Massachusetts Institute of Technology in Cambridge, MA, USA, January 11-14, 2018. ITCS seeks to promote research that carries a strong conceptual message, for instance, introducing a new concept or model, opening a new line of inquiry within traditional or cross-interdisciplinary areas, introducing new techniques, or making novel connections between existing areas and ideas. The conference format is single-session with ample time for discussion, to promote the exchange of ideas between different areas of theoretical computer science and with other disciplines. The call for papers welcomed all submissions, whether aligned with current theory of computation research directions or deviating from them. 181 submissions were received. Of these, the program committee selected 59 papers. I would like to thank the authors of all submissions for their interest in ITCS.

The program committee consisted of 35 members (plus the chair): Shipra Agarwal, Columbia; Zeyuan Allen-Zhu, MSR; Benny Applebaum, Tel Aviv; Paul Beame, U. of Washington; Karl Bringmann, MPI; Bernard Chazelle, Princeton; Jing Chen, Stony Brook; Rachel Cummings, Georgia Tech; Andrew Drucker, U. of Chicago; Faith Ellen, U. of Toronto; Kousha Etessami, U. of Edinburgh; Oded Goldreich, Weizmann; Anupam Gupta, CMU; Zhiyi Huang, U. of Hong Kong; Christian Ikenmeyer, MPI; Yael Kalai, MSR; Robert Kleinberg, Cornell; Tengyu Ma, Stanford; Yury Makarychev, TTIC; Ruta Mehta, UIUC; Raghu Meka, UCLA; Ashley Montanaro, Bristol; Shayan Oveis Gharan, U. of Washington; Christos Papadimitriou, Columbia; Seth Pettie, Michigan; Ronitt Rubinfeld, MIT and Tel Aviv; Atri Rudra, SUNY Buffalo; C. Seshadhri, UC Santa Cruz; Tselil Schramm, Harvard; Roy Schwartz, Technion; Li-Yang Tan, TTIC; Greg Valiant, Stanford; John Watrous, Waterloo; David Woodruff, CMU; and Yuan Zhou, Indiana. I wish to express my sincere thanks to them for agreeing to join the committee and then for investing a great deal of time and effort to evaluate the submissions. I am also grateful to the many subreviewers who assisted with the reviewing process.

The local organizers were Costis Daskalakis (MIT), Yael Kalai (Microsoft Research New England), and Vinod Vaikuntanathan, (MIT). I'd like to thank them profusely for their service. I'm also grateful to Umesh Vazirani, chair of the ITCS Steering Committee, who helped me throughout the process, to Thomas Vidick, who helped with the website among other things, and to Oded Goldreich, Christos Papadimitriou and Madhu Sudan for advice at various stages in the process. Finally, I would like to thank all the presenters and the audience at ITCS; I hope it continues to be a unique experience.

Anna R. Karlin
ITCS 2018 Program Chair
University of Washington
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