

# 10th Innovations in Theoretical Computer Science

ITCS 2019, January 10-12, 2019, San Diego, CA, USA

Edited by  
**Avrim Blum**



*Editor*

Avrim Blum  
Toyota Technological Institute at Chicago (TTIC)  
Chicago, IL, USA  
avrim@ttic.edu

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## ■ Contents

Preface	
<i>Avrim Blum</i> .....	0:ix

### Regular Papers

Submodular Secretary Problem with Shortlists	
<i>Shipra Agrawal, Mohammad Shadravan, and Cliff Stein</i> .....	1:1–1:19
Hamiltonian Sparsification and Gap-Simulation	
<i>Dorit Aharonov and Leo Zhou</i> .....	2:1–2:21
On Solving Linear Systems in Sublinear Time	
<i>Alexandr Andoni, Robert Krauthgamer, and Yosef Poghrow</i> .....	3:1–3:19
Placing Conditional Disclosure of Secrets in the Communication Complexity Universe	
<i>Benny Applebaum and Prashant Nalini Vasudevan</i> .....	4:1–4:14
Bitcoin: A Natural Oligopoly	
<i>Nick Arnosti and S. Matthew Weinberg</i> .....	5:1–5:1
A Simple Sublinear-Time Algorithm for Counting Arbitrary Subgraphs via Edge Sampling	
<i>Sepehr Assadi, Michael Kapralov, and Sanjeev Khanna</i> .....	6:1–6:20
Tensor Network Complexity of Multilinear Maps	
<i>Per Austrin, Petteri Kaski, and Kaie Kubjas</i> .....	7:1–7:21
A #SAT Algorithm for Small Constant-Depth Circuits with PTF Gates	
<i>Swapnam Bajpai, Vaibhav Krishan, Deepanshu Kush, Nutan Limaye, and Srikanth Srinivasan</i> .....	8:1–8:20
Small-Set Expansion in Shortcode Graph and the 2-to-2 Conjecture	
<i>Boaz Barak, Pravesh K. Kothari, and David Steurer</i> .....	9:1–9:12
Algorithms, Bounds, and Strategies for Entangled XOR Games	
<i>Adam Bene Watts, Aram W. Harrow, Gurtej Kanwar, and Anand Natarajan</i> .....	10:1–10:18
Testing Local Properties of Arrays	
<i>Omri Ben-Eliezer</i> .....	11:1–11:20
The Complexity of User Retention	
<i>Eli Ben-Sasson and Eden Saig</i> .....	12:1–12:30
Torus Polynomials: An Algebraic Approach to ACC Lower Bounds	
<i>Abhishek Bhrushundi, Kaave Hosseini, Shachar Lovett, and Sankeerth Rao</i> .....	13:1–13:16
Almost Envy-Free Allocations with Connected Bundles	
<i>Vittorio Bilò, Ioannis Caragiannis, Michele Flammini, Ayumi Igarashi, Gianpiero Monaco, Dominik Peters, Cosimo Vinci, and William S. Zwickler</i> .....	14:1–14:21

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“Quantum Supremacy” and the Complexity of Random Circuit Sampling <i>Adam Bouland, Bill Fefferman, Chinmay Nirkhe, and Umesh Vazirani</i> .....	15:1–15:2
Adversarially Robust Property-Preserving Hash Functions <i>Elette Boyle, Rio LaVigne, and Vinod Vaikuntanathan</i> .....	16:1–16:20
On Closest Pair in Euclidean Metric: Monochromatic is as Hard as Bichromatic <i>Karthik C. S. and Pasin Manurangsi</i> .....	17:1–17:16
Expander-Based Cryptography Meets Natural Proofs <i>Igor C. Oliveira, Rahul Santhanam, and Roei Tell</i> .....	18:1–18:14
A Note on the Quantum Query Complexity of Permutation Symmetric Functions <i>André Chailloux</i> .....	19:1–19:7
Adaptive Boolean Monotonicity Testing in Total Influence Time <i>Deeparnab Chakrabarty and C. Seshadhri</i> .....	20:1–20:7
On Locality-Sensitive Orderings and Their Applications <i>Timothy M. Chan, Sariel Har-Peled, and Mitchell Jones</i> .....	21:1–21:17
Pseudorandom Generators from the Second Fourier Level and Applications to AC0 with Parity Gates <i>Eshan Chattopadhyay, Pooya Hatami, Shachar Lovett, and Avishay Tal</i> .....	22:1–22:15
Classical Algorithms from Quantum and Arthur-Merlin Communication Protocols <i>Lijie Chen and Ruosong Wang</i> .....	23:1–23:20
Capturing Complementarity in Set Functions by Going Beyond Submodularity/Subadditivity <i>Wei Chen, Shang-Hua Teng, and Hanrui Zhang</i> .....	24:1–24:20
Probabilistic Checking Against Non-Signaling Strategies from Linearity Testing <i>Alessandro Chiesa, Peter Manohar, and Igor Shinkar</i> .....	25:1–25:17
On the Algorithmic Power of Spiking Neural Networks <i>Chi-Ning Chou, Kai-Min Chung, and Chi-Jen Lu</i> .....	26:1–26:20
Last-Iterate Convergence: Zero-Sum Games and Constrained Min-Max Optimization <i>Constantinos Daskalakis and Ioannis Panageas</i> .....	27:1–27:18
Density Estimation for Shift-Invariant Multidimensional Distributions <i>Anindya De, Philip M. Long, and Rocco A. Servedio</i> .....	28:1–28:20
From Local to Robust Testing via Agreement Testing <i>Irit Dinur, Prahladh Harsha, Tali Kaufman, and Noga Ron-Zewi</i> .....	29:1–29:18
Every Set in $\mathcal{P}$ Is Strongly Testable Under a Suitable Encoding <i>Irit Dinur, Oded Goldreich, and Tom Gur</i> .....	30:1–30:17
Alea Iacta Est: Auctions, Persuasion, Interim Rules, and Dice <i>Shaddin Dughmi, David Kempe, and Ruixin Qiang</i> .....	31:1–31:20
Spanoids – An Abstraction of Spanning Structures, and a Barrier for LCCs <i>Zeev Dvir, Sivakanth Gopi, Yuzhou Gu, and Avi Wigderson</i> .....	32:1–32:20

Fairness Under Composition <i>Cynthia Dwork and Christina Ilvento</i> .....	33:1–33:20
A Log-Sobolev Inequality for the Multislice, with Applications <i>Yuval Filmus, Ryan O’Donnell, and Xinyu Wu</i> .....	34:1–34:12
Cubic Formula Size Lower Bounds Based on Compositions with Majority <i>Anna Gál, Avishay Tal, and Adrian Trejo Nuñez</i> .....	35:1–35:13
The Space Complexity of Mirror Games <i>Sumegha Garg and Jon Schneider</i> .....	36:1–36:14
The Subgraph Testing Model <i>Oded Goldreich and Dana Ron</i> .....	37:1–37:19
Adventures in Monotone Complexity and TFNP <i>Mika Göös, Pritish Kamath, Robert Robere, and Dmitry Sokolov</i> .....	38:1–38:19
Algorithmic Polarization for Hidden Markov Models <i>Venkatesan Guruswami, Preetum Nakkiran, and Madhu Sudan</i> .....	39:1–39:19
On the Communication Complexity of Key-Agreement Protocols <i>Iftach Haitner, Noam Mazon, Rotem Oshman, Omer Reingold, and Amir Yehudayoff</i> .....	40:1–40:16
The Paulsen Problem Made Simple <i>Linus Hamilton and Ankur Moitra</i> .....	41:1–41:6
How to Subvert Backdoored Encryption: Security Against Adversaries that Decrypt All Ciphertexts <i>Thibaut Horel, Sunoo Park, Silas Richelson, and Vinod Vaikuntanathan</i> .....	42:1–42:20
On Integer Programming and Convolution <i>Klaus Jansen and Lars Rohwedder</i> .....	43:1–43:17
Empowering the Configuration-IP – New PTAS Results for Scheduling with Setups Times <i>Klaus Jansen, Kim-Manuel Klein, Marten Maack, and Malin Rau</i> .....	44:1–44:19
Being Corrupt Requires Being Clever, But Detecting Corruption Doesn’t <i>Yan Jin, Elchanan Mossel, and Govind Ramnarayan</i> .....	45:1–45:14
Simulating Random Walks on Graphs in the Streaming Model <i>Ce Jin</i> .....	46:1–46:15
On the Complexity of Symmetric Polynomials <i>Markus Bläser and Gorav Jindal</i> .....	47:1–47:14
The Orthogonal Vectors Conjecture for Branching Programs and Formulas <i>Daniel M. Kane and Richard Ryan Williams</i> .....	48:1–48:15
SOS Lower Bounds with Hard Constraints: Think Global, Act Local <i>Pravesh K. Kothari, Ryan O’Donnell, and Tselil Schramm</i> .....	49:1–49:21
Semi-Online Bipartite Matching <i>Ravi Kumar, Manish Purohit, Aaron Schild, Zoya Svitkina, and Erik Vee</i> .....	50:1–50:20

Strategies for Quantum Races <i>Troy Lee, Maharshi Ray, and Miklos Santha</i> .....	51:1–51:21
Lower Bounds for Tolerant Junta and Unateness Testing via Rejection Sampling of Graphs <i>Amit Levi and Erik Waingarten</i> .....	52:1–52:20
Secret Sharing with Binary Shares <i>Fuchun Lin, Mahdi Cheraghchi, Venkatesan Guruswami, Reihaneh Safavi-Naini, and Huaxiong Wang</i> .....	53:1–53:20
On the Communication Complexity of High-Dimensional Permutations <i>Nati Linial, Toniann Pitassi, and Adi Shraibman</i> .....	54:1–54:20
Fisher Zeros and Correlation Decay in the Ising Model <i>Jingcheng Liu, Alistair Sinclair, and Piyush Srivastava</i> .....	55:1–55:8
Quadratic Time-Space Lower Bounds for Computing Natural Functions with a Random Oracle <i>Dylan M. McKay and Richard Ryan Williams</i> .....	56:1–56:20
Random Projection in the Brain and Computation with Assemblies of Neurons <i>Christos H. Papadimitriou and Santosh S. Vempala</i> .....	57:1–57:19
Local Computation Algorithms for Spanners <i>Merav Parter, Ronitt Rubinfeld, Ali Vakilian, and Anak Yodpinyanee</i> .....	58:1–58:21
Proofs of Catalytic Space <i>Krzysztof Pietrzak</i> .....	59:1–59:25
Simple Verifiable Delay Functions <i>Krzysztof Pietrzak</i> .....	60:1–60:15
Sum of Squares Lower Bounds from Symmetry and a Good Story <i>Aaron Potechin</i> .....	61:1–61:20
Learning Time Dependent Choice <i>Zachary Chase and Siddharth Prasad</i> .....	62:1–62:19
Erasures vs. Errors in Local Decoding and Property Testing <i>Sofya Raskhodnikova, Noga Ron-Zewi, and Nithin Varma</i> .....	63:1–63:21
A New Approach to Multi-Party Peer-to-Peer Communication Complexity <i>Adi Rosén and Florent Urrutia</i> .....	64:1–64:19
A Schur Complement Cheeger Inequality <i>Aaron Schild</i> .....	65:1–65:15
Game Efficiency Through Linear Programming Duality <i>Nguyễn Kim Thắng</i> .....	66:1–66:20

## ■ Preface

The papers in this volume were presented at the 10th Innovations in Theoretical Computer Science (ITCS 2019) conference. The conference was held at UC San Diego in San Diego, CA, USA, January 10-12, 2019, and co-located with SODA 2019. 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 and aims 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. A record 202 submissions were received. Of these, the program committee selected 66 papers. I would like to thank the authors of all submissions, whether accepted or not, for their interest in ITCS.

The program committee consisted of 39 members (plus the chair): Scott Aaronson, UT Austin; Eric Blais, Waterloo; Jeremiah Blocki, Purdue; Simina Branzei, Purdue; Bernard Chazelle, Princeton University; Amit Daniely, Hebrew University; Sanjoy Dasgupta, UC San Diego; Zeev Dvir, Princeton University; Uriel Feige, Weizmann; Michal Feldman, Tel-Aviv University; Rong Ge, Duke; Venkatesan Guruswami, CMU; Moritz Hardt, UC Berkeley; Russell Impagliazzo, UC San Diego; Brendan Juba, Washington University St Louis; Varun Kanade, University of Oxford; Eyal Kushilevitz, Technion; Yingyu Liang, University of Wisconsin - Madison; Shachar Lovett, UC San Diego; Sepideh Mahabadi, TTIC; Yishay Mansour, Tel-Aviv University; Rafael Pass, Cornell University; Sofya Raskhodnikova, Boston University; Dana Ron, Tel-Aviv University; Ron Rothblum, Technion; Aviad Rubinfeld, Stanford University; Aaron Sidford, Stanford University; Yaron Singer, Harvard University; Mohit Singh, Georgia Tech; Adam Smith, Boston University; Jacob Steinhardt, UC Berkeley; Madhur Tulsiani, TTIC; Vinod Vaikuntanathan, MIT; Thomas Vidick, Caltech; Matt Weinberg, Princeton University; Ryan Williams, MIT; Mary Wootters, Stanford University; Mihalis Yannakakis, Columbia University; Shengyu Zhang, CUHK and Tencent. I wish to express my heartfelt thanks to them for agreeing to join the committee as well as 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 organizer was Shachar Lovett from UC San Diego. I would like to thank him very much for his service. I'm also grateful to Umesh Vazirani, chair of the ITCS Steering Committee, and to Thomas Vidick, who helped with the website among other things. Finally, I would like to thank all the presenters and the audience at ITCS for making ITCS a wonderful experience.

Avrim Blum  
ITCS 2019 Program Chair  
Toyota Technological Institute at Chicago (TTIC)  
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