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# Contents

## Preface

*Venkatesan Guruswami* .......................................................... 0:xiii–0:xiv

## List of Authors

.......................................................... 0:xv–0:xxiii

## Papers

### A Qubit, a Coin, and an Advice String Walk into a Relational Problem

*Scott Aaronson, Harry Buhrman, and William Kretschmer* ............................. 1:1–1:24

### Quantum Pseudoentanglement

*Scott Aaronson, Adam Bouland, Bill Fefferman, Soumik Ghosh, Umesh Vazirani, Chenyi Zhang, and Zixin Zhou* ................................................... 2:1–2:21

### Differentially Private Medians and Interior Points for Non-Pathological Data

*Maryam Aliakbarpour, Rose Silver, Thomas Steinke, and Jonathan Ullman* ....... 3:1–3:21

### Tensor Ranks and the Fine-Grained Complexity of Dynamic Programming

*Josh Alman, Ethan Turok, Hantao Yu, and Hengzhi Zhang* .............................. 4:1–4:23

### On the Complexity of Computing Sparse Equilibria and Lower Bounds for No-Regret Learning in Games


### Pseudorandom Strings from Pseudorandom Quantum States

*Prabhanjan Ananth, Yao-Ting Lin, and Henry Yuen* ...................................... 6:1–6:22

### Geometric Covering via Extraction Theorem

*Sayan Bandyapadhyay, Anil Maheshwari, Sasanka Roy, Michiel Smid, and Kasturi Varadarajan* ............................................................. 7:1–7:20

### Sublinear Approximation Algorithm for Nash Social Welfare with XOS Valuations


### Quantum Merlin-Arthur and Proofs Without Relative Phase

*Roozbeh Bassirian, Bill Fefferman, and Kunal Marwaha* ............................... 9:1–9:19

### Towards Stronger Depth Lower Bounds

*Gabriel Bathie and R. Ryan Williams* ...................................................... 10:1–10:24

### Property Testing with Online Adversaries

*Omri Ben-Eliezer, Esty Kelman, Uri Meir, and Sofya Raskhodnikova* ............ 11:1–11:25

### Are There Graphs Whose Shortest Path Structure Requires Large Edge Weights?

*Aaron Bernstein, Greg Bodwin, and Nicole Wein* ........................................ 12:1–12:22

### Universal Matrix Sparsifiers and Fast Deterministic Algorithms for Linear Algebra


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Contents

Homomorphic Indistinguishability Obfuscation and Its Applications
Kaartik Bhushan, Venkata Koppula, and Manoj Prabhakaran ....................... 14:1–14:21

Testing and Learning Convex Sets in the Ternary Hypercube
Hadley Black, Eric Blais, and Nathaniel Harms ........................................ 15:1–15:21

A Characterization of Optimal-Rate Linear Homomorphic Secret Sharing
Schemes, and Applications
Keller Blackwell and Mary Wootters ..................................................... 16:1–16:20

Loss Minimization Yields Multicalibration for Large Neural Networks
Jarosław Błasiok, Parikshit Gopalan, Lunjia Hu, Adam Tauman Kalai, and
Preetum Nakkiran ............................................................... 17:1–17:21

Winning Without Observing Payoffs: Exploiting Behavioral Biases to Win Nearly
Every Round
Avrim Blum and Melissa Dutz .......................................................... 18:1–18:18

Spanning Adjacency Oracles in Sublinear Time
Greg Bodwin and Henry Fleischmann ............................................. 19:1–19:21

Discreteness of Asymptotic Tensor Ranks
Jop Briët, Matthias Christandl, Itai Leigh, Amir Shpilka, and Jeroen Zuiddam ... 20:1–20:14

Noisy Decoding by Shallow Circuits with Parities: Classical and Quantum
(Extended Abstract)

The NFA Acceptance Hypothesis: Non-Combinatorial and Dynamic Lower Bounds

Private Distribution Testing with Heterogeneous Constraints: Your Epsilon
Might Not Be Mine
Clément L. Canonne and Yucheng Sun ............................................. 23:1–23:24

Classical Verification of Quantum Learning
Matthias C. Caro, Marcel Hinsche, Marios Ioannou, Alexander Nietner, and
Ryan Sweke .............................................................. 24:1–24:23

Learning Arithmetic Formulas in the Presence of Noise: A General Framework
and Applications to Unsupervised Learning

The Distributed Complexity of Locally Checkable Labeling Problems Beyond
Paths and Trees
Yi-Jun Chang ................................................................. 26:1–26:25

Determinants vs. Algebraic Branching Programs
Abhranil Chatterjee, Mrinal Kumar, and Ben Lee Volk ............................. 27:1–27:13

Extractors for Polynomial Sources over $F_2$

Recursive Error Reduction for Regular Branching Programs
Eshan Chattopadhyay and Jyun-Jie Liao ........................................ 29:1–29:20
## Contents

**Influence Maximization in Ising Models**
*Zongchen Chen and Elchanan Mossel* ............................................ 30:1–30:14

**On the Complexity of Isomorphism Problems for Tensors, Groups, and Polynomials III: Actions by Classical Groups**

**Space-Optimal Profile Estimation in Data Streams with Applications to Symmetric Functions**
*Justin Y. Chen, Piotr Indyk, and David P. Woodruff* ......................... 32:1–32:22

**Testing Intersecting and Union-Closed Families**
*Xi Chen, Anindya De, Yuhao Li, Shivam Nadimpalli, and Rocco A. Servedio* ..... 33:1–33:23

**On Parallel Repetition of PCPs**
*Alessandro Chiesa, Ziyi Guan, and Burcu Yıldız* ............................... 34:1–34:14

**Collective Tree Exploration via Potential Function Method**
*Romain Cosson and Laurent Massoulïé* ........................................ 35:1–35:22

**Fraud Detection for Random Walks**
*Varsha Dani, Thomas P. Hayes, Seth Pettie, and Jared Saia* .................. 36:1–36:22

**Smooth Nash Equilibria: Algorithms and Complexity**
*Constantinos Daskalakis, Noah Golowich, Nika Haghtalab, and Abhishek Shetty* 37:1–37:22

**Graph Threading**
*Erik D. Demaine, Yael Kirkpatrick, and Rebecca Lin* ...................... 38:1–38:18

**Simple and Optimal Online Contention Resolution Schemes for k-Uniform Matroids**

**On the Black-Box Complexity of Correlation Intractability**
*Nico Döttling and Tamer Mour* .................................................. 40:1–40:24

**The Message Complexity of Distributed Graph Optimization**
*Fabien Dufoulon, Shregas Pai, Gopal Pandurangan, Sriram V. Pemmaraju, and Peter Robinson* ....................................................... 41:1–41:26

**Time- and Communication-Efficient Overlay Network Construction via Gossip**

**Homogeneous Algebraic Complexity Theory and Algebraic Formulas**

**On the (In)approximability of Combinatorial Contracts**
*Tomer Ezra, Michal Feldman, and Maya Schlesinger* ....................... 44:1–44:22

**Two-State Spin Systems with Negative Interactions**
*Yumou Fei, Leslie Ann Goldberg, and Pinyan Lu* ........................... 45:1–45:13

**Scalable Distributed Agreement from LWE: Byzantine Agreement, Broadcast, and Leader Election**
*Rex Fernando, Yuval Gelles, and Ilan Komargodski*....................... 46:1–46:23
Distribution Testing with a Confused Collector  
*Renato Ferreira Pinto Jr. and Nathaniel Harms* ................................. 47:1–47:14

Proving Unsatisfiability with Hitting Formulas  

Deterministic 3SUM-Hardness  
*Nick Fischer, Piotr Kaliciak, and Adam Polak* ................................. 49:1–49:24

One-Way Functions vs. TFNP: Simpler and Improved  
*Lukáš Folwarczný, Mika Göös, Pavel Hubáček, Gilbert Maystre, and Weiqiang Yuan* ................................. 50:1–50:14

An Axiomatic Characterization of CFMMs and Equivalence to Prediction Markets  
*Rafael Frongillo, Maneesha Papireddygari, and Bo Waggoner* ................................. 51:1–51:21

Rethinking Fairness for Human-AI Collaboration  
*Haosen Ge, Hamsa Bastani, and Osbert Bastani* ................................. 52:1–52:21

New Lower Bounds in Merlin-Arthur Communication and Graph Streaming Verification  
*Prantar Ghosh and Vihan Shah* ................................. 53:1–53:22

NLTS Hamiltonians and Strongly-Explicit SoS Lower Bounds from Low-Rate Quantum LDPC Codes  
*Louis Golowich and Tali Kaufman* ................................. 54:1–54:23

Electrical Flows for Polylogarithmic Competitive Oblivious Routing  

An Algorithm for Bichromatic Sorting with Polylog Competitive Ratio  
*Mayank Goswami and Riko Jacob* ................................. 56:1–56:17

Communicating with Anecdotes  
*Nika Haghtalab, Nicole Immorlica, Brendan Lucier, Markus Mobius, and Dieyarthi Mohan* ................................. 57:1–57:2

An Improved Protocol for ExactlyN with More Than 3 Players  
*Lianna Hambardzumyan, Toniann Pitassi, Suhail Sherif, Morgan Shirley, and Adi Shraibman* ................................. 58:1–58:23

Equivocal Blends: Prior Independent Lower Bounds  
*Jason Hartline and Alec Johnsen* ................................. 59:1–59:21

The Chromatic Number of Kneser Hypergraphs via Consensus Division  
*Ishay Haviv* ................................. 60:1–60:17

Quickly Determining Who Won an Election  
*Lisa Hellerstein, Naifeng Liu, and Kevin Schewior* ................................. 61:1–61:14

On the Complexity of Algorithms with Predictions for Dynamic Graph Problems  

TFNP Intersections Through the Lens of Feasible Disjunction  
*Pavel Hubáček, Erfan Khaniki, and Neil Thapen* ................................. 63:1–63:24
## Contents

<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exponential-Time Approximation Schemes via Compression</td>
<td>Tanmay Inamdar, Madhumita Kundu, Pekka Parviainen, M. S. Ramanujan, and Saket Saurabh</td>
<td>64:1–64:22</td>
</tr>
<tr>
<td>FPT Approximation for Capacitated Sum of Radii</td>
<td>Ragesh Jaiswal, Amit Kumar, and Jatin Yadav</td>
<td>65:1–65:21</td>
</tr>
<tr>
<td>A VLSI Circuit Model Accounting for Wire Delay</td>
<td>Ce Jin, R. Ryan Williams, and Nathaniel Young</td>
<td>66:1–66:22</td>
</tr>
<tr>
<td>Distributional PAC-Learning from Nisan’s Natural Proofs</td>
<td>Ari Karchmer</td>
<td>68:1–68:23</td>
</tr>
<tr>
<td>Quantum and Classical Low-Degree Learning via a Dimension-Free Remez Inequality</td>
<td>Ohad Klein, Joseph Slote, Alexander Volberg, and Haonan Zhang</td>
<td>69:1–69:22</td>
</tr>
<tr>
<td>A Combinatorial Approach to Robust PCA</td>
<td>Weihtao Kong, Mingda Qiao, and Rajat Sen</td>
<td>70:1–70:22</td>
</tr>
<tr>
<td>Hardness of Approximating Bounded-Degree Max 2-CSP and Independent Set on $k$-Claw-Free Graphs</td>
<td>Euiwoong Lee and Pasin Manurangsi</td>
<td>71:1–71:17</td>
</tr>
<tr>
<td>Classical vs Quantum Advice and Proofs Under Classically-Accessible Oracle</td>
<td>Xingjian Li, Qipeng Liu, Angelos Pelecanos, and Takashi Yamakawa</td>
<td>72:1–72:19</td>
</tr>
<tr>
<td>Dynamic Maximal Matching in Clique Networks</td>
<td>Minming Li, Peter Robinson, and Xianbin Zhu</td>
<td>73:1–73:21</td>
</tr>
<tr>
<td>Total NP Search Problems with Abundant Solutions</td>
<td>Jiawei Li</td>
<td>75:1–75:23</td>
</tr>
<tr>
<td>Making Progress Based on False Discoveries</td>
<td>Roi Livni</td>
<td>76:1–76:18</td>
</tr>
<tr>
<td>Modularity and Graph Expansion</td>
<td>Baptiste Louf, Colin McDiarmid, and Fiona Skerman</td>
<td>78:1–78:21</td>
</tr>
</tbody>
</table>
A Myersonian Framework for Optimal Liquidity Provision in Automated Market Makers

Jason Milionis, Ciamac C. Moallemi, and Tim Roughgarden ......................... 81:1–81:19

A Computational Separation Between Quantum No-Cloning and No-Telegraphing

Barak Nehoran and Mark Zhandry .......................................................... 82:1–82:23

On the Size Overhead of Pairwise Spanners

Ofer Neiman and Idan Shabat ............................................................... 83:1–83:22

Budget-Feasible Mechanism Design: Simpler, Better Mechanisms and General Payment Constraints

Rian Neogi, Kanstantsin Pashkovich, and Chaitanya Swamy ....................... 84:1–84:22

General Gaussian Noise Mechanisms and Their Optimality for Unbiased Mean Estimation

Aleksandar Nikolov and Haohua Tang ..................................................... 85:1–85:23

Rumors with Changing Credibility

Charlotte Out, Nicolás Rivera, Thomas Sauerwald, and John Sylvester ........... 86:1–86:23

Tensor Reconstruction Beyond Constant Rank

Shir Peleg, Amir Shpilka, and Ben Lee Volk ............................................ 87:1–87:20

Color Fault-Tolerant Spanners

Asaf Petruschka, Shay Sapir, and Elad Tzalik ........................................... 88:1–88:17

On Generalized Corners and Matrix Multiplication

Kevin Pratt ............................................................................................... 89:1–89:17

Pseudorandom Linear Codes Are List-Decodable to Capacity

Aaron (Louie) Putterman and Edward Pyne ............................................. 90:1–90:21

Lower Bounds for Planar Arithmetic Circuits

C. Ramya and Pratik Shastri ..................................................................... 91:1–91:22

Parity vs. AC0 with Simple Quantum Preprocessing

Joseph Slote ............................................................................................. 92:1–92:21

Training Multi-Layer Over-Parametrized Neural Network in Subquadratic Time

Zhao Song, Lichen Zhang, and Ruizhe Zhang .......................................... 93:1–93:15

Differentially Private Approximate Pattern Matching

Teresa Anna Steiner .................................................................................. 94:1–94:18

Stretching Demi-Bits and Nondeterministic-Secure Pseudorandomness

Iddo Tzameret and Lu-Ming Zhang ........................................................ 95:1–95:22


Gregory Valiant ....................................................................................... 96:1–96:13

Quantum Event Learning and Gentle Random Measurements

Adam Bene Watts and John Bostanci ..................................................... 97:1–97:22

Maximizing Miner Revenue in Transaction Fee Mechanism Design

Ke Wu, Elaine Shi, and Hao Chung ........................................................ 98:1–98:23
Randomized vs. Deterministic Separation in Time-Space Tradeoffs of Multi-Output Functions
  Huacheng Yu and Wei Zhan ..................................................... 99:1–99:15

Sampling, Flowers and Communication
  Huacheng Yu and Wei Zhan .....................................................100:1–100:11

Quantum Money from Abelian Group Actions
  Mark Zhandry .................................................................101:1–101:23

The Space-Time Cost of Purifying Quantum Computations
  Mark Zhandry .................................................................102:1–102:22

Advanced Composition Theorems for Differential Obliviousness
  Mingxun Zhou, Mengshi Zhao, T-H. Hubert Chan, and Elaine Shi .............103:1–103:24
The papers in this volume were presented at the 15th Innovations in Theoretical Computer Science (ITCS 2024) conference. The conference was held from January 30 to February 2, 2024 at the Simons Institute for the Theory of Computing on the campus of University of California, Berkeley.

ITCS seeks to promote research with innovative or bold agendas, which could be conceptual, technical, or methodological, and whose message will advance and inspire the greater theory community. Some examples of the kind of papers that the conference aims to feature are those introducing a new concept, model or understanding; opening a new line of inquiry within traditional or interdisciplinary areas; introducing new mathematical techniques and methodologies, or new applications of known techniques; putting forth a bold, even if preliminary, vision or line of attack; making interesting progress on traditional research directions; or unearthing novel or surprising connections between different topics.

The conference received 272 submissions of which the program committee accepted 103 papers (two of which were presented at the conference in a single merged time slot). The submission pool was strong, which explains the high acceptance rate. The conference format was single-session with the goal of promoting a sense of community, and promoting the exchange of ideas between different areas of theoretical computer science. Given this and the sizable number of accepted papers, each talk at the conference was only about 10 minutes long. The authors of each paper were thus requested to submit a 20-25 minute video, which are posted on the Simons Institute Youtube channel and linked from the conference website.

The program committee (PC) consisted of 42 fantastic members (excluding the chair): Maryam Aliakbarpour (Rice University), Benny Applebaum (Tel Aviv University), Arnab Bhattacharyya (National University of Singapore), Kshipra Bhawalkar (Google Research), Avrim Blum (Toyota Technological Institute at Chicago), Moses Charikar (Stanford University), Vincent Cohen-Addad (Google Research), Andrea Coladangelo (University of Washington), Jelena Diakonikolas (University of Wisconsin-Madison), Ran Duan (Tsinghua University), Alina Ene (Boston University), Bill Fefferman (University of Chicago), Shuichi Hirahara (National Institute of Informatics, Tokyo), Sivakanth Gopi (Microsoft Research), Fernando Granha Jeromino (Simons Institute, UC Berkeley), William Hoza (University of Chicago), Elias Koutsoupias (University of Oxford), Michael P. Kim (UC Berkeley/Cornell University), Bundit Laekhanukit (Shanghai University of Finance and Economics), Jerry Li (Microsoft Research), Ray Li (Santa Clara University), Guillermo Malavolta (Bocconi University/Max Planck Institute for Security and Privacy), Daniele Micciancio (University of California, San Diego), Dor Minzer (Massachusetts Institute of Technology), Jonathan Mosheiff (Ben Gurion University), Partha Mukhopadhyay (Chennai Mathematical Institute), Rasmus Pagh (University of Copenhagen), Aditya Potukuchi (York University), Eric Price (University of Texas at Austin), Dana Randall (Georgia Institute of Technology), Robert Robere (McGill University), Nicolas Resch (University of Amsterdam), Sushant Sachdeva (University of Toronto), Michael Saks (Rutgers University), Hadas Shachnai (Technion - Israel Institute of Technology), Rocco Servedio (Columbia University), Piyush Srivastava (Tata Institute of Fundamental Research, Mumbai), Xiaorui Sun (University of Illinois at Chicago), Magnus Wahlstrom (Royal Holloway, University of London), Matt Weinberg (Princeton University), Manolis Zampetakis (Yale University), and Goran Zuzic (Google Research).
I am extremely grateful to all members of the PC, who worked really hard under very tight time constraints to produce a fantastic program as well as provide useful feedback to the authors, of accepted and rejected papers alike. The review process was double-blind, and throughout the review process the PC members did not have access to the identities of the authors on the hotcrp conference review software. The rationale behind the double-blind process was to help PC members and external reviewers come to a judgment about the paper without unconscious bias, but it was not intended to make it impossible for them to discover who the authors are. As such, the authors were free to post their papers or otherwise make them publicly available.

The program schedule was divided into sessions, each consisting of 6-7 papers. Following ITCS tradition, the chair of each session was tasked with “ranting” about the papers in the session, emphasizing their contributions and the ways in which they are innovative, and when possible tying all the papers in the session together. The program also continued with the wonderful ITCS tradition of “graduating bits,” where students and postdocs looking for academic jobs or postdoc opportunities give a very short (few minutes) presentation.

I would like to thank the Simons Institute for the Theory of Computing for offering its awesome space and auditorium for the conference, as well as hosting the event with its characteristic excellence and unique style. I am very grateful to the Simons Institute staff including William Humnicky who worked hard to plan and execute all the logistics flawlessly, and to Drew Mason for his help with handling and posting the video submissions from the authors. Many thanks to Joanne Talbot Hanley for help with the registration page and other logistics on behalf of the conference steering committee.

Let me end this preface with a personal thanks to Sandy Irani who was effectively the local arrangements chair at the Simons Institute and oversaw the event and budget planning with her characteristic thoroughness and good cheer, and to the ITCS Steering Committee chair Ronitt Rubinfeld for answering my numerous questions and wisely guiding me throughout the process. Working with both of you was a lot of fun, and I am glad that the conference was a big success!

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