

■ Contents

Preface	
<i>Valentine Kabanets</i>	0:ix
Awards	
.....	0:xi
Conference Organization	
.....	0:xiii
External Reviewers	
.....	0:xv

Papers

Rate Amplification and Query-Efficient Distance Amplification for Linear LCC and LDC	
<i>Gil Cohen and Tal Yankovitz</i>	1:1–1:57
An Improved Protocol for the Exactly- N Problem	
<i>Nati Linial and Adi Shraibman</i>	2:1–2:8
Proof Complexity of Natural Formulas via Communication Arguments	
<i>Dmitry Itsykson and Artur Riazanov</i>	3:1–3:34
A Lower Bound on Determinantal Complexity	
<i>Mrinal Kumar and Ben Lee Volk</i>	4:1–4:12
Optimal Tiling of the Euclidean Space Using Permutation-Symmetric Bodies	
<i>Mark Braverman and Dor Minzer</i>	5:1–5:48
On the Power and Limitations of Branch and Cut	
<i>Noah Fleming, Mika Göös, Russell Impagliazzo, Toniann Pitassi, Robert Robere, Li-Yang Tan, and Avi Wigderson</i>	6:1–6:30
Separating ABPs and Some Structured Formulas in the Non-Commutative Setting	
<i>Prerona Chatterjee</i>	7:1–7:24
The (Generalized) Orthogonality Dimension of (Generalized) Kneser Graphs: Bounds and Applications	
<i>Alexander Golovnev and Ishay Haviv</i>	8:1–8:15
Shadows of Newton Polytopes	
<i>Pavel Hrubeš and Amir Yehudayoff</i>	9:1–9:23
Fractional Pseudorandom Generators from Any Fourier Level	
<i>Eshan Chattopadhyay, Jason Gaitonde, Chin Ho Lee, Shachar Lovett, and Abhishek Shetty</i>	10:1–10:24
Deterministic Identity Testing Paradigms for Bounded Top-Fanin Depth-4 Circuits	
<i>Pranjal Dutta, Prateek Dwivedi, and Nitin Saxena</i>	11:1–11:27



Robustly Self-Ordered Graphs: Constructions and Applications to Property Testing <i>Oded Goldreich and Avi Wigderson</i>	12:1–12:74
Barriers for Recent Methods in Geodesic Optimization <i>W. Cole Franks and Philipp Reichenbach</i>	13:1–13:54
Communication Complexity with Defective Randomness <i>Marshall Ball, Oded Goldreich, and Tal Malkin</i>	14:1–14:10
On the Cut Dimension of a Graph <i>Troy Lee, Tongyang Li, Miklos Santha, and Shengyu Zhang</i>	15:1–15:35
On p -Group Isomorphism: Search-To-Decision, Counting-To-Decision, and Nilpotency Class Reductions via Tensors <i>Joshua A. Grochow and Youming Qiao</i>	16:1–16:38
Branching Programs with Bounded Repetitions and Flow Formulas <i>Anastasia Sofronova and Dmitry Sokolov</i>	17:1–17:25
A Majority Lemma for Randomised Query Complexity <i>Mika Göös and Gilbert Maystre</i>	18:1–18:15
Hitting Sets and Reconstruction for Dense Orbits in VP_e and $\Sigma\Pi\Sigma$ Circuits <i>Dori Medini and Amir Shpilka</i>	19:1–19:27
Variety Evasive Subspace Families <i>Zeyu Guo</i>	20:1–20:33
A Lower Bound for Polynomial Calculus with Extension Rule <i>Yaroslav Alekseev</i>	21:1–21:18
Error Reduction for Weighted PRGs Against Read Once Branching Programs <i>Gil Cohen, Dean Doron, Oren Renard, Ori Sberlo, and Amnon Ta-Shma</i>	22:1–22:17
A Stress-Free Sum-Of-Squares Lower Bound for Coloring <i>Pravesh K. Kothari and Peter Manohar</i>	23:1–23:21
Junta Distance Approximation with Sub-Exponential Queries <i>Vishnu Iyer, Avishay Tal, and Michael Whitmeyer</i>	24:1–24:38
Arithmetic Circuit Complexity of Division and Truncation <i>Pranjal Dutta, Gorav Jindal, Anurag Pandey, and Amit Sinhababu</i>	25:1–25:36
SOS Lower Bound for Exact Planted Clique <i>Shuo Pang</i>	26:1–26:63
A Direct Product Theorem for One-Way Quantum Communication <i>Rahul Jain and Srijita Kundu</i>	27:1–27:28
Quantum Complexity of Minimum Cut <i>Simon Apers and Troy Lee</i>	28:1–28:33
On the Complexity of Evaluating Highest Weight Vectors <i>Markus Bläser, Julian Dörfler, and Christian Ikenmeyer</i>	29:1–29:36
On Query-To-Communication Lifting for Adversary Bounds <i>Anurag Anshu, Shalev Ben-David, and Srijita Kundu</i>	30:1–30:39

Hardness of Constant-Round Communication Complexity <i>Shuichi Hirahara, Rahul Ilango, and Bruno Loff</i>	31:1–31:30
Polynomial Time Algorithms in Invariant Theory for Torus Actions <i>Peter Bürgisser, M. Levent Doğan, Visu Makam, Michael Walter, and Avi Wigderson</i>	32:1–32:30
Pseudodistributions That Beat All Pseudorandom Generators (Extended Abstract) <i>Edward Pyne and Salil Vadhan</i>	33:1–33:15
GSF-Locality Is Not Sufficient For Proximity-Oblivious Testing <i>Isolde Adler, Noleen Köhler, and Pan Peng</i>	34:1–34:27
Hardness of KT Characterizes Parallel Cryptography <i>Hanlin Ren and Rahul Santhanam</i>	35:1–35:58
On the Pseudo-Deterministic Query Complexity of NP Search Problems <i>Shafi Goldwasser, Russell Impagliazzo, Toniann Pitassi, and Rahul Santhanam</i> ...	36:1–36:22
A Simple Proof of a New Set Disjointness with Applications to Data Streams <i>Akshay Kamath, Eric Price, and David P. Woodruff</i>	37:1–37:24
Toward Better Depth Lower Bounds: The XOR-KRW Conjecture <i>Ivan Mihajlin and Alexander Smal</i>	38:1–38:24
Fourier Growth of Parity Decision Trees <i>Uma Girish, Avishay Tal, and Kewen Wu</i>	39:1–39:36
The Power of Negative Reasoning <i>Susanna F. de Rezende, Massimo Lauria, Jakob Nordström, and Dmitry Sokolov</i>	40:1–40:24
Matrix Rigidity Depends on the Target Field <i>László Babai and Bohdan Kivva</i>	41:1–41:26