

## Day 3: Tuesday, October 29, 2024

9:00 – 10:30am	Session 4A	Session 4B	Session 4C
	Polynomial Calculus sizes over the Boolean and Fourier bases are incomparable Authors: S. Mouli	Certifying Euclidean Sections and Finding Planted Sparse Vectors Beyond the Dimension Threshold Authors: V. Guruswami, J. Hsieh, P. Raghavendra	High-Temperature Gibbs States are Unentangled and Efficiently Preparable Authors: A. Bakshi, A. Liu, A. Moitra, E. Tang
	A Dense Model Theorem for the Boolean Slice Authors: G. Kalai, N. Lifshitz, T. Ziegler, D. Minzer	Sum-of-Squares Lower Bounds for Non-Gaussian Component Analysis Authors: I. Diakonikolas, S. Karmalkar, S. Pang, A. Potetchin	Structure learning of Hamiltonians from real-time evolution Authors: A. Bakshi, A. Liu, A. Moitra, E. Tang
	Dot-Product Proofs and Their Applications Authors: N. Bitansky, P. Harsha, Y. Ishai, R. Rothblum, D. Wu	Semirandom Planted Clique and the Restricted Isometry Property Authors: J. Błasiok, R. Buhai, P. Kothari, D. Steurer	Quantum eigenvalue processing Authors: G. Low, Y. Su
	Low Acceptance Agreement Tests via Bounded-Degree Symplectic HDXs Authors: Y. Dikstein, I. Dinur, A. Lubotzky and  <i>and</i>  Constant Degree Direct Product Testers with Small Soundness Authors: M. Bafna, N. Lifshitz, D. Minzer	Efficient Certificates of Anti-Concentration Beyond Gaussians Authors: A. Bakshi, P. Kothari, G. Rajendran, M. Tulsiani, A. Vijayaraghavan	Quantum computational advantage with constant-temperature Gibbs sampling Authors: T. Bergamaschi, C. Chen, Y. Liu
	Chernoff-Hoeffding and Reverse Hypercontractivity on High Dimensional Expanders Authors: Y. Dikstein, M. Hopkins	Tensor cumulants for statistical inference on invariant distributions Authors: D. Kunisky, C. Moore, A. Wein	Optimal tradeoffs for estimating Pauli observables Authors: S. Chen, W. Gong, Q. Ye
	New investigations into noncommutative CSPs Authors: E. Culf, H. Mousavi, T. Spirig	Efficient Statistics With Unknown Truncation: Polynomial Time Algorithms Beyond Gaussians	A computational test of quantum contextuality, and even simpler proofs of quantumness

		Authors: J. Lee, A. Mehrotra, M. Zampetakis	Authors: A. Arora, A. Coladangelo, A. Cojocaru, K. Bharti
10:30 – 10:50am	<b>Break</b>		
10:50 – 12:00	<b>Plenary 3</b> <b>Christos Papadimitriou, Columbia University</b>		
12pm – 1:30pm	<b>Conference Lunch</b>		
1:30pm – 2:20pm	<b>Session 5: Best Student Papers (Machtey Prize)</b>		
	<i>Capacity Threshold for the Ising Perceptron</i> <i>Authors: B. Huang</i>		
	<i>Optimal quantile estimation: beyond the comparison model</i> <i>Authors: M. Singhal, M. Gupta, H. Wu</i>		
2:40 – 3:50pm	<b>Knuth Prize Lecture</b> <b>Rajeev Alur, University of Pennsylvania</b>		
3:55 – 4:15	<b>Break</b>		
4:15 – 5:30pm	<b>Session 6A</b>	<b>Session 6B</b>	<b>Session 6C</b>
	Proofs of Space with Maximal Hardness Authors: L. Reyzin	Online Combinatorial Allocations and Auctions with Few Samples Authors: P. Duetting, T. Kesselheim, B. Lucier, R. Reiffenhauser, S. Singla	The Tractability Border of Reachability in Simple Vector Addition Systems with States Authors: D. Chistikov, W. Czerwiński, Ł. Orlikowski, F. Mazowiecki, H. Sinclair-

			Banks, K. Węgrzycki
	Commitments are equivalent to one-way state generators Authors: R. Batra, J. Rahul	Benchmark-Tight Approximation Ratio of Simple Mechanism for a Unit-Demand Buyer Authors: Y. Jin, P. Lu	Hardness of Packing, Covering and Partitioning Simple Polygons with Unit Squares Authors: M. Abrahamsen, J. Stade
	Succinct arguments for QMA from standard assumptions via compiled nonlocal games Authors: T. Metger, A. Natarajan, T. Zhang	Semi-Bandit Learning for Monotone Stochastic Optimization Authors: A. Agarwal, R. Ghuge, V. Nagarajan	The Orthogonal Vectors Conjecture and Non-Uniform Circuit Lower Bounds Authors: R. Williams
	Certifying almost all quantum states with few single-qubit measurements Authors: H. Huang, J. Preskill, M. Soleimanifar	On Robustness to k-wise Independence of Optimal Bayesian Mechanisms Authors: N. Gravin, Z. Wang	Strong vs. Weak Range Avoidance and the Linear Ordering Principle Authors: O. Korten, T. Pitassi
	How to Simulate Random Oracles with Auxiliary Input Authors: Y. Dodis, A. Jain, R. Lin, J. Luo, D. Wichs	Hardness of Approximate Sperner and Applications to Envy-Free Cake Cutting Authors: R. Gao, M. Roghani, A. Rubinstein, A. Saberi	Canonical forms for matrix tuples in polynomial time Authors: Y. Qiao, X. Sun