RANDOM-APPROX 2023 Program

Contributed talks are 20 minutes (15m talk + 5m Q&A). Invited talks are 1 hour (+ 10m Q&A)

All the talks will take place in the **Bill Moore Student Success Center (225 North Ave)**.
RANDOM talks and joint sessions: **Clary Theater**.
APPROX talks: **President's Suites A-B**.
Coffee Breaks: "Hall of Success"

(Last updated: September 10, 2023)

	RANDOM		APPROX	

Monday, September 11

	RANDOM		APPROX	
8:30-9:00	**Coffee**			
Session 1A: Monday, 9:00 AM				
9:00-9:15	Optimal Mixing via Tensorization for Random Independent Sets on Arbitrary Trees	*Charilaos Efthymiou, Thomas P. Hayes, Daniel Stefankovic, Eric Vigoda*		
9:20-9:35	Perfect Sampling for Hard Spheres from Strong Spatial Mixing	*Konrad Anand, Andreas Göbel, Marcus Pappik, Will Perkins*		
9:40-9:55	Fine Grained Analysis of High Dimensional Random Walks	*Roy Gotlib, Tali Kaufman*		
10:00-10:15	Rapid mixing of global Markov chains via spectral independence: the unbounded degree case	*Antonio Blanca, Xusheng Zhang*		
10:20-10:35	Sampling from the Random Cluster model on random regular graphs at all temperatures via Glauber dynamics	*Andreas Galanis, Leslie Ann Goldberg, Paulina Smolarova*		
	Break			
Session 1B: Monday, 11:00 AM				
11:00-11:15	On the Power of Regular and Permutation Branching Programs	*Chin Ho Lee, Edward Pyne, Salil Vadhan*	A Constant-Factor Approximation for Quasi-bipartite Directed Steiner Tree on Minor-Free Graphs	*Zachary Friggstad and Ramin Mousavi*
11:20-11:35	Range Avoidance for Constant-Depth Circuits: Hardness and Algorithms	*Karthik Gajulapalli, Alexander Golovnev, Satyajeet Nagargoje, Sidhant Saraogi*	Algorithms for 2-connected network design and flexible Steiner trees with a constant number of terminals	*Ishan Bansal, Joe Cheriyan, Logan Grout and Sharat Ibrahimpur*
11:40-11:55	Sampling and Certifying Symmetric Functions	*Yuval Filmus, Itai Leigh, Artur Riazanov, Dmitry Sokolov*	Tighter Approximation for the Uniform Cost-Distance Steiner Tree Problem	*Josefine Foos, Stephan Held and Yannik Spitzley*
12:00-12:15	An embarrassingly parallel optimal-space cardinality estimation algorithm	*Emin Karayel*	Approximation Algorithms for Directed Weighted Spanners	*Elena Grigorescu, Nithish Kumar and Young-San Lin*
	Lunch (on your own)			
Joint Session 1C: Monday, 2:00 PM				
14:00-15:00	*Invited talk:* A survey of locally decodable codes			*Shubhangi Saraf (U. Toronto)*
	Break			
Session 1D: Monday, 3:50 PM				
15:50-16:05	Hardness of the (Approximate) Shortest Vector Problem: A Simple Proof via Reed-Solomon Codes	*Huck Bennett, Chris Peikert*	Round and Bipartize for Vertex Cover Approximation	*Danish Kashaev and Guido Schaefer*
16:20-16:25	Interactive Error Correcting Codes: New Constructions and Impossibility Bounds	*Meghal Gupta, Rachel Yun Zhang*	Efficient Algorithms and Hardness Results for the Weighted k-server Problem	*Anupam Gupta, Amit Kumar and Debmalya Panigrahi*
16:30-16:45	A Deterministic Construction of a Large Distance Code from the Wozencraft Ensemble	*Venkatesan Guruswami, Shilun Li*	The (im)possibility of simple search-to-decision reductions for approximation problems	*Alexander Golovnev, Siyao Guo, Spencer Peters and Noah Stephens-Davidowitz*
16:50-17:10	Fast Decoding of Explicit almost Optimal ε-balanced q-ary Codes and Fast Approximation of Expanding k-CSPs	*Fernando Granha Jeronimo*	Experimental Design for Any p-Norm	*Lap Chi Lau, Robert Wang and Hong Zhou*

Tuesday, September 12

8:30-9:00	Coffee			

Time	Title	Authors	Title	Authors
9:00-9:15	Efficient Interactive Proofs for Non-Deterministic Bounded Space	*Joshua Cook, Ron Rothblum*	Oblivious algorithms for the Max-kAND problem	*Noah Singer*
9:20-9:35	Synergy between Circuit Obfuscation and Circuit Minimization	*Russell Impagliazzo, Valentine Kabanets, Ilya Volkovich*	Approximating Red-Blue Set Cover and Minimum Monotone Satisfying Assignment	*Eden Chlamtac, Yury Makarychev and Ali Vakilian*
9:40-9:55	Superpolynomial Lower Bounds for Learning Monotone Classes	*Nader Bshouty*	Approximating submodular k-partition via principal partition sequence	*Karthekeyan Chandrasekaran and Weihang Wang*
10:00-10:15	Tighter MA/1 Circuit Lower Bounds From Verifier Efficient PCPs for PSPACE	*Joshua Cook, Dana Moshkovitz*	Independent Sets in Elimination Graphs with a Submodular Objective	*Chandra Chekuri and Kent Quanrud*
10:20-10:35	Robustness for Space-Bounded Statistical Zero Knowledge	*Eric Allender, Jacob Gray, Saachi Mutreja, Harsha Tirumala, Pengxiang Wang*	Stable Approximation Algorithms for Dominating Set and Independent Set	*Mark de Berg, Arpan Sadhukhan and Frits Spieksma*

Break				

Time	Title	Authors		
11:00-11:15	On Optimization and Counting of Non-Broken Bases of Matroids	*Dorna Abdolazimi, Kasper Lindberg, Shayan Oveis Gharan*		
11:20-11:35	NP-hardness of Almost Coloring Almost 3-Colorable Graphs	*Yahli Hecht, Dor Minzer, Muli Safra*		
11:40-11:55	Private Data Stream Analysis for Universal Symmetric Norm Estimation	*Vladimir Braverman, Joel Manning, Zhiwei Steven Wu, Samson Zhou*		
12:00-12:15	Extracting Mergers and Projections of Partitions	*Swastik Kopparty, Vishvajeet N*		

Lunch				

Time	Title	Authors	Title	Authors
14:00-14:15			Submodular Norms with Applications to Online Facility Location and Stochastic Probing	*Kalen R Patton, Matteo Russo and Sahil Singla*
14:20-14:35			Approximating Pandora's Box with Correlations	*Shuchi Chawla, Evangelia Gergatsouli, Jeremy McMahan and Christos Tzamos*
14:40-14:55	Improved Local Computation Algorithms for Constructing Spanners	*Rubi Arviv, Lily Chung, Reut Levi, Edward Pyne*		
15:00-15:15	On Constructing Spanners from Random Gaussian Projections	*Sepehr Assadi, Michael Kapralov, Huacheng Yu*		

Break				

Time	Title	Authors	Title	Authors
15:50-16:05	Giant Components in Random Temporal Graphs	*Ruben Becker, Arnaud Casteigts, Pierluigi Crescenzi, Bojana Kodric, Michael Raskin, Malte Renken, Viktor Zamaraev*	On Complexity of 1-Center in Various Metrics	*Amir Abboud, Mohammadhossein Bateni, Vincent Cohen-Addad, Karthik C. S. and Saeed Seddighin*
16:20-16:25	On Connectivity in Random Graph Models with Limited Dependencies	*Johannes Lengler, Anders Martinsson, Kalina Petrova, Patrick Schnider, Raphael Steiner, Simon Weber, Emo Welzl*	Bicriteria Approximation Algorithms for Priority Matroid Median	*Tanvi Bajpai and Chandra Chekuri*
16:30-16:45	The full rank condition for sparse random matrices	*Amin Coja-Oghlan, Jane Gao, Max Hahn-Klimroth, Joon Lee, Noela Muller, Maurice Rolvien*	Facility Location in the Sublinear Geometric Model	*Morteza Monemizadeh*
16:50-17:10	Evaluating Stability in Massive Social Networks: Efficient Streaming Algorithms for Structural Balance	*Vikrant Ashvinkumar, Sepehr Assadi, Chengyuan Deng, Jie Gao, Chen Wang*		

Tuesday Evening Outing: Atlanta Beltline

Wednesday, September 13

Time	Title (Track 1)	Authors (Track 1)	Title (Track 2)	Authors (Track 2)
8:30-9:00	**Coffee**			
	Session 3A: Wednesday, 9:00 AM			
9:00-9:15	Low-Degree Testing Over Grids	*Prashanth Amireddy, Srikanth Srinivasan, Madhu Sudan*	On Minimizing Generalized Makespan on Unrelated Machines	*Nikhil Ayyadevara, Nikhil Bansal and Milind Prabhu*
9:20-9:35	Testing versus estimation of graph properties, revisited	*Lior Gishboliner, Nick Kushnir, Asaf Shapira*	Approximation algorithms for maximum weighted throughput on unrelated machines	*George Karakostas and Stavros Kolliopoulos*
9:40-9:55	Directed Poincaré Inequalities and L^1 Monotonicity Testing of Lipschitz Functions	*Renato Ferreira Pinto Jr.*	An AFPTAS for Bin Packing with Partition Matroid via a New Method for LP Rounding	*Ilan Doron-Arad, Ariel Kulik and Hadas Shachnai*
10:00-10:15	Bias Reduction for Sum Estimation	*Talya Eden, Jakob Houen, Shyam Narayanan, Will Rosenbaum, Jakub Tětek*	A 10/7-approximation for discrete bamboo garden trimming and continuous trimming on star graphs	*Felix Höhne and Rob van Stee*
10:20-10:35	Testing Connectedness of Images	*Piotr Berman, Meiram Murzabulatov, Sofya Raskhodnikova, Dragos Ristache*	Online Matching with Set and Concave Delays	*Lindsey Deryckere and Seeun William Umboh*
	Break			
	Joint Session 3B: Wednesday, 11:00 AM			
11:00-12:00	*Invited talk:* Welfare and Fairness in Combinatorial Allocation Problems			*Jan Vondrak (Stanford University)*
	Lunch			
	Joint Session 3C: Wednesday, 2:00 PM			
14:00-14:15	Subset Sum in time $2^{n/2} / poly(n)$	*Xi Chen, Yaonan Jin, Tim Randolph, Rocco A. Servedio*		
14:20-14:35	How to Make Your Approximation Algorithm Private: A Black-Box Differentially-Private Transformation for Tunable Approximation Algorithms of Functions with Low Sensitivity	*Jeremiah Blocki, Elena Grigorescu, Tamalika Mukherjee, Samson Zhou*		
14:40-14:55			Approximation Algorithms and Lower Bounds for Graph Burning	*Matej Lieskovský, Jiří Sgall and Andreas Emil Feldmann*
15:00-15:15			Probabilistic Metric Embedding via Metric Labeling	*Kamesh Munagala, Govind S. Sankar and Erin Taylor*
	Break			
	Session 3D: Wednesday, 3:50 PM			
15:50-16:05	On the Composition of Randomized Query Complexity and Approximate Degree	*Sourav Chakraborty, Chandrima Kayal, Rajat Mittal, Manaswi Paraashar, Swagato Sanyal, Nitin Saurabh*	An Approximation Algorithm for the Exact Matching Problem in Bipartite Graphs	*Anita Dürr, Nicolas El Maalouly and Lasse Wulf*
16:20-16:25	Classical simulation of one-query quantum distinguishers	*Andrej Bogdanov, Tsun Ming Cheung, Krishnamoorthy Dinesh, John C. S. Lui*	Improved Diversity Maximization Algorithms for Matching and Pseudoforest	*Sepideh Mahabadi and Shyam Narayanan*
16:30-16:45	On the Complexity of Triangle Counting using Emptiness Queries	*Arijit Bishnu, Arijit Ghosh, Gopinath Mishra*	Scalable Auction Algorithms for Bipartite Maximum Matching Problems	*Quanquan C. Liu, Yiduo Ke and Samir Khuller*
	End of conference. See you at RANDOM/APPROX 2024!			