Monday, Sep 19

Time (EDT)	APPROX	RANDOM
9-10am	**VirtualChair platform venue opens: https://www.virtualchair.net/events/approx-random-2022**	
10-10:45am	**APPROX 1** **Chair: Chaitanya Swamy**	**RANDOM 1** **Chair: Arnab Bhattacharyya**
	Relative Survivable Network Design, *Michael Dinitz,* ***Ama Koranteng*** *and Guy Kortsarz*	Double Balanced Sets in High Dimensional Expanders, ***David Mass*** *and Tali Kaufman*
	Integrality gap of time-indexed linear programming relaxation for coflow scheduling, ***Takuro Fukunaga***	High dimensional expansion implies amplified local testability, ***Izhar Oppenheim*** *and Tali Kaufman*
	Fair Correlation Clustering in General Graphs, *Roy Schwartz and* ***Roded Zats***	Improved Local testing for multiplicity codes, ***Dan Karliner*** *and Amnon Ta-Shma*
	Approximating CSPs with Outliers, ***Suprovat Ghoshal*** *and Anand Louis*	Eigenstripping, Spectral Decay, and Edge-Expansion on Posets, *Jason Gaitonde,* ***Max Hopkins*** *, Tali Kaufman, Shachar Lovett and Ruizhe Zhang*
10:45-11am	Discussion	Discussion
11-11:45am	**APPROX 2** **Chair: Pasin Manurangsi**	**RANDOM 2** **Chair: Dor Minzer**
	Hardness Results for Weaver's Discrepancy Problem, *Daniel Spielman and* ***Peng Zhang***	Improved bounds for randomly colouring simple hypergraphs, *Weiming Feng, Heng Guo and* ***Jiaheng Wang***
	Bypassing the XOR Trick: Stronger Certificates for Hypergraph Clique Number, *Venkatesan Guruswami, Pravesh K Kothari and* ***Peter Manohar***	A Fully Adaptive Strategy for Hamiltonian Cycles in the Semi-Random Graph Process, ***Calum MacRury*** *, Jane Gao and Pawel Pralat*
	The Biased Homogeneous r-Lin Problem, ***Suprovat Ghoshal***	Tight Chernoff-Like Bounds under Limited Independence, ***Maciej Skorski***
	Some Results on Approximability of Minimum Sum Vertex Cover, ***Aleksa Stankovic***	A Sublinear Local Access Implementation for the Chinese Restaurant Process, *Peter Mörters, Christian Sohler and* ***Stefan Walzer***
11:45am-12 noon	Discussion	Discussion
12-1pm	**Invited talk: Vincent Cohen-Addad** **Recent Progress on Correlation Clustering: The Power of Sherali-Adams and New Practical Insights** Chair: Chaitanya Swamy	
1-2pm	**Networking lunch break**	
2-2:45pm		**RANDOM 3** **Chair: Zongchen Chen**
		Fast and perfect sampling of subgraphs and polymer systems, *Antonio Blanca,* ***Sarah Cannon*** *and Will Perkins*
		Local treewidth of random and noisy graphs with applications to stopping contagion in networks, ***Hermish Mehta*** *and Daniel Reichman*
		Local Stochastic Algorithms for Alignment in Self-Organizing Particle Systems, *Hridesh Kedia,* ***Shunhao Oh*** *and Dana Randall*
		Sampling from Potts on random graphs of unbounded degree via random-cluster dynamics, ***Antonio Blanca*** *and Reza Gheissari*
2:45-3pm		Discussion

Tuesday, Sep 20

(VirtualChair venue: https://www.virtualchair.net/events/approx-random-2022)

Time (EDT)	APPROX	RANDOM
10-10:45am		**RANDOM 4** **Chair: Andrej Bogdanov**
		Communication Complexity of Collision, *Mika Göös and* **Siddhartha Jain**
		Lower Bound Methods for Sign-rank and their Limitations, **Hamed Hatami** *, Pooya Hatami, William Pires, Ran Tao and Rosie Zhao*
		Lifting with Inner Functions of Polynomial Discrepancy, **Yahel Manor** *and Or Meir*
		Polynomial Bounds On Parallel Repetition For All 3-Player Games With Binary Inputs, *Uma Girish, Kunal Mittal, Ran Raz and* **Wei Zhan**
10:45-11am		Discussion
11-11:45am	**APPROX 3** **Chair: Deeparnab Chakrabarty**	**RANDOM 5** **Chair: Amit Chakrabarti**
	Sketching Approximability of (Weak) Monarchy Predicates, *Chi-Ning Chou, Alexander Golovnev, Amirbehshad Shahrasbi, Madhu Sudan and* **Santhoshini Velusamy**	Learning generalized depth three arithmetic circuits in the non-degenerate case, **Vishwas Bhargava** *, Ankit Garg, Chandan Saha and Neeraj Kayal*
	On sketching approximations for symmetric Boolean CSPs, *Joanna Boyland, Michael Hwang, Tarun Prasad,* **Noah Singer** *and Santhoshini Velusamy*	Black-box Identity Testing of Noncommutative Rational Formulas of Inversion Height Two in Deterministic Quasipolynomial-time, *V Arvind,* **Abhranil Chatterjee** *and Partha Mukhopadhyay*
	Maximum Matching sans Maximal Matching: A New Approach for Finding Maximum Matchings in the Data Stream Model, **Moran Feldman** *and Ariel Szarf*	Beyond Single-Deletion Correcting Codes: Substitutions and Transpositions, *Ryan Gabrys, Venkatesan Guruswami, João Ribeiro and* **Ke Wu**
	Space Optimal Vertex Cover in Dynamic Streams, **Kheeran K. Naidu** *and Vihan Shah*	Accelerating Polarization via Field Extension, *Iwan Duursma, Ryan Gabrys, Venkatesan Guruswami, Ting-Chun Lin and* **Hsin-Po Wang**
11:45-12 noon	Discussion	Discussion
12-12:45pm	**APPROX 4** **Chair: Zac Friggstad**	
	Ordered k-Median with Outliers, **Shichuan Deng** *and Qianfan Zhang*	
	Online Facility Location with Linear Delay, *Marcin Bienkowski,* **Martin Böhm** *, Jaroslaw Byrka and Jan Marcinkowski*	
	Caching with Reserves, **Sharat Ibrahimpur** *, Manish Purohit, Zoya Svitkina, Erik Vee and Joshua Wang*	
	A Primal-Dual Algorithm for Multicommodity Flows and Multicuts in Treewidth 2 Graphs, *Tobias Friedrich, Davis Isaac, Nikhil Kumar, Nadym Mallek and* **Ziena Zeif**	
12:45-1pm	Discussion	
1-2:30pm	Social event	

Wednesday, Sep 21

Time (EDT)	APPROX	RANDOM
10-10:45am	**APPROX 5** **Chair: Ravishankar Krishnaswamy**	**RANDOM 6** **Chair: Amit Chakrabarti**
	Finding the KT partition of a weighted graph in near-linear time, *Simon Apers, Pawel Gawrychowski and* **Troy Lee**	Streaming Algorithms with Large Approximation Factors, *Yi Li,* **Honghao Lin** *, David Woodruff and Yuheng Zhang*
	Massively Parallel Algorithms for Small Subgraph Counting, **Amartya Shankha Biswas** *, Talya Eden, Quanquan Liu, Slobodan Mitrović and Ronitt Rubinfeld*	Sketching Distances in Monotone Graph Classes, *Nathaniel Harms,* **Louis Esperet** *and Andrey Kupavskii*
	Asymptotically Optimal Bounds for Estimating H-Index in Sublinear Time with Applications to Subgraph Counting, *Sepehr Assadi and* **Hoai-An Nguyen**	Adaptive Sketches for Robust Regression with Importance Sampling, *Sepideh Mahabadi, David P Woodruff and* **Samson Zhou**
	$(1+\epsilon)$-Approximate Shortest Paths in Dynamic Streams, *Michael Elkin and* **Chhaya Trehan**	
10:45-11am	Discussion	Discussion
11-11:45am	**APPROX 6** **Chair: Thomas Kesselheim**	**RANDOM 7** **Chair: William Hoza**
	Submodular Dominance and Applications, **Frederick Qiu** *and Sahil Singla*	Fourier growth of regular branching programs, **Chin Ho Lee** *, Edward Pyne and Salil Vadhan*
	Prophet Matching in the Probe-Commit Model, **Calum MacRury** *, Allan Borodin and Akash Rakheja*	Affine extractors and AC0-Parity, **Peter Ivanov** *, Xuangui Huang and Emanuele Viola*
	Maximizing a Submodular Function with Bounded Curvature under an Unknown Knapsack Constraint, *Max Klimm and* **Martin Knaack**	Range Avoidance for Low-depth Circuits and Connections to Pseudorandomness, *Venkatesan Guruswami,* **Xin Lyu** *and Xiuhan Wang*
	Approximating LCS and Alignment Distance over Multiple Sequences, **Debarati Das** *and Barna Saha*	Unbalanced Expanders from Multiplicity Codes, **Itay Kalev** *and Amnon Ta-Shma*
11:45-12 noon	Discussion	Discussion
12-1pm	<td colspan="2" align="center">**Invited talk: David Woodruff** **Memory Bounds for the Experts Problem** Chair: Amit Chakrabarti</td>
1-2pm	<td colspan="2" align="center">**Networking lunch break**</td>
2-2:45pm		**RANDOM 8** **Chair: Samson Zhou**
		Exploring the Gap between Tolerant and Non-tolerant Distribution Testing, *Sourav Chakraborty, Eldar Fischer, Arijit Ghosh, Gopinath Mishra and* **Sayantan Sen**
		A Unified Approach to Discrepancy Minimization, *Nikhil Bansal,* **Aditi Laddha** *and Santosh Vempala*
		Hyperbolic Concentration, Anti-concentration, and Discrepancy, *Zhao Song and* **Ruizhe Zhang**
		Cover and Hitting Times of Hyperbolic Random Graphs, *Marcos Kiwi, Markus Schepers and* **John Sylvester**
2:45-3pm		Discussion