Algorithms and Foundations for Data Science
(30 May–10 Jun 2022)

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Name & Affiliation	Talk Title
Sepehr Assadi Rutgers University, USA	Brooks' theorem in graph streams
Ainesh Bakshi Carnegie Mellon University, USA	Low-rank approximation with (1/ϵ)(1/3) matrix-vector products
Petros Drineas Purdue University, USA	Randomized linear algebra for interior point methods
Dan Feldman University of Haifa, Israel	Coresets for decision trees of signals
Mohammad Taghi Hajiaghayi University of Maryland, USA	Massively parallel algorithms for maximal matching and edit distance
Rajesh Jayaram Google Research NYC, USA	New streaming algorithms for high-dimensional EMD and MST
Shaofeng Jiang Peking University, China	Streaming facility location in high dimension
Michael Kapralov EPFL, Switzerland	Factorial lower bounds for (almost) random order streams
Rasmus Kyng ETH Zurich, Switzerland	Scalar and matrix Chernoff bounds from $\ell\infty$-independence
Yi Li Nanyang Technological University, Singapore	Lower bounds for sparse oblivious subspace embeddings
Michael W. Mahoney University of California, Berkeley, USA	Random matrix theory and modern machine learning
Andrew Mcgregor University of Massachusetts Amherst, USA	A guide to estimating entropy for the forgetful and impatient Cameron Musco University of Massachusetts Amherst, USA

Name & Affiliation	Talk Title
Cameron Musco University of Massachusetts Amherst, USA	Sublinear time eigenvalue approximation via random sampling
Christopher Musco New York University, USA	Linear and sublinear time spectral density estimation
Jelani Nelson University of California, Berkeley, USA	Optimal bounds for approximate counting
Huy Le Nguyen Northeastern University, USA	Private frequency estimation via projective geometry
Rasmus Pagh University of Copenhagen, Denmark	Differentially private CountSketch
Eric Price University of Texas at Austin, USA	Finite-sample maximum likelihood estimation of location
Chris Schwiegelshohn Aarhus University, Denmark	Recent developments on coresets for clustering
David P. Woodruff Carnegie Mellon University, USA	Memory bounds for the experts problem
Qin Zhang Indiana University Bloomington, USA	Collaborative learning with limited communication
Samson Zhou Carnegie Mellon University, USA	Near-linear sample complexity for *Lp* polynomial regression