IMS Young Mathematical Scientists Forum — Statistics and Data Science
(20 Nov 2023–23 Nov 2023)

Name & Affiliation	Talk Title
Anish Agarwal Columbia University, USA	Causal Matrix Completion
Xuan Bi University of Minnesota, USA	Distribution-invariant differential privacy
Michael Celentano University of California, Berkeley, USA	Challenges of the inconsistency regime: Novel debiasing methods for missing data models
Michael Choi National University of Singapore, Singapore	Markov chains + X: Markov chain entropy games and the geometry of their Nash equilibria
Hai Dang Dau Oxford University, UK	On using diffusion models for sampling
Jin-Hong Du Carnegie Mellon University, USA	Simultaneous inference for generalized linear models with unmeasured confounders
Paromita Dubey University of Southern California, USA	Two Sample Inference for Random Objects using Metric Profiles
Jean Feng University of California, San Francisco, USA	Statistical tools for auditing machine learning algorithms across subgroups and time
Swarnadip Ghosh Radix Trading, LLC, USA	Backfitting for large scale crossed random effects regressions
Richard Guo University of Cambridge, UK	Harnessing Extra Randomness: Replicability, Flexibility and Causality
Qiyang Han Rutgers University, USA	High dimensional asymptotics: some recent progress beyond Gaussian designs
Yuchen Hu Stanford University, USA	Switchback Experiments under Geometric Mixing
Dongming Huang National University of Singapore, Singapore	Sliced Inverse Regression with Large Structural Dimensions

Name & Affiliation	Talk Title
Cheng Li National University of Singapore, Singapore	Bayesian fixed-domain asymptotics for covariance parameters in spatial Gaussian process models
Gen Li Chinese University of Hong Kong, Hong Kong, China	Approximate message passing from random initialization with applications to Z2 synchronization
Jinzhou Li Stanford University, USA	Simultaneous false discovery proportion bounds via knockoffs and closed testing
Shuangning Li Harvard University, USA	Random Graph Asymptotics for Treatment Effect Estimation under Network Interference
Sifan Liu Stanford University, USA	An Exact Sampler for Inference after Polyhedral Selection
Yuetian Luo University of Chicago, USA	The Limits of Algorithm Evaluation and Comparison
Somabha Mukherjee National University of Singapore, Singapore	High Dimensional Logistic Regression Under Network Dependence
Yang Ni Texas A&M University, USA	Causal Discovery from Multivariate Functional Data
Anant Raj University of Illinois at Urbana-Champaign, USA	An algorithmic stability perspective on heavy-tails SGD
Yan Shuo Tan National University of Singapore, Singapore	MDI+: A Flexible Random Forest-Based Feature Importance Framework
Ye Tian Columbia University, USA	Robust Unsupervised Multi-task Learning on Gaussian Mixture Models
Denny Wu University of Toronto, Canada	Understanding modern machine learning models through the lens of high-dimensional statistics
Yuchen Wu Stanford University, USA	Posterior Sampling from the Spiked Models via Diffusion Processes
Maoran Xu Duke University, USA	Uncertainty quantification for varying dimensional parameters
Qi Xu University of California, Irvine, USA	Estimation of Individualized Combination Treatment Rule

Name & Affiliation	Talk Title
Sheng Xu Princeton University, USA	Maximum likelihood for high-noise group orbit estimation and cryo-EM
Yaoming Zhen The Chinese University of Hong Kong, China	Community Detection in General Hypergraph via Graph Embedding
Wenzhuo Zhou University of California, Irvine, USA	A Model-Agnostic Graph Neural Network for Integrating Local and Global Information
Yichen Zhu Bocconi University, Italy	Fast Approximation and Optimal Contraction for Vecchia Gaussian Processes