Modern Challenges in Data Decentralization: Federated Learning, Differential Privacy and Communication Constraints

(06 Jul 2026–17 Jul 2026)

List of Speakers and Talks' Title

Name & Affiliation	Talk Title
Thomas Berrett University of Warwick, UK	Permutation Testing under Local Differential Privacy
Tony Cai University of Pennsylvania, USA	Federated Learning for Functional Mean Estimation: Optimality under Distributed Privacy Constraints
Yuejie Chi Yale University, USA	The Blessing of Heterogeneity in Federated Reinforcement Learning
Huang Danyang Renmin University of China, China	Differentially Private Estimation and Inference for Spatial Autoregressive Models
Rui Duan Harvard University, USA	Collaborative Learning Frameworks for Multi-Site Data Networks
Jianqing Fan Princeton University, USA	SMART Fine-tuning Factor Augmented Neural Lasso
Jia Gu Zhejiang University, China	Statistical Inference for Decentralized Federated Learning
Yang Feng New York University, USA	Transfer and Multi-Task Learning: Statistical Insights for Modern Data Challenges
Dongming Huang National University of Singapore, Singapore	Inference for General Linear Functionals in High-Dimensional Sparse Regression
Feiyu Jiang Fudan University, China	Contextual Dynamic Pricing: Algorithms, Optimality, and Local Differential Privacy Constraints
Mengchu Li University of Birmingham, UK	Trustworthy Learning across Heterogeneous Data: Differential Privacy and Adversarial Contamination
Qianxiao Li National University of Singapore, Singapore	Learning, Approximation and Control
Sai Li Tsinghua University, China	Efficient Machine Unlearning with Minimax Optimality

Name & Affiliation	Talk Title
Huihang Liu Shanghai University of Finance and Economics, China	Trans-MA: Sufficiency-principled Transfer Learning via Model Averaging
Yuheng Ma East China Normal University, China	Locally Private Estimation with Public Features
Marco Avella Medina Columbia University, USA	Efficient Differentially Private Regression Inference for Longitudinal Data
Jonathan Scarlett National University of Singapore, Singapore	Order-Optimal 1-Bit Mean Estimation
Shuting Shen National University of Singapore, Singapore	Anti-Concentration Inequalities for the Difference of Maxima of Gaussian Random Vectors
Ziteng Sun Google, USA	
Botond Szabo Bocconi University, Italy	Robust Bayesian Inference
Vincent Tan National University of Singapore, Singapore	Muon Outperforms Adam in Tail-End Associative Memory Learning
Banerjee Tathagata National University of Singapore, Singapore	*Short Talk*
Xin Tong National University of Singapore, Singapore	ePTR: A Bridge to DP Estimation
Sara Pinciroli Bocconi University, Italy	*Short Talk*
Paul Rognon-Vael Bocconi University, Italy	*Short Talk*
Tao Shen National University of Singapore, Singapore	*Short Talk*
Lasse Vuursteen Duke University, USA	Optimal Estimation, Adaptation and Inference for Linear Functionals under Differential Privacy

Name & Affiliation	Talk Title
Junhui Wang Chinese University of Hong Kong, HK SAR	Understanding Partial Transfer in CNNs via Kronecker Product Regression
Wanjie Wang National University of Singapore, Singapore	NetPTR: Optimal Differentially Private Spectral Community Detection
Haolei Weng Southern University of Science and Technology, China	Robust Multi-task Learning for Principal Component Analysis
Bi Xuan University of Minnesota, USA	Observation-Level Watermarking and Detection for Tabular Data
Gengyu Xue University of Warwick, UK	Optimal Learning for Fairness-Aware Contextual Bandits
Lingzhou Xue The Pennsylvania State University, USA	Sample-Efficient and Low-Cost Model-Free Reinforcement Learning
Yi Yu University of Warwick, UK	Robust Multilayer Networks Estimation under Batch Contamination
Ming Yuan Columbia University, USA	Quantized Signal Recovery at Optimal Rates
Jiwei Zhao University of Wisconsin, USA	Double Robustness vs. Double Flexibility in Unsupervised Domain Adaptation
Qiong Zhang Renmin University of China, China	When Averaging Fails: Statistical Structure in Federated Learning