Workshop Schedule

Monday (June 2)

Opening Remarks (08:50 - 09:00)

Session 1 - Network Model Assessment and Structure Inference (09:00 - 10:40)

Chair: Yang Feng

Qiwei Yao (London School of Economics and Political Science)
- Goodness-of-Fit and the Best Approximation: an Adversarial Approach

Ji Zhu (University of Michigan)
- Hyperbolic Network Latent Space Model with Learnable Curvature

Masaaki Imaizumi (University of Tokyo)
- Statistical Analysis On In-Context Learning

Wen Zhou (New York University)
- Multivariate Inference of Network Moments by Subsampling

Coffee Break (10:40 - 11:10)

Session 2 - Causal & Temporal Inference in Networks (11:10 - 12:25)

Chair: Ji Zhu

Jinchi Lv (University of Southern California)
- HNCI: High-Dimensional Network Causal Inference

Jiaming Xu (Duke University)
- A Proof of The Changepoint Detection Threshold Conjecture in Preferential Attachment Models

Yuting Wei (University of Pennsylvania)
- To intrinsic dimension and beyond: Efficient sampling in diffusion models

Lunch (12:30 - 14:00)

Session 3 - Generative, Diffusion & Attention Models (14:05 - 15:45)

Chair: Qingfeng Liu

Takeru Matsuda (University of Tokyo & RIKEN Center for Brain Science)
- Matrix estimation via singular value shrinkage

Lexing Xie (Australian National University)
- Online Attention: Processes, Graphs, and Optimization

Xiaotong Shen (University of Minnesota)
- Generative Score Inference for Multimodal Data

Jiashun Jin (Carnegie Mellon University)
- TBD

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Coffee Break (15:45 - 16:15)

Session 4 - Poster Session (16:15 - 17:15)

Chair: Yang Feng

Guillaume Braun (RIKEN Center for Advanced Intelligence Project)
- VEC-SBM: Optimal Community Detection with Vectorial Edge Covariates

Takuya Koriyama (University of Chicago)
- Precise Asymptotics of Bagging Regularized M-estimators

Issey Sukeda (University of Tokyo)
- Torus graph modeling for EEG analysis

Ergan Shang (Carnegie Mellon University)
- Inference for Balance Theory in Time-Varying Signed Network

Tao Shen (National University of Singapore)
- Community Detection in Multilayer Networks with Complex Inhomogeneity

Fan Wang (University of Warwick)
- Change Point Analysis in Dynamic Multilayer Networks

Bingcheng Sui (University of Science and Technology of China)
- Counting Cycles with AI

Tuesday (June 3)

Session 5 - High-Dimensional Statistics and Tensor Methods (09:00 - 10:40)

Chair: Jiashun Jin

Cun-Hui Zhang (Rutgers University)
- Simultaneous Decorrelation of Matrix Time Series

Lexin Li (University of California Berkeley)
- Inference for Directed Acyclic Graph using Deep Generative Learning

Jeff Yao (Chinese University of Hong Kong Shenzhen)
- Alignment and matching tests for high-dimensional tensor signals via tensor contraction

Yuqi Gu (Columbia University)
- Minimax-Optimal Dimension-Reduced Clustering for High-Dimensional Nonspherical Mixtures

Coffee Break (10:40 - 11:10)

Session 6 - Privacy-Preserving & Dynamic Network Learning (11:10 - 12:25)

Chair: Xiaoyue Niu

Tony Cai (University of Pennsylvania)
- Transcending Data Boundaries: Transfer Knowledge in Statistical Learning

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Yi Yu (University of Warwick)
- Optimal federated learning under differential privacy constraints

Wanjie Wang (National University of Singapore)
- Data Integration: Network-Guided Covariate Selection

Group Photo (12:25 - 12:30)

Lunch (12:30 - 14:00)

Session 7 - Data Integration & Applications (14:05 - 15:45)

Chair: Emma Jingfei Zhang

Annie Qu (University of California Irvine)
- High-order Joint Embedding for Multi-Level Link Prediction

Peter Song (University of Michigan)
- Network Structural Equation Models for Causal Mediation and Spillover Effects

Tracy Ke (Harvard University)
- Poisson-Process Topic Model for Integrating Knowledge from Pre-trained Language Models

Hui Shen (McGill University)
- Consistent Identification of Top-K Nodes in Noisy Networks

Coffee Break (15:45 - 16:15)

Session 8 - Spectral / Hypergraph & Signal-Detection Methods (16:15 - 17:30)

Chair: Rachel Wang

Emma Jingfei Zhang (Emory University)
- Modeling Non-Uniform Hypergraphs Using Determinantal Point Processes

Zhigang Bao (Hong Kong University of Science and Technology)
- Signal Detection from Spiked Noise via Asymmetrization

Aaron Bramson (GA technologies)
- Measuring Housing Demand Using Multimodal Geospatial Networks

Wednesday (June 4)

Session 9 - Complex Networks and Multilayer Networks (09:00 - 10:40)

Chair: Kaizheng Wang

Xinyu Zhang (Chinese Academy of Sciences)
- A Transfer Learning Framework for Multilayer Networks via Model Averaging

Rachel Wang (University of Sydney)
- Network autoregression for the propagation of binary responses in social networks

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Ji Oon Lee (Korea Advanced Institute of Science & Technology)
- Detection problems in spiked Wigner matrices

Guangming Pan (Nanyang Technological University)
- Eigenvector overlaps in large sample covariance matrices and nonlinear shrinkage estimators

Coffee Break (10:40 - 11:10)

Session 10 - Advances in Statistical Learning and Uncertainty Quantification (11:10 - 12:25)

Chair: Qiyang Han

Xinghua Zheng (Hong Kong University of Science and Technology)
- Stock Co-jump Network Models based on Site Percolation

Robert Lunde (Washington University at St Louis)
- Conformal Prediction for Dyadic Regression Under Structured Missingness

Kaizheng Wang (Columbia University)
- Uncertainty Quantification for LLM-Based Survey Simulations

Lunch (12:30 - 14:00)

Session 11 - Graphical Models, Hypergraphs, and Generative Approaches (14:05 - 15:20)

Chair: Xinyu Zhang

Nick Whiteley (University of Edinburgh)
- Statistical exploration of the Manifold Hypothesis

Jingming Wang (University of Virginia)
- Network Goodness-of-Fit for the block-model family

Yao Xie (Georgia Institute of Technology)
- Scalable flow-based generative models for network data

Coffee Break (15:20 - 15:50)

Session 12 - Random Matrix Theory and Differential Privacy (15:50 - 16:40)

Chair: Wanjie Wang

Qiyang Han (Rutgers University)
- Algorithmic inference via gradient descent: from linear regression to neural networks

Yumou Qiu (Peking University)
- Versatile differentially private learning for general loss functions

Closing Remarks and Poster Awards (16:40 - 17:00)