Lili Zheng

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EMPLOYMENT

Postdoctoral researcher 2021 – Now
Department of Electrical and Computer Engineering, Rice University
Advisor: Genevera I. Allen

EDUCATION

University of Wisconsin - Madison 2016 – 2021
Ph.D., Statistics
Advisor: Garvesh Raskutti

University of Science and Technology of China 2012 – 2016
B.S., Statistics

RESEARCH INTEREST

Graphical models, tensor data analysis, distribution-free inference, network Granger causality, dependent data, high-dimensional statistics, stochastic algorithms, non-convex optimization

JOURNAL PUBLICATIONS

1. **L. Zheng**, G. I. Allen, "Graphical Model Inference with Erosely Measured Data", *under revision at Journal of the American Statistical Association, Theory and Methods.*

2. H. Chen*, **L. Zheng***, R. A. Kontar, G. Raskutti (*: equal contribution), "Gaussian Process Parameter Estimation Using Mini-batch Stochastic Gradient Descent: Convergence Guarantees and Empirical Benefits", *Journal of Machine Learning Research*, 2022.

   – appeared in part in *Neural Information Processing Systems (NeurIPS)*, 2020.

3. Y. Zhou, A. R. Zhang, **L. Zheng**, Y. Wang, "Optimal High-order Tensor SVD via Tensor-train Orthogonal Iteration", *IEEE Transactions on Information Theory*, 2022.

4. **L. Zheng**, G. Raskutti, R. Willett, B. Mark, "Context-dependent Networks in Multivariate Time Series: Models, Methods, and Risk Bounds in High Dimensions.", *Journal of Machine Learning Research*, 2021.

5. **L. Zheng**, G. Raskutti, "Testing for High-dimensional Network Parameters in Auto-regressive Models", *Electronic Journal of Statistics*, 2019.

CONFERENCE PUBLICATIONS

1. **L. Zheng**, Z. T. Rewolinski, G. I. Allen, "A Low-Rank Tensor Completion Approach for Imputing Functional Neuronal Data from Multiple Recordings", *IEEE Data Science and Learning Workshop (DSLW)*, 2022.

2. **L. Zheng**, G. I. Allen, "Learning Gaussian Graphical Models with Differing Pairwise Sample Sizes", *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, 2022.

PREPRINTS

1. L. Gan*, **L. Zheng***, G. I. Allen (*: equal contribution), "Inference for Interpretable Machine Learning: Fast, Model-Agnostic Confidence Intervals for Feature Importance". https://arxiv.org/abs/2206.02088.

2. A. Chang, **L. Zheng**, G. I. Allen, "Low-Rank Covariance Completion for Graph Quilting with Applications to Functional Connectivity". https://arxiv.org/abs/2209.08273.

Teaching Experience

Stat 301 (Introduction to Statistical Methods), Teaching Assistant   Fall 2016/ Spring 2017

Presentations

- Talk in a topic-contributed session in Joint Statistical Meetings, 2022

- Talk at ICASSP, 2022

- Poster presentation at Joint Statistical Meetings, 2019

- Poster presentation at Joint Statistical Meetings, 2020

- Poster presentation at NeurIPS, 2020

Professional Service

Organizer for a topic-contributed session in Joint Statistical Meetings, 2022
Session chair for ICASSP, 2022
Reviewer for *Journal of the Royal Statistical Society: Series B, Journal of Journal of the American Statistical Association, Biometrika, Journal of Machine Learning Research, Annals of Applied Statistics, IEEE Transactions on Information Theory, Computational Statistics and Data Analysis, International Conference on Artificial Intelligence and Statistics (AISTATS), International Conference on Machine Learning (ICML).*

Programming Skills

R language, MATLAB, Python, C language

Honors

IMS Hannan Graduate Student Travel Award.	2021
Travel grant from Institute for Foundations of Data Science (IFDS), UW-Madison.	2019
Travel grant from IMA workshop on Forecasting from Complexity.	2018
First place in qualifying exam, UW-Madison.	2017
Honorable Mention in Mathematical Contest of Modeling, COMAP (Top 20%)	2015
National scholarship, USTC. (Top 2%)	2015
Outstanding freshman scholarship, USTC(Top 20%)	2012