

Lili Zheng

Homepage: <https://lili-zheng-stat.github.io>

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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, missing data, distribution-free inference, tensor data analysis, 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 major 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. Zheng**, G. Raskutti, “High-dimensional Multi-class Classification with Presence-only Data”, <https://arxiv.org/abs/2304.09305>
2. 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>.

3. 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 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

HONORS

Gold Medal Young Researcher Poster Competition Award,

Conference on Recent Advances in Statistics and Data Science at Rutgers.

2023

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

Honorable Mention in Mathematical Contest of Modeling, COMAP (Top 20%)

2015

National scholarship, USTC. (Top 2%)

2015

Outstanding freshman scholarship, USTC(Top 20%)

2012