

# Xuran Meng

Email: xuranm@umich.edu — Personal Website: <https://xuranmeng.github.io>

## PROFESSIONAL EXPERIENCE

---

### Postdoctoral Research Fellowship

2024 - Present

Department of Biostatistics, University of Michigan

Advisor: Yi Li

## EDUCATION

---

### Ph.D. in Statistics

2020 - 2024

Department of Statistics and Actuarial Science, University of Hong Kong

Thesis: *Generalization Analysis and Regularization in Over-Parameterized Models*

Advisor: Jianfeng Yao and Yuan Cao

### Master in Statistics

2018 - 2020

Department of Statistics, University of Science and Technology of China

### Bachelor in Statistics

2014 - 2018

School of Gifted Youth, University of Science and Technology of China

## RESEARCH PAPERS

---

### Manuscripts Under Review

1. Sattwik Ghosal, **Xuran Meng**, Yi Li. Beyond Consistency: Inference for the Relative risk functional in Deep Nonparametric Cox Models. Under work, 2026+.
2. **Xuran Meng**, Jingfei Zhang, Yi Li. High-Dimensional Bounded Discrete Graphical Models via Regularized Discrete Generalized Score Matching. Under work, 2026+.
3. Yidong Wang, Xin Wang, Cunxiang Wang, Junfeng Fang, Qiufeng Wang, Jianing Chu, **Xuran Meng**, Shuxun Yang, Libo Qin, Yue Zhang, Wei Ye and Shikun Zhang. Temporal Self-Rewarding Language Models: Decoupling Chosen-Rejected via Past-Future. Submitted to *International Conference on Machine Learning (ICML)*, 2026.
4. Hua Yuan, **Xuran Meng**, Qiufeng Wang, Shiyu Xia, Ning Xu, Xu Yang, Jing Wang, Xin Geng and Yong Rui. Towards Understanding Feature Learning in Parameter Transfer. Submitted to *International Conference on Machine Learning (ICML)*, 2026.
5. Shuning Shang, **Xuran Meng**, Yuan Cao, Difan Zou. Initialization Matters: On the Benign Overfitting of Two-Layer ReLU CNN with Fully Trainable Layers. Major Revision in *Journal of Machine Learning Research*, 2026+.

## Published

6. Stephan G Frangakis, **Xuran Meng**, Mark C Bicket, Vidhya Gunaseelan, Sawsan As Sanie, Andrew Urquhart, Yi Li and Chad M Brummett. Two-part Statistical Model for Identifying Baseline Predictors of Chronic Postsurgical Pain. *Anesthesiology*, 2026.
7. **Xuran Meng**, Yi Li. Inference for Deep Neural Network Estimators in Generalized Non-parametric Models. *Journal of the American Statistical Association (Theory and Methodology)*, 2026.
8. **Xuran Meng**, Yuan Cao, Weichen Wang. Estimation of Out-of-Sample Sharpe Ratio for High Dimensional Portfolio Optimization. *Journal of the American Statistical Association (Theory and Methodology)*, 2025.
9. **Xuran Meng**, Jingfei Zhang, Yi Li. Statistical Inference on High-Dimensional Covariate-Dependent Gaussian Graphical Regressions. *Biometrics (Methodology)*, 2025.
10. **Xuran Meng**, Yi Li. Xuran Meng and Yi Li's contribution to the Discussion of "On optimal linear prediction" by I. Helland. *Scandinavian Journal of Statistics*, 2025.
11. Chenyang Zhang, **Xuran Meng**, Yuan Cao. Transformer Learns Optimal Variable Selection in Group-Sparse Classification. *International Conference on Learning Representations (ICLR)*, 2025.
12. **Xuran Meng**, Yuan Cao, Difan Zou. Per-Example Gradient Regularization Improves Learning Signals from Noisy Data. *Machine Learning*, 2025.
13. **Xuran Meng**, Difan Zou, Yuan Cao. Benign Overfitting in Two-Layer ReLU Convolutional Neural Networks for XOR Data. *International Conference on Machine Learning (ICML)*, 2024.
14. **Xuran Meng**, Jianfeng Yao, Yuan Cao. Multiple Descent in the Multiple Random Feature Model. *Journal of Machine Learning Research*, 2024.
15. **Xuran Meng**, Jianfeng Yao. Impact of Classification Difficulty on the Spectra of Weight Matrices in Deep Learning and Applications to Early Stopping. *Journal of Machine Learning Research*, 2023.
16. Jing Zhang, Shuguang Zhang, **Xuran Meng**.  $\ell_{1-2}$  minimisation for compressed sensing with partially known signal support. *Electronics Letters*, 2020.
17. **Xuran Meng**, Xiuchun Bi, Shuguang Zhang. High frequency algorithm and its back-testing results based on GAN. *Journal of University of Science and Technology of China*, 2020.
18. Yu Pan, **Xuran Meng**, Wuqing Ning. A Local Existence Theorem for a Parabolic Blow-Up Inverse Problem. *Pure Mathematics*, 2017.

## PRESENTATIONS

---

- 2025 Oral presentation at *14th High Dimensional Data Analysis Workshop (HDDA-XIV)*, Central Michigan University, Mt. Pleasant, MI, USA.
- 2024 Oral Contributed Presentation Session at *11th World Congress in Probability and Statistics (Bernoulli-IMS)*, Bochum, Germany.  
Poster session at *Forty-first International Conference on Machine Learning (ICML 2024)*, Vienna, Austria.
- 2023 Poster session at *Random Matrix Theory and Applications*, Shenzhen, China.

## GRANTS

---

- **Proposal Title:** *Administrative Supplement for the CLOUD Pipeline*  
(Parent Award: *New Statistical Methods for Modeling Cancer Outcomes*, NIH R01CA249096)  
**Funding Agency:** NIH  
**Response to:** NOT-OD-24-078: Supporting the Exploration of Cloud in NIH-supported Research  
**Role Status:** Co-Investigator (Authored and proposed the CLOUD framework)  
**Review Outcome:** 12th percentile (top 12%)

## TEACHING EXPERIENCE

---

<i>University of Michigan</i> Teaching Assistant	Survival Analysis, 2025
<i>University of Hong Kong</i> Teaching Assistant	Computational Statistics and Bayesian Learning, 2023 - 2024 Statistical Learning for Risk Modelling, 2023 Fundamentals of Statistical Inference, 2022 - 2023 Corporate Finance for Actuarial Science, 2022 Financial Economics, 2021 - 2022 Stochastic Process, 2021
<i>USTC</i> Teaching Assistant	Stochastic Process, 2021

## SERVICE & PROFESSIONAL DEVELOPMENT

---

### Professional Service

- Reviewer 2026 *International Conference on Machine Learning, Management Science, Biometrics.*
- Reviewer 2025 *Statistica Sinica, Journal of Computational and Graphical Statistics, International Conference on Machine Learning, International Conference on Learning Representations, Journal of the American Statistical Association, Biometrics, Neural Information Processing Systems (NeurIPS).*

Reviewer                    *Journal of Machine Learning Research, Regional Anesthesia and Pain Medicine,*  
2024 and earlier        *Neural Information Processing Systems (NeurIPS)* (2023,2024).

### **Professional Development**

Member, American Statistical Association (ASA).

### **Institutional Service**

Local Committee    Shenzhen Conference on Random Matrix Theory and Applications (RMTA)  
2023