

# JIAXIN QIU

🌐 [Homepage](#) | ✉ [jxqiu77@gmail.com](mailto:jxqiu77@gmail.com), [jxqiu@hku.hk](mailto:jxqiu@hku.hk) | 🐙 [GitHub](#) | 🎓 [Google Scholar](#)

## 🕒 EMPLOYMENT

### Postdoctoral Fellow

Nov. 2024 – present

Department of Mathematics, The University of Hong Kong

Mentor: Dr. [Zhigang Bao](#)

### Research Associate

Sep. 2024 – Oct. 2024

School of Data Science, Chinese University of Hong Kong, Shenzhen

Mentor: Prof. [Jianfeng \(Jeff\) Yao](#)

## 🎓 EDUCATION

### The University of Hong Kong

📍 Hong Kong, China

PhD in Statistics

Sep. 2020 – Aug. 2024

Supervisors: Prof. [Jianfeng \(Jeff\) Yao](#) (CUHK-SZ) & Dr. [Zeng Li](#) (SUSTech)

### Harbin Institute of Technology

📍 Harbin, China

M.Sc. in Statistics

Sep. 2018 – Jun. 2020

Supervisor: Prof. [Guo-Liang Tian](#)

### Southern University of Science and Technology

📍 Shenzhen, China

B.Sc. in Mathematics

Sep. 2014 – Jun. 2018

## 🔪 RESEARCH INTERESTS

- Random Matrix Theory
- High-dimensional Statistics

## 📖 PUBLICATIONS/MANUSCRIPTS

### Publications & Preprints

[\*: corresponding author]

1. **Jiaxin Qiu**, Zeng Li\*, Jianfeng Yao (2023). Asymptotic normality for eigenvalue statistics of a general sample covariance matrix when  $p/n \rightarrow \infty$  and applications. **The Annals of Statistics**, 51(3): 1427-1451. DOI: [10.1214/23-AOS2300](#)
2. Zhanting Long, Zeng Li\*, Ruitao Lin, **Jiaxin Qiu** (2023). On singular values of large dimensional lag- $\tau$  sample auto-correlation matrices. **Journal of Multivariate Analysis**, 197. DOI: [10.1016/j.jmva.2023.105205](#)
3. **Jiaxin Qiu**, Zeng Li\*, Jianfeng Yao (2024+). Robust estimation for number of factors in high dimensional factor modeling via Spearman correlation matrix. **Journal of the American Statistical Association**, 120:550, 1139-1151. DOI: [10.1080/01621459.2024.2402565](#).
4. Qianqian Jiang, **Jiaxin Qiu**, Zeng Li\* (2024+). On eigenvalues of sample covariance matrices based on high-dimensional compositional data. *Submitted (Major Revision at EJS)*. [arXiv:2312.14420](#).

### Working Papers

1. **Jiaxin Qiu**, Zeng Li\*, Jianfeng Yao (2024+). On spiked eigenvalues of general sample covariance matrices under extreme aspect ratio. *Manuscript*.

## 📖 PRESENTATIONS

- (Poster) “Robust estimation for number of factors in high dimensional factor modeling via Spearman correlation matrix”, [RMTA2023](#), Shenzhen, China, June 2023
- (Contributed talk) “Eigenvalue statistics in ultra-high dimensional sample covariance matrices”, [2024 IMS China Meeting](#), Yinchuan City, Ningxia, China, July 2024

### Courses at HKU

- (STAT6010/7610) Advanced Probability  
(2023, Course by Prof. Marius Hofert)
- (STAT2601) Probability and Statistics I  
(2 times TA in 2021 and 2024, Course by Dr. K.P., WAT)

### Courses at SUSTech

- (STA5001) High Dimensional Statistics  
(2 times TA in 2022 & 2023, Course by Prof. Zeng Li)
- (MAT7102/MAT412) Selected Research Topics in Statistics  
(2020, Course by Prof. Qi-Man Shao)
- (MA308) Statistical Computation and Software  
(2020, Course by Prof. Zeng Li)
- (MA103A) Linear Algebra A  
(2 times TA in 2018 and 2019; Course by Prof. Jiagang Yang, Prof. Yimao Chen)

### SKILLS

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**Programming:** Julia, R, Python, MATLAB

**Technologies:**  $\text{\LaTeX}$ , Git