Jiaxin QIU

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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 (Joint Program with SUSTech) *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 (Joint Program with SUSTech) *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 $p/n \to \infty$ 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-τ 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*. 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*. 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

Awards & Honors

China Undergraduate Mathematical Contest in Modeling: the 3rd Prize	2017
The Chinese Mathematics Competitions (CMC): the 2nd Prize	2017
Excellent Freshman Scholarship the 1st Prize (5%)	Nov. 2014
University Scholarship	2014–2017
Excellent Student Scholarship (20%)	Oct. 2017
Excellent Undergraduate Thesis (10%)	Jun. 2018

Teaching Assistant

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

Programming: R, Julia, Python, Matlab
Technologies: LaTeX, Git