Jiaxin QIU

PhD Candidate in Statistics

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🎓 Education

The University of Hong Kong 📍 Hong Kong, China
PhD Candidate in Statistics (Joint Program with SUSTech) *Sep. 2020 – Jun. 2024 (Expected)*
Supervisors: Prof. Jianfeng (Jeff) Yao (CUHK-SZ) & Prof. 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. Submitted. arXiv:2309.00870.

4. Qianqian Jiang, **Jiaxin Qiu**, Zeng Li* (2024+). On eigenvalues of sample covariance matrices based on high-dimensional compositional data. Submitted. arXiv:2312.14420.

5. **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

🏛 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