Qin Fang

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Academic Position

The University of Sydney, Business School, Sydney, Australia.

Lecturer (Assistant Professor) in Business Analytics, January, 2024 –

London School of Economics and Political Sciences, Department of Statistics, London, U.K.

Research Officer, May 2022 – December 2023

- Research project: "Statistical network analysis: model selection, differential privacy, and dynamic structures" funded by the EPSRC, under the direction of Prof. Qiwei Yao.

Education

London School of Economics and Political Sciences, Department of Statistics, London, U.K.

Ph.D., Statistics, January, 2019 – April, 2022

- Thesis: High-dimensional functional data/time series analysis: finite-sample theory, adaptive functional thresholding and prediction
- Advisor: Dr. Xinghao Qiao

London School of Economics and Political Science, Department of Statistics, London, U.K.

M.Sc., Statistics, September, 2016 – July, 2017

Central University of Finance and Economics, Department of Statistics, Beijing, China

B.Sc., Statistics, September, 2012 – July, 2016

Research Interests

Functional data analysis: high-dimensional functional data, partially observed functional data.

Complex time series analysis: functional time series, high-dimensional time series.

High-dimensional data analysis: simultaneous testing, covariance and graph estimation.

Network data analysis: dynamic networks, sparse network estimation.

Publications and Preprints

Fang, Q., Guo, S. and Qiao, X. (2023). Adaptive functional thresholding for sparse covariance function estimation in high dimensions, *Journal of the American Statistical Association*, accepted.

Fang, Q., Guo, S. and Qiao, X. (2022). Finite sample theory for high-dimensional functional time series with applications. *Electronic Journal of Statistics*, **16**, 527-591.

Chang, J., Fang, Q.[1], Qiao, X. and Yao, Q. (2024). On the modelling and prediction of high-dimensional functional time series, in revision at *Journal of the American Statistical Association*.

Fang, Q., Jiang, Q. and Qiao, X. (2024). Large-scale multiple testing of cross-covariance functions with applications to functional network models, ready to submit to *Journal of the American Statistical Association*.

[1]The authors are alphabetically ordered.

Chang, J., Fang, Q., Kolaczyk, E. D., MacDonald, P. W. and Yao, Q. (2024). Autoregressive networks with dependent edges.

Working papers under preparation

Chen, C., Fang, Q., and Qiao, X. (2024). High-dimensional variable clustering for partially observed functional data.

Fang, Q., Guo, S., Hong, Y. and Qiao, X. (2024). Empirical likelihood for nonparametric functions with applications to regression discontinuity designs: Robust bias-correction and Wilks phenomenon.

Conference Presentations

Invited talk at "Recent advances in functional data analysis" Workshop, Macquarie University, Sydney, Australia, March 2024.

Invited talk at Tsinghua Sanya International Workshop on "Complex time series analysis: high-dimensionality, change-points, forecasting and causality", Sanya, China, Jan 2024.

Invited talk at Network Stochastic Processes and Time Series (NeST) Away Day and Annual Meeting, York, U.K., Oct 2023.

Invited talk at Joint Statistical Meetings (JSM), Washington D.C., USA, August 2022.

Invited talk at 2022 IMS Annual Meeting in Probability and Statistics, London, U.K., June 2022.

Invited talk at 13th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, U.K., December 2020.

Invited talk at PGMO Days 2019, Paris, France, December 2019.

Teaching Experience

London School of Economics and Political Science, London, U.K.

- ST102 Elementary Statistical Theory — 2022/23, 2019/20
- ST107 Quantitative Methods (Statistics) — 2021/22, 2020/21
- ST309 Elementary Data Analytics — 2023/24, 2022/23, 2021/22, 2020/21
- ST311 Artificial Intelligence — 2021/22
- ST443 Machine Learning and Data Mining — 2021/22, 2020/21, 2019/20

LSE-PKU Summer School, Beijing, China

- Big Data: Data Analytics for Business and Beyond — August 2019

Professional Services

Paper reviewers for *Journal of the Royal Statistical Society: Series B, Journal of Machine Learning Research, Statistica Sinica, Journal of Computational and Graphical Statistic.*

Local organising committee for 2022 IMS Annual Meeting in Probability and Statistics

Honors and Awards

LSE Class Teacher Awards (Highly Commended) — 2022/2023, 2020/2021, 2019/2020
LSE PhD Studentships — 2019-2023
Winton Prize for academic excellence in MSc Statistics/MSc Statistics (Financial Statistics) — 2017
First Prize in the LSE Statistics Practitioners Challenge — 2017