Shakeel Gavioli-Akilagun

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Academic Employment

2025 - **Fellow in the Department of Decision Analytics and Operations**
City University Hong Kong

2025 - **Visiting Fellow (by courtesy)**
London School of Economics

2023 - 2025 **Fellow in Statistics**
London School of Economics

Education

2019-23 **PhD in Statistics**
London School of Economics
Thesis: On Inference and Causality in Change Point Regressions

2018-19 **MSc in Statistics by Research**
London School of Economics (Distinction)
Thesis: Screening High Dimensional Time Series via Tilting

2014-17 **BSc in Economics and Econometrics**
University of York (First Class)

2015-16 **Economics and Statistics**
University of Hong Kong (exchange year)

Research

Publications

Fast and Optimal Inference for Change Points in Piecewise Polynomials via Differencing. S. Gavioli-Akilagun and P. Fryzlewicz. *Electronic Journal of Statistics*, 2025.

Invited discussion of "Automatic Change-Point Detection in Time Series via Deep Learning" by Li, Fearnhead, Fryzlewicz, and Wang. S. Gavioli-Akilagun. *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 2023.

Pre-prints & projects

Optimal Online Change Detection via Random Fourier Features. F. Kalinke and S. Gavioli-Akilagun. *In submission*, 2025.

Adaptive Detection of Machine-Generated Text. H. Zhou, J. Zhu, P. Su, K. Ye, Y. Yang, S. Gavioli-Akilagun, and C. Shi.. *In submission*, 2025.

Causal Change Point Detection using Kernels. S. Gavioli-Akilagun and F. Quinzan. *Work in progress*, 2025+.

Detecting Changes in Production Frontiers. S. Gavioli-Akilagun and Y. Chen. *Work in progress*, 2024+.

Online Detection of Changes in Mean Reverting Processes with Local Cointergration. S. Gavioli-Akilagun, Q. Yao, B. Dou, and S. Tiwari,. *Work in progress*, 2024+.

Robust Inference for Change Points in Piecewise Polynomials using Confidence Sets. S. Gavioli-Akilagun and P. Fryzlewicz. *Manuscript in preparation*, 2023+.

Thesis

On Inference and Causality in Change Point Regressions. *London School of Economics and Political Science*, 2023.

Seminars & Conferences

2025 International Conference on Econometrics and Statistics, Tokyo (invited), Uncertainty in multivariate, non-Euclidean, and functional spaces, Cambridge (participant), LSE Statistics Research Showcase, London (invited), Detecting Anomalous Structure in Streaming Data Settings, Newton Gateway London (invited); LSE Statistics Research Showcase, London (invited)

2024 Spring HiTEc meeting on Complex Data in Econometrics and Statistics, Cyprus (invited); LSE Statistics Research Showcase, London (participant with joint work presented by Y. Chen); Statistical Modeling with Applications, Belgrade (invited); Detecting Anomalous Structure in Streaming Data Settings (DASS) launch event, London (invited)

2023 16th International Conference on Computational and Methodological Statistics, Berlin (invited); 6th International Conference on Econometrics and Statistics, Tokyo (invited, declined) , Charles University Advanced Statistics Seminars, Prague (invited); Paris-Saclay Change-Point Workshop, Paris (invited)

2022 StatScale Early Careers Researchers Meeting, Brighton (invited), American Statistical Association Joint Statistical Meetings, Washington DC (contributed); International Conference on Robust Statistics, University of Waterloo (contributed, with travel award); Institute of Mathematical Statistics Annual Meeting, London (contributed)

2021 14th Conference on Computational and Methodological Statistics, London (contributed)

Teaching

Teaching @ CityU

- MS5217: Statistical Data Analysis (2025)
- MS3111: Quantitative Business Analysis with Visual Basic for Applications (2026)

Teaching @ LSE

- ST445: Managing and Visualising Data (2024, 2025)
- ST447: Data Analysis and Statistical Methods (2025)
- ST446: Distributed Computing for Big Data (2024, 2025)
- ST457: Graph Data Analytics and Representation Learning (2024, 2025)
- ST304: Time Series and Forecasting (2019, 2020, 2021)
- ST310: Machine Learning (2020, 2021)
- ST226: Actuarial Investigations, Financial (2022, 2023)
- ST227: Survival Models (2022, 2023)

Mentoring @ LSE

- Departmental mentor to undergraduate Statistics students (2024)
- Undergraduate Statistics Practitioner's Challenge (2019, 2020, 2024)
- MSc Dissertations Quantitative Methods Advisor (2019)

Scholarships & Awards

Academic Awards

2023 **Postgraduate Travel Award**
London School of Economics

2022 **Travel Award, International Conference on Robust Statistics**
University of Waterloo

2018 **ESRC Studentship, MSc & PhD (1+3) pathway**
London School of Economics

2016 **Achieving Excellence Bursary**
University of York

2017 **National Scholarship Program at York**
University of York

Teaching Awards

2025 **Class Teacher Award**
London School of Economics
For teaching in ST446 and ST457 seminars.

2023 **Class Teacher Award**
London School of Economics
For teaching in ST304 seminars.

2021 **Class Teacher Award**
London School of Economics
For teaching in ST304 seminars.

Additional Information

Professional Service

Referee for: Annals of Statistics, Journal of the Royal Statistical Society Series B, IEE Transactions on Information Theory, Computational Statistics and Data Analysis, Journal of Business and Economic Statistics, Journal of Statistical Software, Statistics and Computing, Journal of Computational and Applied Mathematics, Communications in Nonlinear Science and Numerical Simulation

Technical Skill

Programming: R, Python, Spark, C++, Hadoop, Kafka

Markup languages: LaTeX, HTML, CSS

Human languages: English (native), Italian (native), French (conversational)