

# SHAKEEL GAVIOLI-AKILAGUN

✉ s.a.gavioli-akilagun@lse.ac.uk    🌐 gaviosha.xyz    🐙 github.com/gaviosha

## ACADEMIC EMPLOYMENT

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2023 -    **Fellow in Statistics**  
*London School of Economics*  
Teaching postgraduate courses on distributed computing, data management, and graph representation learning. Carrying out research on change point analysis under the guidance of Dr. Yining Chen and Prof. Qiwei Yao.

## EDUCATION

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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

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### PUBLICATIONS & PRE-PRINTS

Fast and Optimal Inference for Change Points in Piecewise Polynomials via Differencing (with P. Fryzlewicz) *To appear in Electronic Journal of Statistics*, 2025

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

Robust Inference for Change Points in Piecewise Polynomials using Confidence Sets (with P. Fryzlewicz) *Ready for submission to Technometrics*, 2024+

Recovering Causal Structures in Change Point Regressions via Hawkes Process Representation (with P. Fryzlewicz) *Manuscript in preparation*, 2023+

## ONGOING PROJECTS

Detecting Changes in Production Frontiers (with Y. Chen) *Work in progress*, 2024+

Online Detection of Changes in Mean Reverting Processes with Local Cointegration (with Q. Yao, B. Dou, and S. Tiwari,) *Work in progress*, 2024+

## THESIS

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

## SEMINARS & CONFERENCES

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|------|--|
| 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

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### CURRENT TEACHING

- ST445: Managing and Visualising Data
- ST447: Data Analysis and Statistical Methods
- ST446: Distributed Computing for Big Data
- ST457: Graph Data Analytics and Representation Learning

## PAST TEACHING

- 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

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

## INDUSTRY EXPERIENCE

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2019	<b>Data Science Intern</b> <i>Competition and Markets Authority</i>
2018	<b>Summer Research Scholar</b> <i>York Cross-disciplinary Centre for Systems Analysis</i>
2018	<b>Economics Intern</b> <i>Competition and Markets Authority</i>
2017	<b>Policy Research Intern</b> <i>Center for the Study of Democracy</i>
2016	<b>Statistical Research Intern</b> <i>Institute for Integrated Development Studies</i>

## SCHOLARSHIPS & AWARDS

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### ACADEMIC AWARDS

2023	<b>Postgraduate Travel Award</b> <i>London School of Economics</i>
2022	<b>Travel Award, International Conference on Robust Statistics</b> <i>University of Waterloo</i>
2018	<b>ESRC Studentship, MSc &amp; PhD (1+3) pathway</b> <i>London School of Economics</i>
2016	<b>Achieving Excellence Bursary</b> <i>University of York</i>
2017	<b>National Scholarship Program at York</b> <i>University of York</i>

## TEACHING AWARDS

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|------|---|
| 2023 | <b>Class Teacher Award</b><br><i>London School of Economics</i><br>‘Highly Commended’ for teaching in ST304 seminars. |
| 2021 | <b>Class Teacher Award</b><br><i>London School of Economics</i><br>‘Highly Commended’ for teaching in ST304 seminars. |

## ADDITIONAL INFORMATION

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### PROFESSIONAL SERVICE

Referee for: 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

### TECHNICAL SKILL

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

Markup languages:  $\text{\LaTeX}$ , HTML, CSS

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

### EXTRA CURRICULARS

I help organize a lively discussion group for PhD students in the Statistics department at the London School of Economics; see [here](#). I am also an active member of Mwangaza, the Black PhD student network at my university; see [here](#).