Jie LI

CONTACT Information Department of Statistics

School of Mathematics, Statistics and Actuarial Science

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WORKING EXPERIENCE Neuroimaging Data Analyst KTP Associate

Oct. 2023 -

employed by University of Kent and Innovision IP Limited

Research Officer (with Professor Piotr Fryzlewicz) Oct. 2021 – Sept. 2023

Department of Statistics,

London School of Economics and Political Science

Research Assistant (with Professor Shujun Li)

Aug. 2021 - Sep. 2021

School of Computing, University of Kent

EDUCATION

School of Mathematics, Statistics and Actuarial Science, University of Kent, Canterbury, United Kingdom

Ph.D., Statistics, awarded in September 2021

- $\bullet \ \ {\it Thesis Title:} \ \textit{Statistical Inference for High-dimensional Nonparametric Models}$
- Supervisors: Professor Jian Zhang and Dr. Alfred Kume

RESEARCH INTERESTS

Change-point detection; Machine learning; Artificial Intelligence; Reinforcement learning; Causal inference; Nonparametric inference; High dimensional inference; Functional data analysis; Neuroscience

FULL PUBLICATION LIST

Published/Accepted Journal Publications:

- [1] Li, Jie, Fearnhead, Paul, Fryzlewicz, Piotr, and Wang, Tengyao. 2024a. "Authors reply to the Discussion of Automatic Change-Point Detection in Time Series via Deep Learning at the Discussion Meeting on Probabilistic and statistical aspects of machine learning". Journal of the Royal Statistical Society Series B: Statistical Methodology, pp. 1–4. ISSN: 1369-7412. DOI: 10.1093/jrsssb/qkae008. URL: https://doi.org/10.1093/jrsssb/qkae008.
- [2] Li, Jie, Fearnhead, Paul, Fryzlewicz, Piotr, and Wang, Tengyao. 2024b. "Automatic Change-Point Detection in Time Series via Deep Learning". *Journal of the Royal Statistical Society Series B: Statistical Methodology*, pp. 1–17. ISSN: 1369-7412. DOI: 10.1093/jrsssb/qkae004. URL: https://doi.org/10.1093/jrsssb/qkae004.
- 3] Zhang, Jian and **Li, Jie**. **June 1, 2022**. "Factorized Estimation of High-dimensional Nonparametric Covariance Models". *Scandinavian Journal of Statistics* 26, pp. 542–567. DOI: 10.1111/sjos.12529.
- [4] Tang, Nian-Sheng, Li, Hui-Qiong, Tang, Man-Lai, and **Li, Jie**. **Mar. 3, 2016**. "Confidence Interval Construction for the Difference between Two Correlated Proportions with Missing Observations". *Journal of Biopharmaceutical Statistics* 26.2, pp. 323–338. DOI: 10.1080/10543406.2014.1000544.

TEACHING TRAINING

• I have completed the Associate Fellowship Scheme (AFS) which is for Graduate Teaching Assistants (GTAs) in receipt of a Vice Chancellor Scholarship. It includes two 15-credit core modules: An Introduction to Learning, Teaching and the Academic Environment (UN819) and Contextualising Higher Education Teaching and Learning (UN831).

• I have achieved the status of Associate Fellow (AFHEA, fellowship reference: PR224926) in 21/07/2021.

SOFTWARE AND Computer Programming:

- Language Skills Proficient in data analysis using Python, R, MATLAB. For example,
 - Python package AutoCPD for automatic change-point detection via deep neural network based on **TensorFlow**.
 - **Python** package *skewt-scipy* for skew student t distribution.
 - **R** package: *llfdr* for my Ph.D. thesis
 - Intermediate in C++, LATEX, Git, Linux, Microsoft Office, SQL
 - Parallel scientific computation in High Performance Cluster using 1920 CPU cores and 4x NVidia A100 GPU/Compute Cards.
 - Real Big Data Analysis: Human brain source localization based on the neuroscience dataset (200+Gb).

Professional Membership

- Royal Statistical Society (RSS)
- International Chinese Statistical Association (ICSA)

Interpersonal SKILLS

- Problem-solving.
- Team-work.
- Time and task Management.
- Hard-working, responsible.
- Conflict management and resolution skills

Presentations

Invited Talk

- Automatic Change-Point Detection in Time Series via Deep Learning, RSS Discussion meeting, Harrogate, UK. 6th Sept. 2023
- The 10th ICSA International Conference on Global Growth of Modern Statistics in the 21st Century, Shanghai Jiao Tong University, Shanghai, China Dec. 2016

Contributed Talk

- Automatic Change-Point Detection in Time Series via Deep Learning, CMStatistics conference in Berlin. 18 Dec. 2023.
- Automatic Change-Point Detection in Time Series via Deep Learning. The 1st Joint Conference on Statistics and Data Science, Beijing, China. 13 July. 2023
- Factorized estimation of high-dimensional nonparametric covariance models. 2022 IMS Annal Meeting: Probability and Statistics, London 29 Jun. 2022

Websites

- GitHub: https://github.com/Jieli12
- Academic Homepage: https://jieli12.github.io
- Google Scholar: https://scholar.google.com/citations?user=sOhkmd8AAAAJ&hl=en
- Research Gate: https://www.researchgate.net/profile/Jie-Li-271
- LinkedIn: https://www.linkedin.com/in/jie-li-01aa84211/
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