Weichi Wu

Contact Room 114, Weiqing Building, Tsinghua University, Beijing, China.

Research Interests Non-stationary Time Series, High-dimensional Time Series, Functional Time Series, Multiscale Inference, Change Point Problem, Statistical Network Analysis, Nonparametric Method, Forecasting, M-estimation.

Employment

2020.12-Present **Associate Professor (Tenure Track)**
Department of Industrial Engineering, Center for Statistical Science,
Tsinghua University, China.

2018.12-2020.12 **Assistant Professor (Tenure Track)**
Department of Industrial Engineering, Center for Statistical Science,
Tsinghua University, China.

2017.10-2018.12 **Research Associate**
Institute of Statistics, Department of Mathematics,
Ruhr University Bochum, Germany.
Research Mentor: Prof. Holger Dette

2015.07-2017.07 **Research Associate**
Department of Statistical Science,
Big Data Institute, University College London, UK.
Research Mentor: Prof. Patrick Wolfe & Prof. Sofia Olhede

Education

2010.09-2015.11 **University of Toronto, Canada**
Ph.D. in Statistics

2008.09-2010.02 **Columbia University in the City of New York, USA**
M.A. in Statistics

2004.09-2008.07 **Peking University, China**
B.S. in Physics

Publications, (# represents students, $*$ represents corresponding author)

1. Bai, L#.& **Wu, Wu.*** (2023+). Detecting long-range dependence for time-varying linear models, *Bernoulli*, to appear
2. **Wu,W.** & Zhou, Z*. (2023+), Multiscale jump testing and estimation under complex temporal dynamics, *Bernoulli*, to appear.
3. Dhar, S.S. & **Wu,W.*** (2023), Comparing time varying regression quantiles under shift invariance, *Bernoulli*, 29(2):1527-1554.
4. Dette, H., & **Wu, W.***, (2022) Prediction in locally stationary time series, *Journal of Business & Economic Statistics*, 40(1), 370-381.

5. Dette, H., Dhar, S.S. & **Wu,W.***, (2021) Identifying shifts between two regression curves, *Annals of the Institute of Statistical Mathematics* 1-35.

6. Dette, H.*, & **Wu, W.** (2019). Detecting Relevant Changes in the Mean of a Non-stationary Process. *The Annals of Statistics*, 47(6), 3578–3608. (alphabetical authorship)

7. **Wu, W.***, & Zhou, Z. (2018). Gradient-based Structural Change Detection for Nonstationary Time Series M-estimation. *The Annals of Statistics*, 46(3), 1197-1224.

8. **Wu, W.***, & Zhou, Z. (2018). Simultaneous Quantile Inference for Non-stationary Long-memory Time Series. *Bernoulli*, 24(4A), 2991-3012.

9. Dette, H., **Wu, W.***, & Zhou, Z. (2018). Change Point Analysis of Correlation in Non-stationary Time Series. *Statistica Sinica*, 29(2), 611-644.

10. **Wu, W.***, & Zhou, Z. (2017). Nonparametric Inference for Time-varying Coefficient Quantile Regression. *Journal of Business & Economic Statistics*, 35(1), 98-109.

Funding and Awards

2020.01 - 2022. 12 **Principal Investigator**, NSFC General program (No.12271287), 460,000 Chinese Yuan.

"Statistical Analysis of Locally Stationary High Dimension Time Series and Functional Time Series"

2020.01 - 2022. 12 **Principal Investigator**, NSFC Young program (No.11901337), 289,000 Chinese Yuan.

"Statistical Inference and Forecasting for Locally Stationary Time Series"