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Yao Zheng

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EDUCATION

Ph.D. in Statistics, University of Hong Kong, *2017.*

B.Sc. (First-class honours) in Actuarial Science, University of Hong Kong, *2013.*
First year study at School of Economics and Management, Tsinghua University, 2009.

APPOINTMENTS

Assistant Professor, Department of Statistics, University of Connecticut, *2019–.*

Post-doc and Visiting Assistant Professor, Department of Statistics and School of Industrial Engineering, Purdue University, *2017–2019.*

HONORS AND AWARDS

– Elected Member of the International Statistical Institute (ISI), *Since 2022.*

– Institute of Mathematical Statistics (IMS) New Researcher Travel Award, *2022.*

– Excellence in Teaching Recognition, University of Connecticut, *Fall 2019.*

– University of Hong Kong:
- Best Teaching Assistant Award, *Fall 2013, Fall 2014, Fall 2016 & Spring 2017.*
- University Postgraduate Scholarship, *2013–2017.*
- Undergraduate Research Fellowship & Excellent Poster Presentation Award, *2012.*
- Statistics & Actuarial Science Scholarship, *2011.*
- C.V. Starr Scholarship for Exchange Study, *2010.*
- Summer Research Fellowship & Best Poster Presentation Award, *2010.*

FUNDING

– Makuch Faculty Fellowship, University of Connecticut, $10,000, *Jan 2023–Dec 2024.*

– UConn OVPR Research Excellence Program, Role: PI, $24,999, *June 2021–Dec 2022.*

PUBLICATIONS

[Co-first author*; Corresponding author†]

[1] **Zheng, Y.**, Wu, J. and Li, G. (2022). Least absolute deviations estimation for nonstationary vector autoregressive time series models with pure unit roots. *Statistics and Its Interface*, to appear.

[2] Wang, D., **Zheng, Y.**, Lian, H. and Li, G. (2022). High-dimensional vector autoregressive time series modeling via tensor decomposition. *Journal of the American Statistical Association*, **117**, 1338–1356.

[3] **Zheng, Y.** and Cheng, G. (2021). Finite time analysis of vector autoregressive models under linear restrictions. *Biometrika*, **108**, 469–489.

[4] **Zheng, Y.**, Zhu, Q., Li, G. and Xiao, Z. (2018). Hybrid quantile regression estimation for time series models with conditional heteroscedasticity. *Journal of the Royal Statistical Society: Series B*, **80**, 975–993.

[5] Zhu, Q., **Zheng, Y.**[*,†] and Li, G. (2018). Linear double autoregression. *Journal of Econometrics*, **207**, 162–174.

[6] **Zheng, Y.**, Li, W.K. and Li, G. (2018). A robust goodness-of-fit test for generalized autoregressive conditional heteroscedastic models. *Biometrika*, **105**, 73–89.

[7] **Zheng, Y.**, Li, Y., Li, W.K. and Li, G. (2016). Diagnostic checking for Weibull autoregressive conditional duration models. In: Li, W.K., Stanford, D.A., Yu, H. (editors): *Advances in Time Series Methods and Applications: the A. Ian McLeod Festschrift.* Springer-Verlag, New York.

[8] **Zheng, Y.**, Li, Y. and Li, G. (2016). On Fréchet autoregressive conditional duration models, *Journal of Statistical Planning and Inference*, **175**, 51–66.

PRESENTATIONS

Invited Conference Talks

1. "An Interpretable and Efficient Infinite-Order Vector Autoregressive Model for High-Dimensional Time Series", CFE-CMStatistic, King's College London, *Dec 2022* (online).
2. "An Interpretable, Sparse and Tractable Parametric Approach to VARMA-type Time Series Modeling", The 22nd IMS Meeting of New Researchers in Statistics and Probability, George Mason University, *August 2022*.
3. "Tensor Methods for High-Dimensional Time Series Modeling", EcoSta2022, Ryukoku University, Kyoto, Japan, *June 2022* (online).
4. "Tensor Methods for High-Dimensional Time Series Modeling", The 35th New England Statistics Symposium, University of Connecticut, *May 2022*.
5. "A Novel Computationally Scalable High-Dimensional Vector Autoregressive Moving Average Model", CMStatistics 2021, King's College London, *Dec 2021* (online).
6. "A Novel Computationally Scalable High-Dimensional Vector Autoregressive Moving Average Model", The 34th New England Statistics Symposium, University of Rhode Island, *Oct 2021* (online).

7. "High-Dimensional Low-Rank Tensor Autoregressive Time Series Modeling", ISBISKOCHI2020, Cochin University of Science & Technology, India, *Dec 2020* (online).

8. "Finite Time Analysis of Vector Autoregressive Models under Linear Restrictions", The 33rd New England Statistics Symposium, University of Connecticut, *May 2019*.

9. "Hybrid Quantile Regression Estimation for Time Series Models with Conditional Heteroscedasticity", The 1st International Conference on Econometrics & Statistics (EcoSta2017), Hong Kong University of Science and Technology, Hong Kong, *June 2017*.

10. "Linear Double Autoregressive Time Series Model and Its Conditional Quantile Inference", The 6th International IMS-FIPS (Finance, Insurance, Probability and Statistics) Workshop, University of Alberta, Canada, *July 2016*.

Invited Departmental Seminars

11. "Tensor Methods for High-Dimensional Time Series Modeling", SUNY Binghamton University, Department of Mathematics and Statistics, *May 2022* (online).

12. "High-Dimensional Low-Rank Tensor Autoregressive Time Series Modeling", Shanghai University of Finance and Economics, School of Statistics and Management, *Dec 2021* (online).

13. "High-Dimensional Low-Rank Tensor Autoregressive Time Series Modeling", University of Maryland, Department of Mathematics, *Sep 2020* (online).

14. "High-Dimensional Low-Rank Tensor Autoregressive Time Series Modeling", University of Missouri, Department of Statistics, *Sep 2020* (online).

15. "High-Dimensional Low-Rank Tensor Autoregressive Time Series Modeling", University of Connecticut, Department of Economics, *Sep 2020* (online).

16. "Finite Time Analysis of Vector Autoregressive Models under Linear Restrictions", Boston College, Department of Economics, *Dec 2019*.

17. "Finite Time Analysis of Vector Autoregressive Models under Linear Restrictions", Indiana University-Purdue University Indianapolis, Department of Mathematics, *Oct 2018*.

PROFESSIONAL ACTIVITIES AND SERVICES

Professional Service

- Secretary/Treasurer, Business and Economic Statistics (B&E) Section, American Statistical Association (ASA), *2023–2024*.
- Member, ASA B&E Student Paper Awards Committee, *2023*.
- Chair, NESS Student Poster Awards Committee, *2022*.
- Member, NESS Student Paper & Poster Awards Committees, *2021*.
- Member, Education Committee, New England Statistical Society, *2020–*.

Referee Service

Annals of Statistics; Canadian Journal of Statistics; Communications in Statistics-Simulation and Computation; Computational Statistics; Contemporary Clinical Trials; Economics Letters;

JMIR Public Health and Surveillance; Journal of Business & Economic Statistics; Journal of Data Science; Journal of Econometrics; Journal of Multivariate Analysis; Journal of Statistical Computation and Simulation; Journal of the American Statistical Association; Journal of the Korean Statistical Society; Journal of Time Series Analysis; Open Health; Quantitative Finance; Sankhya; Statistica Sinica; Statistical Analysis and Data Mining; Statistics and Its Interface.

Grant Proposal Reviewer

- Reviewer for the National Science Foundation (NSF)

Conference Service

- Guest panelist, Virtual Time Series Seminar, "Sparse Identification and Estimation of Large-Scale Vector AutoRegressive Moving Averages", Speaker: David Matteson, *Jan 2023*.
- Organizer, invited session on "Modern Statistical Learning Methods for Dynamic Models." 2022 Joint Statistical Meetings, Business and Economic Statistics Section, *Aug 2022*.
- Organizer, invited session on "New Advances in High-dimensional Time Series Analysis." The International Chinese Statistical Association (ICSA) Applied Statistics Symposium, *Sep 2021*.
- Organizer, invited session on "New Advances in Time Series Analysis." The 63rd International Statistical Institute (ISI) World Statistics Congress 2021, *July 2021*.
- Organizing committee. The Pfizer/ASA/UConn Distinguished Statistician Series, *Since 2019*.
- Organizer, invited session on "High Dimensional Dependent Data Analysis." The 33rd New England Statistics Symposium, University of Connecticut, *May 2019*.

Department Service

- Member, Committee on Colloquium, *2019–*.
- Member, Committee on Alumni and Friends Receptions at JSM or other major conferences, *2019–*.
- Member, Committee on Makuch Distinguished Lecture Series, *2019–*.
- Member, Committee on Library/Tech Reports, *2019–*.

Professional Memberships

- Elected member, International Statistical Institute
- Member, American Statistical Association
- Member, Institute of Mathematical Statistics
- Member, New England Statistical Society
- Member, Education committee of New England Statistical Society

STUDENTS

PhD Students

- Shibo Li, *current*. (major advisor)
- Chiranjit Dutta, *2022*. (associate advisor)

Undergraduate Students

- Miles Kee, Summer Research Assistant, *2022*.
- Christine Nguyen, McNair Scholar Program, *2022*.

TEACHING

University of Connecticut:

– STAT 3675Q Statistical Computing (4 cr., undergraduate level; *Spring 2022 & 2023*).

– STAT 4825/5825 Applied Time Series (3 cr., undergraduate and graduate levels; *Fall 2021 & 2022*).

– STAT/BIST 5515 Design of Experiments (3 cr., graduate level; *Fall 2019–2022*).

– STAT/BIST 5815 Longitudinal Data Analysis (3 cr., graduate level; *Spring 2020 & 2021*).

Purdue University:

– STAT 511 Statistical Methods (3 cr., undergraduate level; *Spring & Summer 2019*).