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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*.

APPOINTMENTS

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

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

HONORS AND AWARDS

– Makuch Faculty Fellow, University of Connecticut, *Jan 2023–Dec 2024*.

– 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.*

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. The 22nd IMS Meeting of New Researchers in Statistics and Probability, George Mason University, *August 2022*. Title: "An Interpretable, Sparse and Tractable Parametric Approach to VARMA-type Time Series Modeling"
2. The 5th International Conference on Econometrics & Statistics (EcoSta2022), Ryukoku University, Kyoto, Japan, *June 2022* (online). Title: "Tensor Methods for High-Dimensional Time Series Modeling"
3. The 35th New England Statistics Symposium (NESS2022), University of Connecticut, *May 2022*. Title: "Tensor Methods for High-Dimensional Time Series Modeling"
4. The 14th International Conference of the European Research Consortium for Informatics and Mathematics Working Group (ERCIM WG) on Computational and Methodological Statistics (CMStatistics 2021), King's College London, *Dec 2021* (online). Title: "A Novel Computationally Scalable High-Dimensional Vector Autoregressive Moving Average Model"
5. The 34th New England Statistics Symposium (NESS2021), University of Rhode Island, *Oct 2021* (online). Title: "A Novel Computationally Scalable High-Dimensional Vector Autoregressive Moving Average Model"
6. ISBISKOCHI2020: International Virtual Conference on Advanced Statistical Techniques in Business and Industry, Cochin University of Science & Technology, India, *Dec 2020* (online). Title: "High-Dimensional Low-Rank Tensor Autoregressive Time Series Modeling"

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

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

Invited Departmental Seminars

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

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

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

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

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

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

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

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*).