Wei Zhang

Contact Information

Department of Economics
Purdue University
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Research Interests

Large Bayesian VARs, stochastic volatility models, dynamic factor models, variational inference, tree-based models.

Education

Purdue University, West Lafayette, IN USA

Ph.D. Candidate, Economics, August 2019 (expected graduation date: August 2025)

- Advisor: Joshua C. C. Chan; GPA: 3.9

Humboldt University of Berlin, Berlin, Germany

M.S., Econometrics, August 2015-August 2017

University of International Business and Economics (UIBE), Beijing, China

Master of Economics, International Trade, September 2014-June 2017

Zhongnan University of Economics and Law (ZUEL), Wuhan, China

B.A., September 2010-June 2014

Honors and Awards

Purdue University: Doctoral Student Research Fund, 2024; Summer Research Grant 2022, 2024; Federick N. Andrews Fellowship, 2019, 2020

UIBE: Graduate Student Scholarship, 2014-2016;

ZUEL: Excellent Graduate of Class 2014; National Scholarship, 2013.

Working Papers

"Bayesian Dynamic Factor Model for High-dimensional Matrix-valued Time Series" (Job Market Paper)

"Measuring Inflation Risk Using Matrix Dynamic Factors: A Granular Approach for the Euro Area" (with Joshua C. C. Chan and Marta Bańbura, ready to submit)

"Bayesian Model Comparison for Large Bayesian VARs after the COVID-19 Pandemic" (with Joshua C. C. Chan and Xuewen Yu, R&R, **Journal of Econometrics**)

"Asymmetric Dynamic Factor Model" (with Joshua C. C. Chan, ready to submit)

Academic Experience

Purdue University, West Lafayette, Indiana USA

Teaching assistant **August 2019-present**

- Providing students with a deep understanding of regression techniques, causal inference, and predictive modeling.
- Led sessions in macroeconomics, financial valuation and investment analysis, covering discounted cash flow models, portfolio optimization and asset pricing theory.
- Emphasized both mechanical and intuitive understanding of statistical methods to prepare students to apply models to real-world problems and critique empirical strategies.

- *Undergraduate*
  - Econ 210 Principals of Economics (Spring 2020)
  - Econ 251 Microeconomics (Fall 2019)
  - Econ 340 Intermediate Microeconomics (Fall 2020)
- *Masters*
  - Econ 572 Econometrics (Summer 2023)
  - Econ 576 Statistical and Machine Learning (Fall 2024)
  - Econ 590 (MY1) Financial Valuation (Fall 2021)
  - Econ 590 (MY3) Investments (Fall 2021, Fall 2022)
- *Ph.D.*
  - Econ 606 Microeconomics I (Fall 2020)
  - Econ 671 Economics (Fall 2023)
  - Econ 674 Econometrics (Spring 2022, Spring 2023, Fall 2024)
  - Econ 693 Bayesian Econometrics I (Fall 2023, Fall 2024)

Research Assistant **August 2019 -present**

- Conducted comprehensive literature reviews to support research in behavioral economics, industrial organization, labor economics, and macroeconomics.
- Collected, cleaned, and managed high-dimensional datasets from diverse sources, ensuring accuracy and consistency across variables and time periods.
- Performed econometric analysis using to identify empirical relationships and generate insights for academic and policy-oriented research.

Conference, Seminars and Workshops

SEA 94th Annual Meeting, *Graduate Student Award*, November, 2024.

NABE Tech Economics Conference & Industry Job Fair, October, 2024.

European Central Bank, DG-E Internal Seminar, August, 2024.

Purdue University, Department of Economics, Economics Workshop, 2022, 2021

Refereeing

Journal of Business & Economic Statistics, Journal of Forecasting, Journal of Quantitative Economics

Professional Experience

European Central Bank, Frankfurt am Main, Germany

Summer Trainee **July 2024-August 2024**

Collaborated with leading economists on the project "Inflationary Pressure Tracking in Euro Area". Presented the paper "Bayesian Dynamic Factor Model for High-dimensional Matrix-valued Time Series" with its application to an inflation panel in Euro area in the internal seminar. Refined the model to address missing data challenges and enhance inflation forecasting accuracy.

Skills

- Statistical Softwares: R, Matlab, Python
- Languages: Chinese (native), English (fluent), Japanese (beginner), German (basic)

Personal Information

- US permanent resident