Kejin Wu

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Department of Mathematics
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Work Experience

2025 - now Assistant Professor, Loyola University Chicago
2024 Spring Associate Instructor, University of California San Diego
2023 Fall Associate Instructor, University of California San Diego
2021 Summer Research Assistant, University of California San Diego
2021-2025 Teaching Assistant, University of California San Diego

Education

2021-2025 Ph.D. in Statistics, University of California San Diego
2019-2021 M.S. in Statistics, University of California San Diego
2018 Exchange student, University of Queensland
2015-2019 B.S. in Mathematics and Applied Mathematics, Chongqing University

Research Interests

Sampling methods • Model-free bootstrap & Scalable subsampling
Time series analysis • Pertinent prediction inference
Computational statistics • Uncertainty quantification & Prediction inference of financial data

Submitted and Working Manuscripts

2024 **Wu, K.** and Politis, D.N., Deep Limit Model-free Prediction in Regression. *(Submitted to ACM/IMS Journal of Data Science)* (Paper Link)
2024 **Wu, K.**, Karmakar, S. and Gupta, R., GARCHX-NoVaS: A Model-free Approach to Incorporate Exogenous Variables. *(Submitted to Journal of Forecasting)* (Paper Link)
2023 Ryan, O., **Wu, K.** and Jacobson, N.C., Exploratory Continuous-Time Modeling (expct): Extracting Dynamic Features from Irregularly Spaced Time Series. *(Under working)*
2020 **Wu, K.**, McFadden, J.R. and Jacobson, N.C., Determining Timing Effects of Microrandomized Trials Using Intensive Longitudinal Data and The Differential Time-varying Effect Model, 2020. *(Under working)* (Paper Link)

Publications

2025 **Wu, K.** and Politis, D.N., Scalable Subsampling Inference of Deep Neural Networks. *ACM/IMS Journal of Data Science* 2025, 2(1), 1-29. (Paper Link)
2024 **Wu, K.** and Politis, D.N., Bootstrap Prediction Inference of Nonlinear Autoregressive Models, *Journal of Time Series Analysis* 2024, 45, 800-822. (Paper Link)
2023 **Wu, K.**, Gupta, R., Pierdzioch, C. and Karmakar, S., Climate Risks and Stock Market Volatility over A Century in An Emerging Market Economy: The Case of South Africa.*Climate* 2024, 12(5), 68.

(Paper Link)

2023 Politis, D.N. and **Wu, K.**, Non-parametric Forward Bootstrap on Predicting Non-linear Time Series: Consistency, Pertinence and Debiasing, *Stats* 2023, 6(3), 839-867. (Paper Link)

2023 **Wu, K.** and Karmakar, S., A Model-free Approach to Do Long-term Volatility Forecasting and Its Variants, *Financial Innovation* 2023, 9(59). (Paper Link)

2021 **Wu, K.** and Karmakar, S., Model-Free Time-aggregated Predictions for Econometric Datasets, *Forecasting* 2021, 3(4), 920-933. (Paper Link)

Teaching Experience

Associate Instructor, University of California, San Diego

2024 Spring MATH 11: Calculus-Based Introductory Probability and Statistics

2023 Fall MATH 11: Calculus-Based Introductory Probability and Statistics

2023 Summer MATH 10A: Calculus I

2021 - 2024 **Teaching Assistant**, University of California, San Diego

MATH 287A: Time Series Analysis
MATH 281C: Mathematical Statistics
MATH 189: Exploratory Data Analysis and Inference
MATH 183: Statistical Methods
MATH 181A: Introduction to Mathematical Statistics I
MATH 181B: Introduction to Mathematical Statistics II
MATH 180A: Introduction to Probability
MATH 180B: Introduction to Stochastic Processes I
MATH 180C: Introduction to Stochastic Processes II
MATH 170A: Introduction to Numerical Analysis: Linear Algebra
MATH 11: Calculus-Based Introductory Probability and Statistics

Conferences

2025 NBER-NSF Time Series Conference, *Types of Distribution-free Methods for Forecasting Financial Volatility*, poster.

2025 NBER-NSF Time Series Conference, *Bootstrap Prediction Inference of Non-linear Autoregressive Models*, co-authored talk.

2024 Workshop on Statistical Frontiers in LLMs and Foundation Models, NeurIPS, *Deep Limit Model-free Prediction & Subsampling on Deep Neural Networks*, poster.

2023 Society Ambulatory Assessment, *Extracting Dynamic Features from Irregularly Spaced Time Series*, co-authored talk.

Services

Journal reviewers
Statistics and Computing; Mathematics and Computers in Simulation; Journal of Systems Science and Information; International Review of Economics and Finance; Fudan Journal of the Humanities and Social Sciences; International Journal of Data Science and Analytics
Mentor
UCSD Math department mentorship program

Fellowship, Honor & Award

2022 Libby Graduate Research Award

2021-2023 James B. Ax Graduate Fellowship

2019 Outstanding Student of Chongqing

2018 The Mathematical Contest in Modeling (MCM), COMAP, Meritorious Winner

2016 Mathematics Competition of Chinese College Students, First Prize Winner in Chongqing

R Package

expct: Estimate auto- and cross-correlations from irregularly spaced time series, with Prof. Ryan (Github)