Bin Wu (吴彬)

University of Science and Technology of China
Department of Statistics and Finance
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Born on August 17th, 1995
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Research Interests

Finance and Economics: Financial Derivatives Pricing; Risk Management.

Statistics and Econometrics: High-Frequency High-Dimensional Statistics; Factor Model.

Artificial Intelligence: Generative AI (Diffusion Model); Reinforcement Learning.

Education

Ph.D. in Statistics (Financial Engineering), University of Science and Technology of China, P.R.China 2023.

Research

Selected Publications

Wuyi Ye, Yi Zhou, Pengzhan Chen*, and **Bin Wu**. (2024). A simulation-based method for estimating systemic risk measures. *European Journal of Operational Research*.

Bin Wu, Pengzhan Chen, and Wuyi Ye. (2023). Variance Swaps with mean reversion and multi-factor variance. *European Journal of Operational Research*.

Wuyi Ye, Wenjing Xia, **Bin Wu***, and Pengzhan Chen*. (2022). Using implied volatility jumps for realized volatility forecasting: Evidence from the Chinese market. *International Review of Financial Analysis*.

Bin Wu, Pengzhan Chen, and Wuyi Ye. (2021). Jump activity analysis of the equity index and the corresponding volatility: Evidence from the Chinese market. *Journal of Futures Markets*.

In Progress

Xinbing Kong, **Bin Wu***, and Wuyi Ye. Staleness Factors and Volatility Estimation at High Frequencies. Major revision, *Journal of the American Statistical Association* (Top 4 Statistical Journal).

Xinbing Kong, **Bin Wu***, and Wuyi Ye. High-Dimensional Binary Variates: Maximum Likelihood Estimation with Nonstationary Covariates and Factors. Submitted to *Journal of Econometrics*.

Xinbing Kong, Cheng Liu, and **Bin Wu***. Data Synchronization at High Frequencies. Submitted to *Management Science*.

Pengzhan Chen, Yingda Song*, **Bin Wu**, and Wuyi Ye. Intra-Horizon Risk: The Role of Stochastic Volatility. Submitted to *Management Science*.

Wenjing Xia, Wuyi Ye, **Bin Wu***, and Yi Zhou. Option-implied systemic risk measures. Major revision, *Journal of Banking and Finance*.

Chuhan Cao, Pengzhan Chen, and **Bin Wu***. How to Invest and When to Adjust: A Real Options Model for Cybersecurity Investment Decisions. Submitted to *Production and Operations Management*.

Honors and Awards

First Prize of the Chinese Mathematics Competitions (Ranked 3rd in the Anhui province), 2015.

Computing Skills

Programming

MATLAB, R, LaTeX, CUDA, Python.

Methods

Advanced Probability Theory, Advanced Mathematical Statistics, Stochastic Processes, Machine Learning, Generative AI, Foundations of Probability Limit Theory, Advanced Econometrics.