GUO NAIXIN PH.D STUDENT

(+86) 18811536533
naizinguo2-c@my.cityu.edu.hk
Update: 2026.1

EDUCATION

City University of Hong Kong — Hong Kong, China
Ph.D. in Decision Analytics and Operations — 2026 *(expected)*
- Advisor: Prof. FENG Guanhao, Prof. ZHOU Zhixin
- Research Area: Machine Learning, Asset Pricing

Peking University — Beijing, China
M.S. in Statistics — 2021

Jilin University — Changchun, China
B.S. in Statistics (First Major) — 2017

Jilin University — Changchun, China
B.S. in Insurance (Dual Degree) — 2017

RESEARCH INTEREST

Machine learning , Textual Analysis, Empirical Asset Pricing, FinTech.

PUBLISHED PAPER

Can News Predict Firm Bankruptcy? 2025
- with BIE Siyu, FENG Guanhao, and HE Jingyu.
  Journal of Financial Markets 2025

Abstract: *This paper examines whether real-time business news predicts firm bankruptcy. Using full-text daily articles from the Dow Jones Newswires database, we generate firm-level predictors with ChatGPT and benchmark against FinBERT and dictionary-based models. ChatGPT-based variables outperform alternatives, with sentiment scores showing predictive power across horizons. Full-text news significantly enhance predictive accuracy over headlines. News-based measures add explanatory power beyond financial variables. Finally, we show that news captures timely information on macroeconomic conditions relevant to bankruptcy prediction, such as VIX, real GDP growth, and recession probability.*

Fast Conformal Prediction using Conditional Interquantile Intervals 2026
- with LUO Rui, and ZHOU Zhixin.
  Forthcoming, *Proceedings of the AAAI Conference on Artificial Intelligence 2026*

Abstract: *We introduce Conformal Interquantile Regression (CIR), a conformal regression method that efficiently generates minimal prediction intervals with guaranteed coverage. CIR leverages black-box machine learning models to estimate outcome distributions through interquantile ranges, transforming these estimates into compact prediction intervals while achieving approximate conditional coverage. We further propose CIR+ (Conditional Interquantile Regression with More Comparison), which enhances CIR by incorporating a width-based selection mechanism for interquantile intervals. This refinement yields narrower prediction intervals while maintaining comparable coverage, though at the cost of slightly increased computational time. Both methods address key limitations of existing distributional conformal prediction approaches: they handle skewed distributions more effectively than Conformalized Quantile Regression, and they achieve substantially higher computational efficiency than Conformal Histogram Regression by eliminating the need for histogram construction. Extensive experiments on synthetic and real-world datasets demonstrate that our methods optimally balance predictive accuracy and computational efficiency compared to existing approaches.*

Work in Progress

One News, Two Markets: LLM-Derived Sentiment and Trading Volume

- with BIE Siyu, FENG Guanhao, and HE Jingyu.
  Under review at *Management Science*.

Group Lasso for Factor Selection

- with Arash A. Amini, ZHOU Zhixin, and FENG Guanhao.

Academic Services and Teaching

Reviewer:

NeurIPS, ICLR, AAAI.

Teaching Assistant:

Probability and Statistics (2018)

Deep Learning (2018)

Advanced Mathematics (2019)

Probability with Applications in Business (2021-2023)

Introduction to Mathematical Statistics (2022)

Skills

Programming: Python, R, Linux, MATLAB, Stata, SAS.

Database: Dow Jones Newswires, CRSP, Compustat, TRACE.

Awards and Honors

- **Scholarship** Second-class Scholarship (2014, 2017)
- **Scholarship** National Scholarship (2015)
- **Scholarship** First-class Scholarship (2016)
- Outstanding Student (2016)
- National Undergraduate Innovation and Entrepreneurship Training Program (2016)

References

FENG Guanhao Gavin
Associate Professor
Supervisor/Chair, Qualifying Panel
Dept. of Decision Analytics&Operations
City University of Hong Kong
E-mail: gufeng@cityu.edu.hk

LUO Lorry Rui
Assistant Professor
Qualifying Panel Member
Dept. of Systems Engineering
City University of Hong Kong
E-mail: ruiluo@cityu.edu.hk

HE Jingyu
Assistant Professor
Qualifying Panel Member
Dept. of Decision Analytics&Operations
City University of Hong Kong
E-mail: jingyuhe@cityu.edu.hk