Yibo Wang

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Education

University of Science and Technology of China Sept. 2022 - June 2026 (Expected)

B.S. in Statistics, Department of Statistics and Finance, School of Management

- **GPA**: 3.98/4.30 **Weighted Score**: 92.20 **Rank**: 1/87 in School of Management

Publications

1. **Wang, Y.**, Leng, C., and Tang, C. Y. (2025). Generalized Correlation Regression for Disentangling Dependence in Clustered Data. arXiv:2509.01774. *(Submitted)*
2. Wu, J., **Wang, Y.**, Pang, X., Zhang, Z. and Zhao, R. (2024). New Quality Productive Forces and Digital Economy: Measurement Index, Coupling Coordinated Degree and Influence Mechanism. *(Under Review)*

Scholarship and Awards

- China National Scholarship (Highest Scholarship from Ministry of Education of China) 2025
- China National Scholarship (Highest Scholarship from Ministry of Education of China) 2024
- JAC Motors & NIO Joint Scholarship (Top 3 in School) 2024
- First Prize in 15^{th} Chinese Mathematics Competitions in Anhui Province 2023
- Bronze Prize in 1^{st} USTC Yuqing Cup Campus Software Design Competition 2023
- Student Grants by National Basic Subject Talent Training Plan in USTC 2022

Research Experience

Generalized Correlation Regression for Clustered Data Feb. 2025 - Sept. 2025

Advisor: ***Prof. Chenlei Leng*** *(University of Warwick) and* ***Prof. Cheng Yong Tang*** *(Temple University)*

- We introduce generalized correlation regression (GCR), a unified framework that models correlations directly as functions of interpretable covariates, while accommodating continuous, binary, categorical, and count outcomes.
- GCR simultaneously estimates marginal means and correlation structures, enabling flexible, covariate-dependent modeling of dependence without requiring fully specified joint distributions.
- Through three real-world applications, GCR reveals community-, family- and individual-level drivers of dependence, achieves superior predictive performance, and uncovers insights obscured by standard methods.

Influence Mechanism of New Quality Productive Forces and Digital Economy May 2024 - Oct. 2024

Advisor: ***Prof. Jie Wu*** *(Department of Management Science, USTC)*

- Construct measurement index systems for the new quality productive forces (NQPF) and digital economy (DECO). Employ the cross entropy weight method to measure their levels across 30 provinces in China from 2013 to 2022.
- Analyze the spatiotemporal evolution and coupling relationship of NQPF and DECO, utilizing kernel density estimation, Dagum gini coefficient, and coupling coordination degree model.
- Explore the influence mechanisms between NQPF and DECO by fixed effects model, moderation effects model and threshold regression model, and find that NQPF significantly promoted the development of DECO, with fintech playing a positive moderating role and exhibiting a triple threshold effect.

Relevant Courses

*(OG denotes ongoing courses; * denotes graduate-level courses)*

- **Mathematics**: Mathematical Analysis B (93, 93, 86), Linear Algebra B (95, 90), Introduction to Differential Equations with Applications (86), Real Analysis (88), Complex Variable (90), Functional Analysis (99), Convex Optimization (100)
- **Probability and Statistics**: Probability (87), Mathematical Statistics (88), Applied Stochastic Processes (92), Fundamentals of Statistical Algorithm (92), Regression Analysis (96), Time Series Analysis A (96), Multivariate Analysis A (99), Non-parametric Statistics (100), Machine Learning (OG), *Advanced Probability Theory (OG)
- **Computer Science**: Computer Programming A (94), Database Technology and Applications (97), Applied Statistical Software (100)

Academic Experience

Visiting Student of University of Warwick June 2025 - Sept. 2025

Department of Statistics, University of Warwick

- Summer research internship student advised by ***Prof. Chenlei Leng***

Zhejiang University 2024 SDG Global Summer School July 2024

School of Mathematical Sciences, Zhejiang University

- Course: Data Acquisition and Processing

Oxford Prospects Programmes - 2024 Winter On-Campus Programme Jan. 2024 - Feb. 2024

OPGDI, Regent's Park College, University of Oxford

- Module: STEM

Teaching Assistant

Applied Statistical Software (STAT3002, USTC) Spring 2025

Department of Statistics and Finance, University of Science and Technology of China

- Lecturer: *Prof. Canhong Wen* and *Prof. Jing Zeng*

Leadership and Activities

- **President** of USTC Harmonica Association Sept. 2024 - June 2025
- **Commissioner** of USTC Harmonica Association Sept. 2023 - June 2024