Zijin Wang

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Education

- 2017.09 – present   Southwestern University of Finance and Economics, Master and Ph.D. degree candidate in Mathematical Finance
  (Defense schedule: 2024 December, supervisor: Chuan DING, Peimin CHEN)
- 2021.12 – 2022.12   Humboldt University in Berlin, Germany, visiting student, funded by the China Scholarship Council
  (Supervisor: Wolfgang Karl Härdle)
- 2013.09 - 2017.06   Southwestern University of Finance and Economics
  Bachelor of Science + Bachelor of Economics,   Mathematics and Applied Mathematics

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Research Interest

- Financial risk management: semiparameter volatility model, tail risk, distance to default
- Asset pricing
- High-dimensional time series, high-dimensional network
- Deep learning application in financial time series

Research papers

- Volatility Cluster and Its Implications in Value at Risk (joint with Peimin Chen, Chunchi Wu, Peng Liu), *International Review of Economics and Finance,* 2024, 94
  MATLAB codes: [wzj5163/Cluster-partition-volatility (github)](#)
- Network Portfolio and its Estimation under High-dimensionality (joint with Rui Ren, Wolfgang Karl Härdle, Wei Biao Wu), R&R in *Journal of Business and Economic Statistics*
  R codes：[wzj5163/Network-portfolio (github)](#)
- Risk Premia in the Bitcoin Market (joint with Caio Almeida, Maria Grith, Ratmir Miftachov), working paper: https://arxiv.org/pdf/2410.15195, presented in SoFiE 2024
  Python & MATLAB codes：[wzj5163/CDI_EPK_BTC (github)](#)
- Regime-Dependent Multi-Task Learning for Risk-Adjust Portfolio (joint with Junzo Watada, Yicheng Wei) working paper, presended in ISME2024
- GEV-based Distance to Default (joint with Peimin Chen, Chunchi Wu), working paper
  MATLAB codes：[wzj5163/Distance_to_default (github)](#)
- Firms' environmental performance and stock returns long-term volatility level and connectedness. Evidence from international comparison (joint with Gianluca Vagnani, Jinhuan Tian, Yan Dong), working paper
- Top managers involvement in inventive activities, technological knowledge breadth, and firms' performance (joint with Gianluca Vagnani, Jinhuan Tian, Yan Dong), working paper
- Markovian Dynamic Correlation (joint with Gianluca Vagnani) Working Paper

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Conference report

- 2024   The 19th International Symposium on Management Engineering (ISME 2024), Matsue, Japan
  selected paper "Regime-Dependent Multi-Task Learning for Risk-Adjust Portfolio"

Conference webpage: [ISME2024](#)

- 2024 16th Annual SoFiE(Society of Financial Econometrics) Meeting, Rio de Janeiro, Brazil
   report paper "Risk Premia in the Bitcoin Market"
   Conference webpage: [SoFiE2024](#)
- 2022 STAT of ML, Prague, Czech Republic
   report paper "Network Portfolio and its Estimation under High-dimensionality"
   Conference webpage: [STAT of ML 2022](#)
- 2022 ML Approaches Finance and Management，Berlin, Germany
   report paper "Network Portfolio and its Estimation under High-dimensionality"
   Conference webpage: [ML approaches Finance and Management](#)
- 2022 Haindorf Seminar, Hainice, Czech Republic
   Report paper "Volatility Cluster and Its Implications in Value at Risk and Option Pricing"
   Conference webpage: [Haindorf Seminar 2022](#)
- 2019 The 2nd National Mathematical Finance Doctoral Forum, Chengdu, China
   report paper "Volatility Cluster and Its Implications in Value at Risk and Option Pricing"

Funded academic projects

- 2020 Central Universities Basic Research Fund Doctoral Research Project (JBK2007195, completed), as project leader (10,000 RMB)
   Project title: Volatility Cluster and Its Implications in Value at Risk and Option Pricing
- 2016 The 13th Undergraduate Research Innovation Project of Southwestern University of Finance and Economics
   Project title: Research on the influencing mechanism of second-child gender preference in Chinese families from a micro perspective—Empirical analysis based on CFPS data (completed with A-level)

Working experience

2023.12–2024.03 China Post & Capital Fund Management Co., Ltd　　　　　　　　**Quantitative Intern**

- Machine learning investment strategies and quantitative fund selection strategies
- Asset allocation and factor selection

Teaching experience

- Teaching Assistant: Analysis (6 semesters), Algebra (4 semesters), Algebra in English (2 semesters), Analytical Geometry, Probability Theory and Mathematical Statistics (1 semester)
- Online courses
   Graph theory minimum spanning tree and its applications: [Minimum Spanning Tree | Quantinar](#)
   Network Portfolio: [Network Portfolio | Quantinar](#)

Awards

- 2019　　Special PhD student scholarship (top 30)
- 2019　　2019 Second Prize for Thesis at the Second National Mathematical Finance Doctoral Forum
- 2018　　College Student Comprehensive Quality A-Level Certificate
- 2017　　Outstanding Graduates of Southwestern University of Finance and Economics
- 2015　　National Second Prize in the National Undergraduate Mathematical Modeling Competition

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Miscellaneous

- Programming and Software:
  - Proficient: MATLAB, R, Python, LaTeX, Gephi, ffmpeg
  - Intermediate: SPSS, Stata, SAS, tenserflow
- Language:
  - English: proficiency, IELTS 6.5
  - Chinese: mother tongue
  - German: A1

References

- Chuan Ding
  - Professor at Southwestern University of Finance and Economics, Email: dingchuan@swufe.edu.cn
- Peimin Chen
  - Associate Professor at BNU-HKBU United International College, Email: peiminchen@uic.edu.cn
- Wolfgang Karl Härdle
  - Professor at Humbolt University of Berlin, Email: haerdle@hu-berlin.de
- Caio Almeida
  - Professor at Princeton University, Email: calmeida@princeton.edu
- Maria Grith
  - Associate Professor at Erasmus University Rotterdam, Email: grith@ese.eur.nl
- Wei Biao Wu
  - Professor at Chicago University, Email: wbwu@uchicago.edu
- Chunchi Wu
  - Professor at State University of New York, Buffalo, Email: chunchiw@buffalo.edu
- Peng Liu
  - Professor at Cornell University, Email: peng.liu@cornell.edu