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Citizenship: Chinese

Weiguan WANG (王伟冠)

Academic Positions

2021–present **Assistant Professor of Finance**, *Shanghai University*, China

Research Interests

Financial Engineering, FinTech, Hedging, Machine Learning, Portfolio Management

Education

2016–2021 **Ph.D. Mathematics**, *London School of Economics and Political Science*
Supervisor: Johannes Ruf
Thesis: Statistical Hedging with Neural Networks
Defence committee: Johannes Muhle-Karbe and Mihail Zervos

2014–2015 **MSc. Financial Mathematics**, *University College London*, Distinction
Thesis: Optimal Execution Under Nonlinear Transient Market Impact Model

2009–2013 **BEng Automation**, *Donghua University*, Shanghai, First Class

Publications

Published and forthcoming papers in peer-reviewed journals

- Risk premium principal component in the Chinese stock market. (with Jie Mao, Jingjing Shao). **Pacific-Basin Finance Journal**. [Journal]
- A note on spurious model selection. (with Johannes Ruf.) **Quantitative Finance**, 2022. [Journal, SSRN, Code]
- Hedging with linear regressions and neural networks. (with Johannes Ruf). **Journal of Business & Economic Statistics**, 2022. [Journal, SSRN, Code]
- Neural networks for option pricing and hedging: A literature review, **Journal of Computational Finance**, 2020. (with Johannes Ruf). [Journal, SSRN]

Chinese papers

- 基于线性回归和神经网络的期权对冲方法：以上证 50ETF 期权为例. (with 丁静，刘鑫). **上海大学学报（自然科学版）**. [Journal]

Papers submitted to peer-reviewed journals

- How effective are narratives for pricing Chinese stocks? (with Siqiang Gong)
- A latent factor model for the Chinese option market
- Do lagged features help option hedging: A tale of two markets

Working papers

- Benchmarking deep hedging
- Deep hedging with signature for non-Markovian setting

Theses

- Statistical Hedging with Neural Networks. Thesis for the Ph.D. in Mathematics, LSE, 2021. [PDF]
- Optimal Execution Under Nonlinear Transient Market Impact Model. Thesis for the MSc. in Financial Mathematics, UCL, 2015. [PDF]

Work in progress

- Statistical hedging in multi-period with neural networks.

Grants

- Nation Natural Science Foundation of China for Young Researchers, Grant no. 72201158, RMB 300,000, PI
- Starting grant for young scholar at Shanghai University, RMB 150,000, PI
- Leading scholars scheme at Shanghai, RMB 150,000, PI

Awards and Prizes

2023	The 16th Philosophy and Social Science Outstanding Accomplishment Award	*Shanghai*
2019	Final year Ph.D. Scholarship	*LSE*
2013	Excellent Graduate	*Donghua University*
2011 & 2012	Academic Excellence Prize	*Donghua University*
2010	Shanghai Scholarship	*Shanghai Municipal Education Commission*
2010	University Scholarship	*Donghua University*

Conferences

Contributed talks

- Information Leakage in Backtesting, 7th International Young Finance Scholar's Conference, in virtual, 2021
- Hedging with Linear Regressions and Neural Networks, LSE Financial Mathematics Reading Group, 2018 & 2019

Participated conferences

- 12th European Summer School in Mathematical Finance, Padova, 2019
- LSE Ph.D. Day, London, 2018, 2019
- 17th Winter School in Mathematical Finance, Lunteren, 2017
- LSE Risk and Stochastic Conference, London, 2016 & 2017

Teaching

Teaching Assistant

2018–2019	Computational Methods in Financial Maths	*LSE, Summer School*
2017–2019	Mathematical Methods	*LSE, Undergraduate*
2017–2019	Programming in C++	*LSE, MSc. Fin. Maths*

Referee Activities

Journal of Finance and Data Science, Journal of Commodity Markets

Industrial Experiences

20.12–21.01 **Quant Analyst (intern)**, *Huatai Securities (华泰证券)*, Shanghai, Fixed Income
Constructed zero curves, implemented Z-Spread calculation, and conducted research in understanding the movement of Z-Spread in Chinese fixed income market.

20.08–20.09 **Quant Analyst (intern)**, *Qianxiang Asset Management (千象资产)*, Shanghai, Commodity Trading
Implemented optimal liquidation algorithms under transient market impact models.

20.06–20.08 **Quant Analyst (intern)**, *Zheshang Securities (浙商证券)*, Shanghai, Financial Derivatives
Validated pricing models for exotic options including shark fin, snowball, and others.

Computer Skills

C++, LaTeX, Linux, Matlab, Microsoft Office, Python, R