Chufang WU, Yuki

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WORK EXPERIENCE

Shenzhen Polytechnic University Mar 2023 - Present

Lecturer, Tech X Academy
Research Interest: Portfolio Management, Risk Management, Derivatives Pricing, Actuarial Science
Courses Taught: Calculus, Physical Modelling, Linear Algebra

International Digital Economy Academy Sep 2022 – Mar 2023

Researcher, Fin-AI Department

- Compared implied volatility surface models for SSE 50ETF options (e.g., Heston, SABR, SVI, Wing)
- Assisted in developing Delta-neutral quantitative volatility trading strategies and conducted back-testing
- Maintained the derivatives pricing ETL system, evaluated pricing errors, and performed risk monitoring

EDUCATION

The University of Hong Kong Sep 2018 - Sep 2022

PhD in Mathematics
Supervisor: Prof. Wai-Ki Ching and Prof. Jia-Wen Gu
TA Experience: Linear Algebra II, Stochastic Processes, Financial Economics, Non-life Insurance Actuarial Science, Basic Mathematics for Business and Economics

Southern University of Science and Technology Sep 2014 – Jul 2018

Bachelor of Economics (GPA: 3.83 / 4.00)
Courses Taken: Probability, Mathematical Statistics, Partial Differential Equation, Real Analysis, Econometrics, Risk Management, Security Investment, Models and Pricing of Financial Derivatives, etc.

Publications (*corresponding author)

- **Wu, C.**, Gu, J.*, Ching, W.K. (2024). **Pre-committed strategies with initial-time and intermediate-time VaR constraints.** *Journal of Optimization Theory and Applications*. (published version)
- Yu, F., Ching, W.K., **Wu, C.***, Gu, J. (2022). **Optimal pairs trading strategies: a stochastic mean-variance approach.** *Journal of Optimization Theory and Applications*. (published version)
- He, W.H., **Wu, C.***, Gu, J., Ching, W.K., Wong, C. (2021). **Pricing vulnerable options under a jump-diffusion model with fast mean reverting stochastic volatility.** *Journal of Industrial and Management Optimization*. (published version).
- So, C.C.*, Li, T.O., **Wu, C.**, Yung, S.P. (2021). **Differential spectral normalization (DSN) for PDE discovery.** *Proceedings of the AAAI Conference on Artificial Intelligence*. (published version)
- **Wu, C.**, Gu, J.*, Ching, W.K., So, C.C. (2025). **Optimal investment for a DC pension plan under VaR regulations and minimum insurance with inflation risk.** Submitted. (preprint)

RESEARCH EXPERIENCE

Modelling the CSI 300 ETF options implied volatility surface Aug 2022 – Sep 2022

Research project at the International Digital Economy Academy

- Investigated and implemented various implied volatility models such as SVI, SABR and Heston
- Constructed the implied volatility surface and option trading strategies based on a combined model

An empirical analysis of volatility smile based on S&P 500 index options Jan 2018

Course project for Models and Pricing of Financial Derivatives, under the supervision of Prof. Pingping Zeng

- Examined the volatility smile pattern for S&P 500 index options from Sep. to Dec. 2017 with MATLAB
- Assessed the determinants that cause the smile pattern using Granger Causality Test

ACTIVITIES

Half-Marathon Finisher, **Standard Chartered Hong Kong Marathon** Jan 2025
Young Scientist, **Hong Kong Laureate Forum** Oct 2023
Student Member, **The Actuarial Society of Hong Kong** Sep 2018 - Mar 2020

ADDITIONAL

Languages	Native in Mandarin, Cantonese; Business proficient in English
Applications	Familiar with Python, MATLAB, R, Excel VBA, SAS, etc.
Qualifications	Passed Exam P/FM/MFE/STAM/LTEM/VEE of the Society of Actuaries; Futures Practitioners Qualification Certificate