

Yi SHEN

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EDUCATION BACKGROUND

The Chinese University of Hong Kong, Hong Kong 09/2023-06/2027

PhD in Mathematics

- **Cumulative GPA: 3.889/4.0**

The University of Edinburgh, United Kingdom 09/2021-09/2022

Master of Science in Computational Mathematics in Finance

- **GPA:** 76.6/100 (Distinction)
- **Main Courses:** Discrete Time in Finance, Monte Carlo and Python Programming etc.

Beijing Normal University-Hong Kong Baptist University United International College, China 09/2017-06/2021

Bachelor of Science (Honours) in Financial Mathematics

- **Cumulative GPA:** 3.5/4.0 (First Class Honours) **Major GPA:** 3.81/4.0

ACADEMIC EXPERIENCE

Current Research - ESG Pricing and Related Issues. 09/2023-Present

- Engaged in research on ESG pricing models and their impact on financial markets.
- Focus on developing and evaluating new methods to integrate ESG factors into asset pricing and investment decisions.
- Utilize quantitative techniques to assess how ESG criteria influence stock returns and market dynamics.

Research Programme-The Chinese University of Hong Kong and Luoshu Investment 09/2022-09/2023

Research Assistant of Prof. Xiaolu Tan

- Assisted in using stochastic controls to find the optimal bid and offer prices in the market making, especially for closed-form approximation for bid-ask prices.
- Conducted research to identify alpha factors for investment strategies, focusing on enhancing portfolio returns through factor analysis. Utilized neural networks to explore and validate potential alpha factors, optimizing model performance and identifying factors that exhibit predictive power.

Final-year Project at The University of Edinburgh 06/2022-09/2022

Solving Non-path-dependent PDEs and Path-dependent Heat Equation

- This paper aims to use the Probability Meshless Method(PMM) to obtain the posterior distribution probabilities of the non-path-dependent linear and non-linear solutions, and to explain how to make use of PMM and signature kernel to solve path-dependent heat equation.
- The result shows that R-squared is very high and Mean Squared Error (MSE) is low after setting different terminal payoffs and conducting parameter tests, which is a good evidence of the high precision of the numerical solutions.

Financial Mathematics Programme-BNU-HKBU United International College 09/2018-09/2020

Research Assistant of Prof. Xiaoyi Chen

- Assisted in the research on the growth law of biological tissue involved in biomechanics to explore the effect of stress on the growth of biological tissue.
- Co-published a paper with my supervisor during her work: “**Generating Complex Fold Patterns through Stress-free Deformation Induced by Growth**”, published in **Journal of the Mechanics and Physics of Solids (JMPS)** in 2021.

EXTRACURRICULAR ACTIVITIES

Mathematical Contest in Modeling (MCM) 03/2020

Contestant (Meritorious Winner).

ADDITIONAL INFORMATION

- **Skills:** Good Command of Mathematica, MATLAB, R, Python, C++, etc.; Proficient in MS Office
- **Awards:** First Class Scholarship of BNU-HKBU United International College in 2020-2021 Academic Year and 2021-2022 Academic Year