







# Cunxin Huang, PhD Student

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## Education

- 2022 – today    **PhD student, Department of Applied Mathematics, The Hong Kong Polytechnic University.**  
Applied Optimization and Optimal Control.  
Supervised by Dr. Zaikun Zhang and Prof. Xiaojun Chen.  
Supported under the Hong Kong PhD Fellowship Scheme (HKPFS).
- 2018 – 2022    **BSc, School of Mathematics, Jilin University.**  
Information and Computing Science.

## Research Interests





-  **Derivative-free Optimization (DFO)**
-  **Randomized Methods**

## Publications


- 1**   **C. Huang**, H. Song, J. Yang, and B. Zhou. “Error Analysis of Finite Difference Scheme for American Option Pricing under Regime-Switching with Jumps”. In: *J. Comput. Appl. Math.* (2023). Accepted for publication.
- 2**   Z. Gao, **C. Huang**, H. Song, and B. Zhou. “Projection and Contraction Method for Pricing American Option under Regime-Switching Model”. In: *Journal of Jilin University (Science Edition)* 60 (2022), pp. 1090–1096.

## Honors

### Fellowships


- 2022    **Hong Kong PhD Fellowship Scheme (HKPFS)**, supported by Research Grants Committee (RGC) of Hong Kong, ref. PF21-56718.
- 2020, 2021    **First Class Scholarship**, awarded by Jilin University.
- 2020    **Zhao-Yue Scholarship**, awarded by School of Mathematics, Jilin University.
- 2019    **National Scholarship**, awarded by Ministry of Education, China.

### Competition Awards

- 2021    **Finalist Award of Mathematical Contest in Modeling**, awarded by Society for Industrial and Applied Mathematics (SIAM).

## Honors (continued)





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- 2020      **First Prize of National College Students Mathematical Competition**, awarded by Chinese Mathematical Society (CMS).




## Miscellaneous Experience

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### Student Affairs




- 2021 – 2022      **Academic Mentor for Freshmen**, School of Mathematics, Jilin University.  
Guiding and monitoring the study of freshmen in School of Mathematics.
- 2020 – 2021      **President of Student Union**, School of Mathematics, Jilin University.  
Coordinating all departments of student union and organizing various activities.
-  **Teaching Assistant**, School of Mathematics, Jilin University.  
Conducting seminars on Mathematical Analysis and Advanced Linear Algebra for freshmen in School of Mathematics.
- 2019 – 2021      **Assistant Counselor**, School of Mathematics, Jilin University.  
Giving freshmen useful guidance on study and life.

### Extra-Curricular Activities

- 2021      **Interdisciplinary Training Program**, Jilin University.  
Research on efficient numerical methods to solve put option pricing under regime-switching model.
- 2020      **Academic Exchange Program**, Cambridge & Jilin University.  
Two-week online courses, awarded “Best Group Leader”.
- 2019      **Poverty Alleviation Research**, Si-Yuan Program.  
Two-week field research on: development of the wine industry for poverty alleviation in Hongsipu, and analysis of its future opportunities and challenges.

## Skills

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- Languages      Native speaker for Mandarin, and level B2 for English.
- Coding         Python, C, MATLAB, Git,  $\text{\LaTeX}$ .
- Misc.           Basketball, table tennis, calligraphy.