

WANG RUIJIE

✉ WANGaRuijie.github.io  [Wang Ruijie](#)  [WANGaRuijie](#)  ruijie.wang@connect.polyu.hk

EDUCATION

The Hong Kong Polytechnic University

Major in Computer Science, Minor in Applied Mathematics, 3.67/4.3

August 2022 - Present

Kowloon, Hong Kong

Yali High School

Track of Science for the National College Entrance Examination

September 2019 - June 2022

Changsha, China

EXPERIENCES

Research Assistant, The Hong Kong Polytechnic University

Advised by [Prof. Li Bo](#)

September 2023 - Present

Kowloon, Hong Kong

- Focus on the fair allocation problem of indivisible items.

Summer Research Intern, Simon Fraser University

Mentored by [Prof. Wang Yuepeng](#)

May 2025 - Present

Burnaby, Canada

- Design and implement a SQL program synthesizer for vector databases.

Service Learning: Technology Beyond Borders

Cooperation with *Da Nang University of Architecture*

December 2023 - January 2024

Da Nang, Viet Nam

- Promote STEM education in Lý Công Uẩn Primary School with local college students.

Exchange Student, Technical University of Denmark

Department of Applied Mathematics and Computer Science

May 2023 - August 2023

Copenhagen, Denmark

- Data analytics and Computational Imaging.

RESEARCH INTERESTS

Economics and Computation Fair division, Mechanism Design, Algorithmic Fairness, and Game Theory Reasoning in Machine Learning, Cryptocurrency, and Privacy.

Foundations of Machine Learning Optimization, Generalization, Causality, and Interpretability.

Formal Methods and Verification Program Synthesis and Automated Reasoning.

PAPERS

Fair Orientations: Beyond Envy-Freeness Ankang Sun, **Ruijie Wang**, Bo Li. Under review.

We introduce the study of proportionality, equitability, and their relaxations for the fair orientation model on graphs. PROP1 + fPO orientations always exist and can be computed in polynomial time, while PROP, PROPX, EQ, EQX, and EQ1 orientations of goods and chores and EF1 orientations of chores may not exist and are NP-hard to decide.

HONORS & AWARDS

Dean's Honours List 2024/2025

Issued by the Faculty of Engineering, The Hong Kong Polytechnic University

September 2025

Mitacs Globalink Research Internship Award

Issued by Mitacs, Canada, for the internship at Simon Fraser University with full funding.

February 2025

Dean's Honours List 2023/2024

Issued by the Faculty of Engineering, The Hong Kong Polytechnic University

September 2024

HKSAR Government Scholarship Fund - Reaching Out Award 2022/23

Issued by the Education Bureau, Hong Kong Special Administrative Region

August 2023