

WANG RUIJIE

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EDUCATION

The Hong Kong Polytechnic University Major in Computer Science, Minor in Applied Mathematics, GPA 3.67	<i>August 2022 - Present Kowloon, Hong Kong</i>
Yali High School Track of Science for the National College Entrance Examination	<i>September 2019 - June 2022 Changsha, China</i>

EXPERIENCES

Research Assistant, The Hong Kong Polytechnic University <i>Advised by Prof. Li Bo</i>	<i>September 2023 - Present Kowloon, Hong Kong</i>
· Focus on the fair allocation problem of indivisible items.	
Summer Research Intern, Simon Fraser University <i>Mentored by Prof. Wang Yuepeng</i>	<i>May 2025 - Present Burnaby, Canada</i>
· Design and implement a SQL program synthesizer for vector databases.	
Service Learning: Technology Beyond Borders <i>Cooperation with Da Nang University of Architecture</i>	<i>December 2023 - January 2024 Da Nang, Viet Nam</i>
· Promote STEM education in Lý Cửng Un Primary School with local college students.	
Exchange Student, Technical University of Denmark <i>Department of Applied Mathematics and Computer Science</i>	<i>May 2023 - August 2023 Copenhagen, Denmark</i>
· Data analytics and Computational Imaging.	

RESEARCH INTERESTS

Fair Division, Mechanism Design, Game Theory, and their interplay with Machine Learning, Privacy, and Blockchain; Program Synthesis and Formal Verification for Databases and AI Systems.

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, EQ1, and EF1 orientations 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	<i>September 2025</i>
Mitacs Globalink Research Internship Award Issued by Mitacs, Canada, for the internship at Simon Fraser University with full funding.	<i>February 2025</i>
Dean's Honours List 2023/2024 Issued by the Faculty of Engineering, The Hong Kong Polytechnic University	<i>September 2024</i>
HKSAR Government Scholarship Fund - Reaching Out Award 2022/23 Issued by the Education Bureau, Hong Kong Special Administrative Region	<i>August 2023</i>