He Entong *July 26, 2003*

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The University of Hong Kong • Pokfulam, Hong Kong SAR • China

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EXPERIENCE

Mitacs Globalink Research Internship - Advisor: Prof. Anne Broadbent *2024/5/27 - 2024/8/20*
Research focus: quantum non-locality, algebra of non-local games and quantum complexity theory. The project was co-advised by Dr. Connor Paddock.

HKU Summer Research Programme 2023 - Advisor: Prof. Chenshu Wu *2023/5/29 - 2023/8/10*
Focused on sensing techniques with quantum metrology and the sensor localization model it introduces. The project was co-advised by Prof. Yuxiang Yang.

Student Teaching Assistant - Supervisor: Prof. Takwing Chim / Dr. Failung Tsang *2022 - 2023*
Helped with (1) problem-solving session for COMP2113/ENGG1340 - Programming technologies, (2) conducting example classes for MATH1851/1853 - Introduction to calculus/linear algebra.

Research Assistant - Advisor: Prof. Daniel Zhuoyu, Long @ CUHK SEEM *2022/7/1 - 2022/9/1*
Assisted the mathematical proof of theorems in resource allocation with proactive upgrade scheme. Promoted the proof of the submodularity property of revenue function defined by a variant of the HJB equation.

AWARDS

HKU Undergraduate Research Fellowship Programme Scholarship	*HONG KONG SAR, CHINA*
Mitacs Globalink Research Internship Award - 2024	*CANADA*
HKU Presidential PhD Scholarship (2025 intake) - conditional offer	*HONG KONG SAR, CHINA*
HKU Summer Research Programme 2023 Research Scholarship	*HONG KONG SAR, CHINA*
C.V. Starr Scholarship	*HONG KONG SAR, CHINA*
2021-2022 Dean's Honour List Award - HKU Faculty of Engineering	*HONG KONG SAR, CHINA*
36th & 37th Chinese Physics Olympiad - Second Prize	*GUANGDONG, CHINA*

PUBLICATIONS AND PREPRINTS

Topics in Non-local Games: Synchronous Algebras, Algebraic
Graph Identities, and Quantum NP-hardness Reductions *Entong He*
Preprint. Research conducted as a Mitacs visiting research student at the uOttawa QUASAR group.
arXiv link: https://arxiv.org/pdf/2408.10114

QuERLoc: Towards Next-Generation Localization
with Quantum-Enhanced Ranging *Entong He, Yuxiang Yang, Chenshu Wu*
Preprint, under review for INFOCOM 2025.
arXiv link: https://arxiv.org/pdf/2404.16895

Quantum Ranging Enhanced TDoA Localization *Entong He, Yuxiang Yang, Chenshu Wu**
In proceedings of 2024 IEEE International Conference on Acoustics, Speech and Signal Processing.
doi: 10.1109/ICASSP48485.2024.10446684

SERVICE

Reviewer for 2025 IEEE International Conference on Acoustics, Speech and Signal Processing.

EDUCATION

The University of Hong Kong	POKFULAM, HONG KONG SAR, CHINA

Bachelor of engineering in computer science (in progress). *2021 - present*
Cumulative GPA: 3.85/4.3 (WES 3.81/4) - **top 15**.

National University of Singapore	SINGAPORE

Exchange student @ NUS School of Computing. *2024 Jan - May*
Courses: quantum computing, stochastic operations research, game theory, Bayesian statistics.
Semester GPA: 4.75/5.

Shenzhen Senior High School	SHENZHEN, GUANGDONG, CHINA

2021 NJCEE participant (Subjects: Physics, Chemistry, Biology). *2018 Sep - 2021 Jun*

SKILLS

Technical specialties: (1) **Mathematical Skills:** calculus, linear algebra, measure theory-based probability, design and analysis of algorithms. (2) **Programming Skills:** C, C++, Python, Mathematica.

Natural languages: Mandarin (native); English (**IELTS**: 7.5; **TOEFL**: 107, 25 in speaking); Cantonese (fluent).