He Entong *July 26, 2003*

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EXPERIENCE

Mitacs Globalink Research Internship 2024 – *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
  – Research focus: sensing with quantum metrology and sensor localization approaches with quantum sensing.
  – The project was *co-advised by Prof. Yuxiang Yang*.

Student Teaching Assistant – *Supervisor: Prof. Takwing Chim / Dr. Failung Tsang* 2022 - 2023
  – Assisted teaching in (**1**) problem-solving session for COMP2113/ENGG1340 (programming technologies); (**2**) conducting example and remedial classes for MATH1851/1853 (introduction to calculus/linear algebra).

Research Assistant at CUHK SEEM – *Advisor: Prof. Daniel Zhuoyu, Long* 2022/7/1 - 2022/9/1
  – Research focus: resource allocation with proactive upgrade scheme. Promoted the proof of the submodularity property of 3- and 4-product revenue function on a variant of the Hamilton-Jacobi-Bellman equation.

AWARDS

HKU Undergraduate Research Fellowship Programme Scholarship HONG KONG SAR, CHINA
2024 Mitacs Globalink Research Internship Award CANADA
C.V. Starr Scholarship HONG KONG SAR, CHINA
HKU Presidential PhD Scholarship (HKU-PS) - conditional offer for 2025 intake HONG KONG SAR, CHINA
HKU Summer Research Programme 2023 Research 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 (3.81/4 in WES) - top **15**.
    – Selective coursework: advanced probability (real analysis), cryptography, advanced algorithm design and analysis, introduction to optimization, principles of operating system, robotics, multivariable calculus, *etc.*

National University of Singapore SINGAPORE
  Exchange student @ NUS School of Computing. *2024 Jan - May*
    – Coursework: 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, abstract algebra, measure theory-based probability, discrete algorithms. (**2**) **Programming Skills:** C, C++, Python, Mathematica.

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