Po-Wei (George) Huang

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Education

National University of Singapore **Aug 2020 - Jun 2023**
B.Comp. (Hons) in Computer Science (GPA 4.81/5.00)
- Second major in Mathematics
- Study focus area: Algorithms and theory / Artificial intelligence
- Dissertation: Post-variational quantum neural networks
- Advisors: Prof. Patrick Rebentrost and Prof. Rahul Jain

Nanyang Technological University, Singapore **Aug 2019 - Jun 2020**
Undergraduate Computer Science and Business (GPA 4.91/5.00)

Research Experience

Centre for Quantum Technologies, Singapore **May 2023 - Jul 2024**
Research Assistant (Principal Investigator: Prof. Patrick Rebentrost)

Web IR/NLP Group, National University of Singapore **Apr 2021 - Jul 2022**
Undergraduate Researcher (Supervisor: Prof. Min-Yen Kan)

Manuscripts and Publications

P.-W. Huang, X. Li, K. Koor, P. Rebentrost (2023). Hybrid quantum-classical and quantum-inspired classical algorithms for solving banded circulant linear systems. *arXiv:2309.11451 [quant-ph]*

P.-W. Huang, P. Rebentrost (2023). Post-variational quantum neural networks. *arXiv:2307.10560 [quant-ph]*

P.-W. Huang (2022). Domain specific augmentations as low cost teachers for large students. In *Proceedings of the First Workshop on Information Extraction from Scientific Publications*, pages 84–90.

P.-W. Huang, A. Ramesh Kashyap, Y. Qin, Y. Yang, and M.-Y. Kan (2022). Lightweight contextual logical structure recovery. In *Proceedings of the Third Workshop on Scholarly Document Processing*, pages 37–48.

Other Experiences

NUS School of Computing **Jan 2021 - Apr 2023**
Teaching Assistant (Data Structures and Algorithms)

Continental Automotive Singapore **May 2022 - Jul 2022**
Software Engineer Intern (Central Engineering Department)

Taiwan Semiconductor Manufacturing Company (TSMC) **Jul 2021 - Sep 2021**
Information Technology Intern (Equipment Edge Computing Team)

Posters and Talks

Hybrid quantum-classical and quantum-inspired classical algorithms for solving banded circulant linear systems. *Poster at QIP 2024.* (Jan 15, 2024)

Post-variational quantum neural networks. *Contributed talk at QTML 2023.* (Nov 22, 2023)

Post-variational strategies for quantum machine learning. *QML Seminar, QAISG.* (Oct 24, 2023)

Post-variational quantum neural networks. *CS Seminar, CQT.* (Aug 30, 2023)

Achievements and Awards

EPSRC Quantum Technologies DTP Studentship, Oxford *(2024)*
Honours Degree with Highest Distinction, NUS *(2023)*
School of Computing Turing Research Programme, NUS *(2023)*
Dean's List, NUS *(Fall 2020, Spring 2021, Fall 2022)*
Honour List of Student Tutors, NUS *(2022)*

Academic Services

Reviewer (Journal): Int. J. Quantum Information
Sub-reviewer (Journal): Advanced Quantum Technologies
Sub-reviewer (Conference): QTML 2023, QIP 2024, TAMC 2024, TQC 2024

Skills

Spoken Languages: English (full professional proficiency), Chinese (native)
Programming Languages: C/C++, Java, Python
Quantum Computing: Qiskit, Pennylane