

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
- Dual specialization in algorithms and theory/artificial intelligence
- Dissertation title: *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, P. Rebentrost (2024). [Quantum algorithm for large-scale market equilibrium computation](#). *arXiv:2405.13788 [quant-ph]*

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 CASE Conversion Studentship (2024-2028)

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 Inf, Quantum Mach. Intell.

Reviewer (Conference): QTML 2023, TAMC 2024, TQC 2024

SKILLS

Spoken Languages: English (full professional proficiency), Mandarin (native)

Programming Languages: C/C++, Java, Python

Machine/Deep Learning: PyTorch, Jax

Quantum Computing: Qiskit, PennyLane