

Po-Wei (George) HUANG

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EDUCATION

University of Oxford Oct 2024 - Present

DPhil in Mathematics (MATHEMATICAL PHYSICS)

- Advisors: Prof. Bálint Koczor

National University of Singapore Aug 2020 - Jun 2023

BComp (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

RESEARCH EXPERIENCE

Entangled Computing Lab, Centre for Quantum Technologies May 2023 - Sep 2024

Research Assistant (PI: PROF. PATRICK REBENTROST)

Web IR/NLP Group, National University of Singapore Apr 2021 - Jul 2022

Undergraduate Researcher (ADVISOR: PROF. MIN-YEN KAN)

Department of Chemistry, National Cheng Kung University Sep 2018 - Apr 2019

Student Researcher (ADVISOR: PROF. HONG-PING LIN)

MANUSCRIPTS AND PUBLICATIONS

- [1] B. Y. Gan, **P.-W. Huang**, E. Gil-Fuster, P. Rebentrost (2024). [Concept learning of parameterized quantum models from limited measurements](#). *arXiv:2408.05116 [quant-ph]*
– Accepted at QTML 2024 and AQIS 2024 as a regular contributed talk.
- [2] **P.-W. Huang**, P. Rebentrost (2024). [Quantum algorithm for large-scale market equilibrium computation](#). *arXiv:2405.13788 [quant-ph]*
- [3] **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]*
- [4] **P.-W. Huang**, P. Rebentrost (2023). [Post-variational quantum neural networks](#). *arXiv:2307.10560 [quant-ph]*
– Accepted at QTML 2023 as a regular contributed talk.
- [5] **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.
- [6] **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)

TALKS

- [1] **Post-variational quantum neural networks.** *Contributed talk at QTML 2023.* (Nov 22, 2023)
- [2] **Post-variational strategies for quantum machine learning.** *QML Seminar, QAISG.* (Oct 24, 2023)
- [3] **Post-variational quantum neural networks.** *CS Seminar, CQT.* (Aug 30, 2023)
- [4] **Domain specific augmentations as low cost teachers for large students.** *Contributed talk at WIESP@AAACL-IJCNLP 2022.* (Nov 21, 2022)

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