Yuqing Li

University of Science and Technology of China

Email: lyq62693641@mail.ustc.edu.cn

Education

University of Science and Technology of China   09/2021-Present
School of Cyber Science and Technology
Major: Information Security
Overall GPA: 3.47/4.3   **Weighted average**: 84.88

Core Courses

Quantum Physics: 90	Abstract Algebra and Number Theory: 88
Computer Programming A: 91	Mathematical Analysis B1: 90
Algorithms Analysis and Design: 89	Electromagnetism A: 90

Research Interests

- Variational Quantum Algorithm for Machine Learning
- Quantum Complexity Analysis
- Quantum Differential Privacy
- Quantum Circuits Optimization

Publications

- **Yuqing Li**, Yusheng Zhao, Xinyue Zhang, Hui Zhong, Miao Pan, Chi Zhang, *Differential Privacy Preserving Quantum Computing via Projection Operator Measurements* (under review).

Research Experiences

Quantum Differential Privacy via Shot Noise   06/2023-12/2023
Instructor: Prof. Miao Pan, Electrical & Computer Engineering, University of Houston

- Conduct literature review on quantum differential privacy and variational quantum algorithm.
- Analyze and quantify the quantum privacy budget resulting from shot noise in quantum circuits with different types of noise or without noise.
- Perform corresponding experiments of quantum differential privacy on variational quantum circuits using *qiskit* and *pennylane*. For example, I trained a quantum classifier using the Iris dataset and calculate the privacy budget caused by shot noise for a small number of shots.

The Interpretability of Quantum Machine Learning   12/2023-present
Instructor: Wei Yang, School of Computer Sciences and Technology, USTC

- Engage in a comprehensive review of corresponding literature and provide a summary of the research findings.
- Attempt to improve the interpretability of quantum machine leanring in other effective approaches at present.

Scholarships

Yan Jici Physics Science and Technology Scholarship	2022
Excellent Student Scholarship, Bronze Prize	2022

Skills

Programming Languages: C, C plus, Python, MATLAB, Latex, Shell, Markdown, Mathematica
Extra: SolidWorks, Cello, Violin