

Zi-Shen Li

+86 15991797375 @ 11910324@mail.sustech.edu.cn zishen-li

Education

SUSTECH

BSc IN PHYSICS

📅 2019–2023 📍 Shenzhen, China

- **GPA 3.85/4 Rank 6/51**
- **TOEFL iBT 92**

Coursework

SELECTED COURSES & SCORES

Quantum Information(97/100)

Quantum Mechanics(94/100)

Statistical Mechanics(99/100)

Mathematical Methods in

Physics(98/100)

Analytical Mechanics(96/100)

Solid State Physics(97/100)

Skills

PROGRAMMING

Python • MATLAB • Quantum Programming lib (mindquantum, qiskit, TensorFlow, etc)

MISCELLANEOUS

LaTeX • Microsoft Office • Git

Honors

• NATIONAL ENCOURAGEMENT SCHOLARSHIP@SUSTECH

Awarded to students who have excellent performance in coursework and public benefit activities.

• OUTSTANDING STUDENT@USTC
QUANTUM COMPUTING SEMINAR
Only 6 students were chosen out of 100 who are excellent students from Cambridge, Tsinghua, Peking University, UIUC etc.

Competitions

• FIRST PRIZE–MATHEMATICS COMPETITION OF CHINESE COLLEGE STUDENT

📅 Oct 2021

• GRAND PRIZE–HUAWEI QUANTUM COMPUTING PAPER RECURRENCE

📅 Jan 2022 📍 Shenzhen

• BRONZE PRIZE–PHYSICS COMPETITION OF AMERICAN COLLEGE STUDENT

📅 Sep 2021

Experience

MAN-HONG YUNG'S GROUP

SUSTECH

📅 Sep 2021 – ongoing 📍 Shenzhen, China

- Studying in Man-Hong Yung's group. Mainly focusing on quantum information theory and quantum algorithms, including variational quantum eigensolver and quantum machine learning.
- Writing a lot of Python codes to verify our or other researcher's theories, including quantum natural gradient, QAOA and barren plateaus. Click [here](#) for more details.

QUANTUM OPEN SOURCE PROJECT

HUAWEI RESEARCH CENTER FOR QUANTUM SOFTWARE & ALGORITHM

📅 Dec 2021 – May 2022 📍 Shenzhen, China

- Solving optimization problems by quantum programming, including image recognition via quantum machine learning, and variational quantum eigensolver of small molecules, such as hydrogen lithium and methane.

QUANTUM ALGORITHM SUMMER SEMINAR

DEPARTMENT OF COMPUTER SCIENCE, USTC

📅 Jul 2021 – Sep 2021 📍 Hefei, China

- Studying Nielsen&Chuang's book. Learning basic quantum algorithms and properties of quantum systems.

QUANTUM COMPUTATION SUMMER SCHOOL

DEPARTMENT OF PHYSICS, TSINGHUA UNIVERSITY

📅 Aug 2021 📍 Beijing, China

- Professors lectured on frontier topics in quantum information.
- Learning widely in quantum information technology.

QBRONZE WORKSHOP

QWORLD (ASSOCIATION)

📅 Nov 2021 📍 Online

- Professors lectured on quantum technology and quantum programming skills.
- Learning basic programming methods from which I benefit a lot, especially in subsequent research.

Recent Projects

EXPLORING BPS & ENTANGLEMENT

MAN-HONG YUNG'S GROUP

📅 Dec 2021 – ongoing 📍 Shenzhen, China

- A project supported by HUAWEI quantum computing team and Shenzhen Institute for Quantum Science & Engineering (SIQSE). Our project is supervised by Man-Hong Yung.
- We found a strong correlation between the gradient vanishing phenomenon in quantum neural networks and bipartite entropy both analytically and experimentally. Part of the codes are posted [here](#).

QUANTUM HACKATHON

HUAWEI HIQ TEAM

📅 Feb 2022 – May 2022 📍 Shenzhen, China

- A competition project, mainly focusing on VQE of methane and quantum neural network for MNIST recognition.
- My teammates are Le Niu, an AI engineer, and Jingxing Xie, a PhD student at Wuhan University.