

# Yue Yu

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## EDUCATION

### PEKING UNIVERSITY

Sep. 2019 - Jul. 2023(expected)

*Bachelor of Science in Physics*

- **Academics:** Overall GPA: 3.75/4.00
- **Courses:** Group Theory (99), Quantum Information (95)
- **Honors and Awards:** Weiming Physics Scholarship (2019, 2020), Peking University Scholarship (2019), College Scholarship (2020), Gold Medal in the 35th China Physics Olympics final(2019)

## PREPRINTS & PUBLICATION

- None

## RESEARCH EXPERIENCE

### Research on Photonics Quantum Computing & Quantum Hamiltonian Simulation

Apr. 2021 – Present

*Advisor: Prof. Jianwei Wang, Peking University*

- Read papers about quantum computing based on photonics and some state-of-the-art quantum algorithms (quantum walk, quantum signal processing, VQE, etc.)
- Assisted the calibration of photonics quantum computing chip.
- Assisted the photonic chip design.
- (In-progress) Modified the multi-product algorithm for Hamiltonian simulation (proposed by Nathan Wiebe and Andrew M. Childs, arXiv:1202.5822), and adapt it for the simulation of non-Hermitian Hamiltonian on photonics quantum computing chip.

### Research on Integrated Optics and Machine Learning

Oct. 2020 - Present

*Advisor: Prof. Xiaoyong Hu, Peking University*

- Read papers about Integrated Photonics and conducted literature review about machine learning for photonics devices design and optical neural networks.
- Assisted the design of silicon-based photonics devices using COMSOL.
- (Submitted) Design an optical cavity with certain Q automatically using inverse design with machine learning.

## SKILLS

- **Programming:** Python, Mathematica, COMSOL, LaTeX
- **Machine Learning Algorithms:** Neural network, SVM, unsupervised learning, etc.
- **Chip design:** Design photonic chip with *ipkiss* (Python package) and Klayout