

# Dang Khoa Tao

QUANTUM INFORMATION SCIENCE · MACHINE LEARNING

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## Education

### UST(Korea University of Science and Technology)

Daejeon, S.Korea

M.S. IN QUANTUM INFORMATION (CURRENT GPA: 4.42/4.5)

Sep. 2024 - present

- Thesis: "Quantum Circuit Optimization with Deep Reinforcement Learning"
- Advisor: Lee Changhyoup

### HUST(Hanoi University of Science and Technology)

Hanoi, Vietnam

B.S. IN MECHATRONICS ENGINEERING (GPA: 3.69/4.0)

Aug. 2019 - Sep. 2023

- Thesis: "Application of deep learning and image processing for industrial robot arms"

## Employment

### (KRISS) Korea Research Institute of Standards and Science

Daejeon, S.Korea

STUDENT RESEARCHER AT QUANTUM OPTICS GROUP

Sep. 2024 - present

- Quantum Circuit Optimization with Deep Reinforcement Learning

## Honors & Awards

- |      |   |                |
|------|---|----------------|
| 2024 | <b>3rd Place</b> , IonQ Quantum Challenging                         | Seoul, S.Korea |
| 2023 | <b>Academic Excellence Scholarship</b> , HUST                       | Hanoi, Vietnam |
| 2022 | <b>Academic Excellence Scholarship</b> , HUST                       | Hanoi, Vietnam |
| 2022 | <b>Corporate Excellence Scholarship</b> , Nhat Minh Company Limited | Hanoi, Vietnam |
| 2022 | <b>Corporate Excellence Scholarship</b> , Daizo tec Co., LTD        | Hanoi, Vietnam |
| 2021 | <b>Academic Excellence Scholarship</b> , HUST                       | Hanoi, Vietnam |
| 2020 | <b>Academic Excellence Scholarship</b> , HUST                       | Hanoi, Vietnam |
| 2020 | <b>Corporate Excellence Scholarship</b> , Nhat Minh Company Limited | Hanoi, Vietnam |

## Publications

### QUANTUM COMPUTING

- Deep Reinforcement Learning for Efficient Quantum Circuit Optimization (2025)

### OPTICAL DESIGN

- Vu, Danh Tien, **Dang Khoa Tao**, Nhu Thanh Nguyen, Cuc Thi Kim Nguyen, and Binh Xuan Cao. "Liquid vortex surface deformation probed by light reflection." Physica Scripta 99, no. 12 (2024): 125509
- **Tao, Dang Khoa**, Thi Phuong Anh Nguyen, Duc Duong Nguyen, Manh Toan Bui, Thi Kim Cuc Nguyen, and Xuan Binh Cao. "Accurate subpixel center determination for overlapping spots." Available at SSRN 4781072 (2024)
- Nguyen, Duc Duong, Vu Yen Nhi Thai, **Dang Khoa Tao**, Thi Phuong Anh Nguyen, Xuan Binh Cao, and Cuc Nguyen Thi Kim. "A New Method to Detection of Laser Focal Position based on Microlens Array." Acta Polytechnica Hungarica 21, no. 9 (2024)

## Symposia & Meetings

### EXHIBITION

- **Dang Khoa Tao**, Danh Tien Vu, Xuan Binh Cao. "Determination of liquid property based on dynamical surface reflection", Proceedings of the 8th Academic Conference on Natural Sciences for Young Scientists, Masters and PhD. Students from ASEAN countries (CASEAN-8) (2023)