

Gaoxiang Tang

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Education

Renmin University of China

B.S. in Physics

GPA: 3.85/4.0 (2/27)

2020.09 – Present

Haidian, Beijing, China

Research Experience

Research Training for Undergraduates

2022.10 – 2022.11

TIQS Lab at Renmin University of China

Haidian, Beijing, China

- Involved in the implementation of micromotion minimization methods in a single-ion trap at TIQS in Renmin University of China
- Theoretical results of relevant papers are reproduced numerically: the micro motion of a trapped ion is maximized when the RF electrode is applied with a modulation frequency equal to the trap frequency.
- Design a process of regulating the voltage to minimize the time required to compensate for stray fields.

Research Training for Undergraduates

2022.05 – 2022.06

TIQS Lab at Renmin University of China

Haidian, Beijing, China

- Involved in the theoretical design and instrumentation of an experiment to implement quantum state discrimination in the single ion system using non-Hermitian PT-Hamiltonian quantities.
- Wrote part of the Mathematica code used to control the experiment equipment.

Internships

Research Intern

2023.01 – Present

Beijing Academy of Quantum Information Sciences

Haidian, Beijing, China

- Write a Python program utilizing the STL model of a surface electrode ion trap and use Boundary Element Method to calculate the potential field distribution inside the trap when voltages are applied to the electrodes.
- Use the above results to optimize the setting of voltages during ion shuttling.
- Code is open source at <https://github.com/GaoxiangTang/junction-trap-simulation>.

Awards & Honors

Third Class Undergraduate Study Excellence Scholarship

Renmin University of China

2022.11

Second Class Undergraduate Study Excellence Scholarship

Renmin University of China

2021.12

Special Scholarship for Excellence and Innovation

School of Science, Renmin University of China

2021.12

Specialized Skills

Programming Languages: Python (intermediate), C++(intermediate)

Research Tools: LaTeX(intermediate)

Language: CET6

Other Interests

Badminton: Member of the school of science badminton team

Jogging: Has a habit of jogging 5km per day since junior high school

Real-Time-Strategy Games: Fan of *StarCraft* and *Red Alert*