# Gaoxiang Tang

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## *Education*

**Renmin University of China** 2020.09 – Present
*B.S. in Physics* *Haidian, Beijing, China*
**GPA: 3.82/4.0 (2/27)**

## *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 habbit of jogging 5km per day since junior high school
**Real-Time-Strategy Games**: Fan of *StarCraft* and *Red Alert*