Yu Wang

Curriculum Vitae

Education

2013–2016 **High school**, *Beijing No. 4 High School*.

2016–now **Undergraduate**, *School of Physics*, Beijing, *junior*.
major in physics,average GPA 3.82/4, rank 10%

Research Experience

Present work

2019.1-present **ion trap** , *Luming Duan*, Tsinghua University, Beijing, Institute of interdisciplinary Information Science.

- design a high precision objective for ion fluorescence collecting
- set up a Fiber noise cancellation system, compensate phase noise with high speed regulation.

Visiting research

2018.9-2019.2 **Rydberg atoms** , *F.Barry Dunning& Tomas Killian*, Rice University,Houston, Department of Physics&Astronomy.

Detailed achievements:

- developing and setting up the optical system required to create a tailored series of micro traps for use in cold atom experiments, including MOT system and optical tweezer system.
- designing and assembling the objective lens systems to obtain diffraction limited spot sizes(resolution 2.2um) which work both for trap wavelength(532nm) and MOT wavelength(461nm) in experiments.
- Program the SLM based on Gerchberg–Saxton algorithm to tailor the incoming wavefront to obtain the desired spot arrangement which could be shifted in 3D and changed rapidly.

Previous lab experience

2017.8-2018.8 **ion trap** , *Luming Duan*, Beijing, Institute of interdisciplinary Information Science.
Detailed achievements:

- Assemble blade traps(under the guidance of a graduate).
- Design and construct a helical coil resonator for a desired frequency that maximizes the quality factor for a set of experimental constraints.
- Design a RF resonance amplification circuit which drive the ion trap in a 4K cryogenic environment.

No. 5 Yiheyuan Road Beijing – Beijing – China
wangyuolive@pku.edu.cn • *WYu-pkuphy*

Skills

- optical designing: OSLO.
- circuit designing: Eagle.
- Programming:matlab, mathematica, python, labview, C++,C#.

Interest

1 UltraCold atoms/ions/molecule

2 Quantum computation and simulation

3 Many-body quantum system

Publications&Talks

2018.7 **Oral Talk**, *Trapped Ion System for Quantum Computation*, "Basic Subjects Top Students Training Program" Student Academic Exchange Meeting, USTC,Hefei, China.

Honors and Awards

2017-2018 **SK Scholarship&Merit student (5 th place out of 220 students)**, *Peiking University*.

2016–2017 **National Scholarship& Pacemaker to Merit Student (2 th place out of 220 students)**, *Peiking University*, Ministry of Education of the People's Republic of China.

2016–2017 **Outstanding League Branch Secretary** , *Peiking University*.

2017 **Meritorious Winner**, *Interdisciplinary Contest in Modeling*, COMAP.

2018 **Meritorious Winner**, *Mathematical Math Contest in Modeling*, COMAP.

Selected Course

- Quantum Statistical Physics*Δ 100
- Group Theory* 95
- Solid State Theory* 92
- Introduction to low temperature physics techniques* 92
- Method of Mathematical Physics 98
- Quantum Mechanics (A) 95
- Atomic Physics 95.5
- Seminar for Quantum Mechanics 99
- Introduction to Theoretical Physics 99
- Quantum Theory of Many-Body Systems* 94
- Computational Physics A 92
- Equilibrium statistical physics 94

* indicate graduate course and Δ indicate English taught course.

Overseas Communication Experience

2017 **Wu Tayou Science Camp**, *Future Development of Human Being: From the Perspective of Life Science*, Taiwan, Wu Tayou Foundation.

2017 **Asian Science Camp**, *Universiti Tunku Abdul Rahman*, Malaysia, Kuala Lumpur Engineering Science Fair.

Other Interesting Program

2016 **Algorithm of a program which achieve various circuits simulation function** , *Lei Yian*, Peking University, Introduction to Computation.

2018 **Design of a 1L vacuum system which can work under the temperature range from 0 to 100 Celsius.**, *Lin Xi*, Peking University, Introduction to low temperature physics techniques.

2017-2018 **Held quantum field seminars for students discussing about advanced topics**, *Peking Univeristy*.