

Chaoshen Zhang

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EDUCATION

2019 - Present **University of California, Santa Barbara** Isla Vista, CA (GPA: 4.0/4.0)
B.S. in Physics, College of Creative Studies

2017 - 2019 **Shenzhen Middle School** Shenzhen, Guangdong, China (GPA: 4.01/4.32)
High School Diploma June, 2019

RESEARCH EXPERIENCE

Dr. A. M. Jayich Lab University of California, Santa Barbara June 2020 - present
Undergraduate Student Researcher

- Work in an experimental quantum physics lab and participate in experiments for fundamental physics and quantum information science
- Lead the development and testing of a cryogenic ion trapping system with novel micro-fabricated ion traps
- Participated measurement of Sr^+ isotope shifts in a linear Paul Trap
- Developed [continuous laser intensity stabilization](#) apparatus

PUBLICATIONS

Measurement of the Ra^+ $7p^2P_{3/2}$ state lifetime

M. Fan, C. A. Holliman, A. Contractor, **C. Zhang**, S. Gebretsadkan, and A. M. Jayich
Physical Review A **105**, 042801 (2022)

PRESENTATIONS AND TALKS

10/2022 *Cryogenic Ion Trapping System for Developing Novel Ion Traps*
Contributed talk, Worster Symposium, UCSB

9/2022 *Cryogenic Ion Trapping System*
Presentation, Hartmut Haeffner Ion Trap Group Meeting, UCB

9/2022 *Measuring Heating Rate of Ion Traps at Cryogenic Temperature* [\[Link to Video\]](#)
Contributed talk, Undergraduate Research Symposium, Department of Physics, UCSB

6/2022 *Towards a Cryogenic Vacuum System for Rapid Testing of Ion Traps*
Poster, The 53rd Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics

9/2021 *Precision Measurement on Isotope Shifts of Strontium Ions*
Contributed talk, Undergraduate Research Symposium, Department of Physics, UCSB

HONORS AND AWARDS

- 6/2022 *Worster Summer Research Fellowship*
Department of Physics, UC Santa Barbara
Awarded to six individuals among upper division Physics undergraduate at UCSB each year
- 7/2021 *Summer Undergraduate Research Fellowship*
College of Creative Studies, UC Santa Barbara
- 1/2018 *Swartz Trophy Prize*
United States International Young Physicists' Tournament

SKILLS

- Proficiency in writing Graphic User Interfaces, and the statistical analysis of experiment data with **Python**
- Experience in **WolframAlpha Mathematica**
- Proficiency in CAD modeling with **Autodesk**
- Proficiency in printable circuit design with **Eagle**, and experience with **Altium**
- Experience in radio-frequency resonator circuit, and experience in microwave devices
- Proficiency in free space optics, and experience with ECDL and He-Ne Lasers
- Experience with analog and digital PID control
- Experience in cryogenic vacuum system and room temperature ultrahigh vacuum system