

Yi J Zhu

(301) 250-6398
yi.zhu@berkeley.edu
ocf.berkeley.edu/~yizhu/

EDUCATION	Harvard University PhD Quantum Science and Engineering	2022–Present
	University of California, Berkeley BS Engineering Physics	2018–2022
EXPERIENCE	Berkeley Trapped Ions Group Supervisors: Hartmut Häffner, Sara Mouradian	July 2020 – Present
	<ul style="list-style-type: none">• Quantum information processing with trapped $^{40}\text{Ca}^+$ ions• Simulated and optimized waveguide crossings for integrated photonics.• Designed, characterized, and constructed a free-space optical system for single-ion addressing.• Simulated sources of field error in trapped-ion systems via IonSim.	
TEACHING OUTREACH	Ultrafast Nano-Optics Group, UC Berkeley Supervisors: Feng Wang, Tairu Lyu	May 2019 - December 2019
	<ul style="list-style-type: none">• Constructed graphene-based heterostructures for detection of thermal waves.• Reprogrammed controls for the stamping motor, thermocouple, and Peltier cooler.• Performed Raman spectroscopy of trilayer-graphene and analyzed Raman shift.	
	Director, Undergraduate Labs at Berkeley, Physics & Astronomy Division August 2019 – Present	
	<ul style="list-style-type: none">• Lead instructor for the Undergraduate Lab at Berkeley (ULAB): a 2-semester course that seeks to make research accessible to under-supported students and students traditionally underrepresented in academia.• Taught over 150 students and oversee over 30 members of staff conducting projects on topics in physics and astronomy.• Designed assignments on Python, LaTeX, Statistics, and Git.• Coordinated with advisors, faculty, postdocs, and graduate students in the physics and astronomy departments.• Securing department funding and grants. Obtained \$60,000 over 3 years as part of the Berkeley Discover Grant (PI: Eugene Chiang).	
	BURET Group Supervisors: Elisa Stone	September 2021 - Present
	<ul style="list-style-type: none">• The Berkeley Undergraduate Research Evaluation Tool (BURET) group develops tools to evaluate the effectiveness of undergraduate research experiences.• Performing a study of ULAB's effectiveness in promoting accessibility of undergraduate research using novel tools developed by the group.	
	Course Reader Grading and correcting homework for:	

	<ul style="list-style-type: none"> • Physics C191: Quantum Information Science and Technology Fall 2021 • Physics 110A: Electromagnetism and Optics Spring 2021 • Physics 5B: Introductory Electromagnetism, Waves, and Optics Fall 2020
TALKS	Berkeley Physics Research Fair Spring 2020 <ul style="list-style-type: none"> • <i>A Scalable Approach to Ion Addressing in a Linear Paul Trap</i>
HONORS	Berkeley Physics Undergraduate Research Scholarship Spring 2021 <ul style="list-style-type: none"> • Scholarship from the Berkeley Physics department in support of my research with the Häffner group. Edward Frank Kraft Scholarship February 2019 <ul style="list-style-type: none"> • Awarded to students who have attained the highest scholastic records in their first semester at UC Berkeley.
COURSEWORK	<ul style="list-style-type: none"> • Physics: classical mechanics, electromagnetism and optics (2 semesters), quantum mechanics (3 semesters), solid state (1 semester), quantum information science and technology, general relativity • Math: linear algebra, real analysis, complex analysis, statistics