

Conner Chu

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EDUCATION

University of California, Berkeley

Bachelor of Arts in Physics and Minor in Mathematics

Berkeley, CA

Aug. 2023 – May 2027

EXPERIENCE

Research Assistant

Mu2e at Lawrence Berkeley National Laboratory

Sept. 2024 – Present

Berkeley, CA

- Studying the theory behind charged-lepton flavor violating (CLFV) neutrino-less conversion of muons
- Calibrating the simulation of variable energy deposition values in Mu2e's straw tracker detector

Wetware Computing

Neurotech at Berkeley

Sept. 2023 – Present

Berkeley, CA

- Developing an automated medium replacement and imaging system to maintain neural cultures
- Culturing neurons on a microelectrode array to replicate Cortical Lab's DishBrain biological neural network

Research Assistant

Leone Group at UC Berkeley

June 2024 – July 2024

Berkeley, CA

- Performed a cross-polarized attosecond transient absorption scan of Tellurium (Te) via high-harmonic generation
- Operated a mill, lathe, and drill press to machine structural support pieces for laser beam stabilization
- Analyzed the anisotropy of Te using Singular Value Decomposition (SVD) and the Fast Fourier Transform (FFT)

Telescope Crew

Berkeley Undergraduate Astronomy Society

Sep. 2023 – May 2024

Berkeley, CA

- Operating the Cassegrain and Newtonian telescopes during sidewalk astronomy and star party events
- Engaging and educating onlookers by providing captivating explanations of celestial objects

Researcher

San Diego State University

Jan. 2021 – Aug. 2022

Hybrid

- Self-directed research on the effects of low-frequency electromagnetic fields on the growth of methanotrophs
- Conducted extensive literature review and cold-emailing for six months for professional insight and lab space
- Published in the Journal of Emerging Investigators following several rounds of revision

RELEVANT COURSEWORK

Fall 2023: General Chemistry (Chem 1A), General Chemistry Lab (Chem 1AL), Multivariable Calculus (Math 53)

Spring 2024: Honors Introductory Mechanics and Relativity (Physics 5A), Introduction to Mathematical Physics (Physics 89), Accelerated Elementary Chinese for Heritage Speakers (Chinese 1X)

Fall 2024: Honors Introductory Electromagnetism, Waves, and Optics (Physics 5B), Honors Introduction to Experimental Physics I (Physics 5BL), Discrete Mathematics (Math 55)

TECHNICAL SKILLS

Life Science: Pipetting, Serial Dilution, Vacuum Filtration, Bacterial Culture, Spectrophotometry, Titration

Physical Science: Vertical Bandsaw, Horizontal Bandsaw, Drill Press, Lathe, Mill

Computer Science: Python (NumPy, Matplotlib, SciPy), Java, JavaScript, HTML/CSS, RootFS

HONORS & LEADERSHIP

Honors: Congressional Silver Medal Award, CyberPatriot Platinum and Gold State Qualifier, 2nd Place in California State Personal Finance Challenge (x2), AP Scholar with Distinction (x3)

Leadership: Co-President of Taft High School MUN team, Co-Founder and VP of Taft High School Amnesty International, VP of Taft High School Astronomy Club, Speaker at TEDxYouth@Timberline

INTERESTS

Swimming, Snowboarding, Bouldering, Rollercoasters, Neo-Noir Cinema, and Dark Chocolate