Nathan C. Song

714.482.7107

2546 Etna Street

nathansong@berkeley.edu

Berkeley, CA 94704

Education

University of California, Berkeley   *Berkeley, CA*

B.A. Physics, B.A. Mathematics   *Grad. May 2025 (est.)*

- Relevant Coursework: **Math 110** (Linear Algebra) **Math 55** (Discrete Mathematics) **Math W128A** (Numerical Analysis), **Physics 89** (Intro Mathematical Physics), **Physics 5A, 5B, 5BL** (Intro Physics Series)

Work Experience

IMPACT-NG REU *Undergraduate Researcher*   *June 2022 – August 2022*

- Created MEMs (Microelectromechanical) structures that latched onto fiber meshes. Electrically characterized said "grippers" across different operating conditions and proved their potential to make fully flexible circuits.

- Presented at NNCI Nano + Additive Manufacturing Summit; Currently writing paper for JIEE-FLEPS

- *Relevant Skills:* Photolithography, SEM, Mask Design, Xenon Etching, Metal Deposition, Plasma cleaning, Wet etching, Parylene deposition, NEXUS (See U. of L), Probe station

Ultrafast NanoOptics Group *Undergraduate Researcher*   *September 2021- May 2022*

- Investigated novel properties of 2D materials with optical spectroscopy. Proficient in AFM, photolithography, PC-film manufacturing and exfoliation.

Fluxergy *Junior Web Developer*   *April 2021 – August 2022*

- Created current Fluxergy.com website while communicating with CEO/Advisory Board. Captured long-term corporate vision and optimized user experience.

- Used SEO data to optimize site search. Doubled website loading speed and streamlined customer integration with ActiveCampaign. Created guidelines for cleaner site maintenance and UI choices.

Cal State University *MechE Intern*   *June 2019 - August 2019*

- Built CAD models for a 12 DOF robot inspired by MIT's 'Cheetah'.
- Optimized part choices and designs in co-op with software intern.

Skills

Languages: Python, Matlab, C++, HTML+CSS

Tools and Frameworks: Pandas, NumPy, OpenCV, Matplotlib

Activities

STEAM For All: Outreach program for schools in Orange County / surrounding districts. Wrote 200+ AMC-style problems for biannual tournaments attended by ~250 middle school students. Lead monthly workshops for ~16 students on competitive math.

PacfiicSTEM: Outreach program for high schools in La Mirada / Diamond Bar. Lead student group to find speakers for annual STEM networking event from JPL, Mars Food, and CrowdStrike. Shifted event to Zoom format within a month (COVID-19), attendance ~50 high school students.

Science Olympiad: 1st Regionals Team. Medals: *SoCal Regional: 2nd Exp. Design, 3rd Machines; Transcon Tournament: 1st Machines, 2nd Detector Building; Mesa Wilson: 3rd Exp. Design*

Honors and Awards

The Leadership Award (UC Berkeley), President's Gold Volunteer Service Award (X2), National Merit Semifinalist, AIME Qualifier, 2x All-Southern Concert Orchestra