

Uri Dickman

uridickman@gmail.com | +1 (650) 743-6630 | [linkedin.com/in/uri-dickman](https://www.linkedin.com/in/uri-dickman)

EDUCATION

University of California, Santa Barbara

Santa Barbara, CA

Ph.D. Candidate, Mechanical Engineering

Sept. 2025 – Present

- *Emphasis:* Computational Science and Engineering | *Minor:* Solid Mechanics, Materials, and Structures
- *Advisor:* Frederic Gibou

Brown University

Providence, RI

Bachelor of Science, Physics with Honors

Sept. 2020 – May 2024

- *Honors Thesis:* "The Specific Heat of Nano-confined Fluids"
- *Presentations:* Oral Thesis Defense (May 2024), Summer Research Poster Symposium (August 2023)

RESEARCH EXPERIENCE

Project Analyst

July 2024 – May 2025

Case Western Reserve University

Cleveland, OH

- Worked on a computational neuroscience project as a part of the BRAIN Initiative's *Aplysia californica* (Calif. sea hare) consortium.
- Developed a computational tool in NEURON to analyze Central Pattern Generator circuits, such as those found in *Aplysia californica*. Demonstrated applications to parameter optimization and dynamical systems.

Undergraduate Research Assistant

Jan. 2023 – May 2024

Brown University

Providence, RI

- Conducted computational and experimental physics research about the specific heat of nano-confined fluids in single-walled carbon nanotubes (CNTs) in Prof. Matthias Kuehne's Nanofluidics group.
- Accomplishments: Detailed Molecular Dynamics characterization of thermodynamics of water-filled CNT, developed a finite difference algorithm to analyze transient heat conduction in a water-filled CNT, programmed a Raman spectroscopy scanning routine to detect isolated CNTs, grow CNTs on substrates and deposit metal contacts, take 4-probe electrical measurements.

WORK EXPERIENCE

Academic Tutor

July 2024 – May 2025

ModernSmart, Inc.

Remote

- Provide individualized remote tutoring for high school students in Honors and AP Physics and AP Calculus.
- Create curricula to prepare students for their courses and exams, and supplement their school work.

Line Cook

July 2024 – Dec. 2024

Aladdin's Eatery

Cleveland Heights, OH

- Build strong teamwork and collaboration skills with fellow cooks and servers to work efficiently and provide high quality food to customers.

Undergraduate Teaching Assistant

Sept. 2021 – Aug. 2024

Brown University

Providence, RI

- Teaching assistant for 9 courses, including Analytical Mechanics, Multivariable Calculus, and Calculus I.
- Held office hours, graded exams and homework, led problem-solving recitations, completed administrative work for courses, made solutions for homework and exams.

Instructional Laboratory Demonstrations Assistant

February 2022 – May 2024

Brown University

Providence, RI

- Designed and prepared live demonstrations for physics courses to convey physics concepts.
- Created a new website to host the archive of physics demonstrations.

AWARDS

Undergraduate Research and Teaching Award

May 2023 – August 2023

Brown University

Providence, RI

- Grant awarded to students in order to conduct full-time summer research at Brown University.

Math Teaching Fellowship

Sept. 2022 – Dec. 2022

Brown University

Providence, RI

- Fellowship program with stipend awarded to students committed to teaching mathematics at the college level.
- Participated in discussions about research-based pedagogical methodology and teaching observations with Brown faculty. Program accompanied by a teaching assistantship.

RELEVANT COURSEWORK

Courses: Computational Physics, Computational Neuroscience, Solid State Physics I, Advanced Electromagnetic Theory, Thermodynamics and Statistical Mechanics, Quantum Mechanics A and B, Data Mining and Analysis, Program Design with Data Structures and Algorithms, Honors Statistical Inference I, Applied ODEs and PDEs

SKILLS & INTERESTS

Scientific Tools: LAMMPS, NEURON, LaTeX, Linux, Numpy, Pandas, Slurm, Zotero, Microsoft Office

Programming Languages: Python, MATLAB, Julia, Java

Other skills: Teaching, teamwork, computational and research methods, experimental physics, independent learning

Interests: Chamber music, orchestra, violin performance, cooking, music production, sound design