Uri Dickman

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EDUCATION

University of California-Santa Barbara — Santa Barbara, CA
Doctor of Philosophy, Mechanical Engineering — *Sept. 2025 – Present*
- *Topics*: Computational Science and Engineering; Solid Mechanics, Materials, and Structures
- *Advisor*: Frederic Gibou

Brown University — Providence, RI
Bachelor of Science, Physics with Honors — *Sept. 2020 – May 2024*
- *Awards*: Undergraduate Teaching and Research Award (Summer 2023), Math Teaching Fellowship (Fall 2022)

RESEARCH EXPERIENCE

Project Analyst — July 2024 – August 2025
Computational Biomathematics Laboratory, Case Western Reserve University — *Cleveland, OH*
- Accomplishments: Developed a computational tool in Python for computation of complex models for Central Pattern Generator (CPG) circuits; dynamical systems analysis of a CPG to determine mechanisms behind phenomena seen in experiments.

Undergraduate Research Assistant — Jan. 2023 – May 2024
Solid State Nanofluidics Group, Brown University — *Providence, RI*
- Accomplishments: 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 CNTs; growth and electrical characterization of CNTs.

WORK EXPERIENCE

Academic Tutor — July 2024 – May 2025
ModernSmart, Inc. — *Remote*
- Provide tutoring, exam preparation and curriculum creation for students in AP Physics and Calculus.

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 — Feb. 2022 – May 2024
Brown University — *Providence, RI*
- Designed and prepared live demonstrations for physics courses to convey physics concepts.

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: Scientific computing, teaching, numerical methods, scientific writing, teamwork, independent learning
Interests: Chamber music, orchestra, violin performance, cooking, music production