

Kevin A. Silberberg

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WORK EXPERIENCE

Atmos Lab, Applied Mathematics, UCSC

Graduate Student Researcher

Santa Cruz, CA

Jun 2024 - Sep 2024

- Obtained Remote Pilot Certification under the FAA's Small UAS Rule (Part 107).
- Mentored 6 undergraduate researchers to develop experimental methods for the collection of methane samples and mathematical tools for system identification using **MATLAB** and NASA's **SIDPAC** software.
- Conducted vertical transects using quadcopter drones to collect air samples downwind of dairy farms which was used to create a mathematical model of methane emissions.
- Researched sensor-free methods to infer wind velocity from the recorded flight data of rotorcraft drones.

CAMINO, Ecology and Evolution, UCSC

Undergraduate Researcher

Santa Cruz, CA

Jun 2022 - Sep 2022

- Collaborated with team members to plan meals and prepare gear for field missions at 14 different sites in the Sierra Nevada Mountains.
- Conducted bird count surveys and collected biological samples (vegetation, feathers, blood, stool) from alpine birds for genomic and isotopic analyses.
- Independently researched the impact of invasive trout on alpine bird populations using historic trout data using **ArcGIS**; performed hypothesis testing and statistical data analysis with **R**.
- Presented research findings at the Ecology and Evolutionary Biology Seminar.

United States Navy

Aviation Machinist's Mate, 2nd Class

Lemoore, CA

Sep 2013 - Sep 2017

- Led a team of 7 maintenance technicians in executing 5,964 maintenance actions supporting 75 military aircraft across multiple squadrons, ensuring 3,685 accident-free flight hours and the completion of 1,327 successful missions.
- Designed and delivered comprehensive on-the-job training programs that qualified 7 technicians in advanced maintenance procedures. Developed technical competency standards and performance evaluation metrics.
- Coordinated and facilitated 45 hours of professional development training, directly contributing to 8 team members earning promotions through enhanced technical qualifications and leadership assessments.
- Served dual roles by ensuring regulatory compliance and safety standards while managing daily operations of aircraft maintenance as work center manager.

TEACHING EXPERIENCE

Teaching Assistant

Undergraduate Course, Mathematical Modeling I
Applied Mathematics Department, UCSC

Santa Cruz, CA

Jan 2025 - Mar 2025

- Graded and provided detailed feedback for 32 students on weekly submissions for writing and coding assignments.
- Held 1-hour long discussion sections twice a week, as well as 1-hour long office hours twice a week.

EDUCATION

University of California, Santa Cruz

Master of Science in Scientific Computing and Applied Mathematics
GPA: 4.0

Santa Cruz, CA

2024 - 2025

University of California, Santa Cruz

Bachelor of Science in Applied Mathematics, Statistics
GPA: 3.6

Santa Cruz, CA

2021 - 2024

¹ personal website: <https://ksilberb.github.io/paxnomada/>

Fresno City College
Associate of Science in Biology

Fresno, CA
2017 - 2020

TECHNICAL SKILLS

Programming Languages: Julia, Python, FORTRAN, C, C++
Software and Tools: Git, Linux, Bash scripting
HPC: OpenMPI, MPI IO, OpenMP, Slurm, HDF5, NetCDF
Development: Emacs, GCC/GFortran/ifort, Make, gprof, valgrind
Documentation: Quarto, Latex, Markdown, Jupyter notebooks, Github Pages
Data Visualization: Makie.jl, gnuplot, matplotlib, Plotly, Seaborn, Bokeh
Numerical Libraries: BLAS, LAPACK

HONORS & AWARDS

Next Generation Scholars in Applied Mathematics	2023-2025
Teaching Assistant Excellence Award	Winter 2025
Dean's Honors Spring ('23), Fall, Winter, and Spring Quarters	2023-2024