

# SHIORI NAKAYA

shiorinakaya@gmail.com | Duarte, CA | [http://www.linkedin.com/shiori\\_n](http://www.linkedin.com/shiori_n)  
<http://www.shiorinakaya.com>

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## EDUCATION

### University of California, Riverside

College of Natural and Agricultural Sciences

Riverside, CA

September 2024 - June 2026

Bachelors of Science in Geophysics, Minor in Mathematics

- Undergraduate Student Editorial Board Member for UCR Undergraduate Research Journal
- Undergraduate Research Assistant at Ford Seismological Laboratory
- Member of Geosciences Undergraduate Student Organization
  - Vice President (2025-2026)
- TRIO Scholar (2024-2026)

Courses: Global Geophysics, Structural Geology, Probability and Statistics for Scientists/Engineers, Python Programming, Computational Methods for Physical Scientists, Optimization, Applied and Exploration Geophysics, Introduction to Proofs, Mathematics for Machine Learning, Partial and Ordinary Differential Equations (Fall, Winter, Spring 2025-2026), Numerical Skills for Geosciences

### Pasadena City College

Pasadena, CA

Certificate of Achievement for Geographic Information Systems

August 2022 - June 2026

Associate in Science Degree for Transfer in Mathematics

August 2022 - June 2024

- Honors Transfer Program Participant, PASS TRIO Scholar, Member of the first Inaugural Cohort of Calculus Achievement for Success Program
- Vice President, Public Relations Chair, and ICC Representative of Dana Club (Geoscience Club)
- Outreach Events: STEM Saturday Spring/Fall 2023, HBCU Caravan Fall 2023, Earth Day 2023
- Awards: Edwin Van Amringe Scholarship (\$1000), PASS Scholarship (\$500)

Courses: Single Variable Calculus I/II, Multivariable Calculus, Differential Equations, Physical Oceanography, Physical Geology Lecture/Lab, Physical Geology Field Study, Physics with Calculus I Lecture/Lab

### El Camino College

Torrance, CA

Major: Biological Sciences

August 2009 - May 2015

- Teacher Assistant for Dr. Perry Hacking for Solar Systems and Cosmology class (2013-2015)
- Award: Carl Sagan Scholarship (\$1000)

Courses: General Physics I/II/III Lecture/Lab, General Biology Lecture/Lab, General Chemistry I/II Lecture/Lab, Organic Chemistry I/II Lecture/Lab

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## RESEARCH EXPERIENCE

### NASA/JPL-California Institute of Technology

Pasadena, CA

NASA MUREP VERITAS Intern

June 2025 - August 2025

VERITAS MSP/SOAR Intern

June 2024 - April 2025

**Mentor:** Suzanne E. Smrekar, PhD (Principal Investigator of VERITAS Mission)

**Co-Mentor:** Anna P. Gülcher, PhD (Summer 2024, Fall 2024, Winter 2024) and Dr. Andrea (Summer 2025)

- Prepared training set for machine learning model utilizing image segmentation and fault mask label scripts.
- Explored correlations between geophysical data (crustal thickness, elastic thickness, geoid, topography, mantle load) and wrinkle ridge orientation and locations to determine if wrinkle ridges are a potential location for recent geologic activity.
- Research Poster Presentations:
  - **Pasadena City College Natural Science Division Summer 2024 Research Symposium** - Exploring Potential Mechanisms for Wrinkle Ridge Formation and Applications in Machine Learning for Mapping Wrinkle Ridges
  - **Geological Society of America CONNECTS 2024 Conference** - VERITAS-SOAR Program Poster on behalf of Dr. Suzanne E. Smrekar and Dr. Jennifer Whitten
  - **Lunar Planetary Science Conference 2025** - Abstract #2583 titled "Exploring Driving Forces for Wrinkle Ridge Formation" under Venus Shake n' Bake session
  - **UC Riverside Earth and Planetary Sciences 2025 Alumni Event** - "Exploring Driving Forces for Wrinkle Ridge Formation" from LPSC 2025
- **Skills:** QGIS, ArcGIS Pro, Data Analysis, Python Programming, Machine Learning/Deep Learning Model Training, Education Outreach, Public Speaking, International Collaboration, Microsoft Suite, Adobe Suite

### University of California, Riverside - Ford Seismological Laboratory

Riverside, CA

Undergraduate Research Assistant

January 2025 - present

**PI:** Heather Ford, PhD

- **Senior Thesis:** Obtaining and Modeling Gravity Data over Poverty Hills, Owens Valley, CA
  - Downloading and processing raw data and generating receiver function analysis from seismic stations.
  - Seismic data gathered from stations in the Sierra Nevada using NSF SAGE Earthscope Database
  - **Applied Geophysics Field Experience:**
    - Part of the Rapid Response Deployment team of node seismometers over 2 days at Julian, CA in March 2025. Deployed 33 node seismometers over Julian, CA based on locations provided by faculty (Dr. Ahbijit Ghosh and Dr. Heather Ford).
    - Seismic Exploration over Poverty Hills utilizing the following equipment: 24 Channel Seismograph, Geometrics Proton Procession Magnetometer, Supersting R1 Earth Resistivity Meter. Collecting magnetic, electrical resistivity, and seismic reflection/refraction field data over a weekend in May 2025.
  - **Skills:** Data Analysis, Python Programming, Data Processing, Applied Geophysics Field Work, Computational Modeling
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## **WORK EXPERIENCE**

### **Raymond M. Alf Museum of Paleontology**

Claremont, CA

*ACCESS PALEO Community College Intern*

June 2023 - August 2023

- Prepared museum exhibit on convergent evolution utilizing fossils from the museum collection.
- Attended GSA Connects 2023 to apply networking skills and explore career options in the geosciences
- Prepared a 1 minute TikTok video on sexual dimorphism in Brontotheres for the museum TikTok
- Prepared and posted an instagram post about California Fan Palms at the California Botanic Garden
- **Skills:** Exhibit Design, Education Outreach, Public Outreach, Social Media Content Creation

### **Cedars Sinai Medical Center**

Los Angeles, CA

*Animal Laboratory Technician*

May 2021 - July 2022

**Skills:** Customer Service, Budget Monitoring, Administrative Support, Animal Husbandry, Laboratory Compliance, Onboarding Training, Laboratory Maintenance, Microsoft 365 Programs

### **California Institute of Technology**

Pasadena, CA

*Assistant Animal Laboratory Technician*

February 2020 - May 2021

**Skills:** Gnotobiotic Animal Husbandry, Non-human Primate Husbandry, Time Tracking, Laboratory Compliance, Laboratory Maintenance, Onboarding Training, Microsoft 365 Programs

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## **VOLUNTEER AND OUTREACH EXPERIENCE**

### **Pasadena City College - Geology Department**

Pasadena, CA

*Education Outreach*

August 2023 - present

Supervisor: Dr. Michael Vendrasco

Outreach events: STEM Saturday Spring/Fall 2023, HBCU Caravan Fall 2023, Earth Day 2023, STEM Saturday 2024, STEM Gala 2025, Panelist for STEM Saturday 2025.

### **Raymond M. Alf Museum of Paleontology**

Claremont, CA

*Invited Scientist*

August 2023 - present

Supervisor: Gabriel Santos

Popup Museum Outreach events attended: CalBG Family Bird Festival 2024, Discovery Day Power of the Plants 2024, Fishtival 2024 at the Cabrillo Marine Aquarium, Dino Day at Gilb Museum 2024, Dino Fest at NHM LA 2024

### **Cosplay for Science**

Los Angeles, CA

*Invited Scientist*

August 2023 - present

Supervisor: Gabriel Santos

Popup Museum Outreach events attended: Star Wars Legends Con 2023, LA Comic Con 2023, LA Comic Con 2024, Academy Museum May the 5th Celebration

### **California Science Center**

Los Angeles, CA

*Terrestrial Animal Husbandry Volunteer*

August 2023 - July 2024

Supervisor: Alex Soto