Frida Alejandra Perez

fridalejandra | falejandraperez@ucla.edu | +1(951)400-1241

Education

University of California, Los Angeles — *Los Angeles, CA*
PhD in Geography — *2019 - Present*

University of California, Los Angeles — *Los Angeles, CA*
MA in Geography — *2019 - 2020*

University of California, Los Angeles — *Los Angeles, CA*
Bachelor's in Geography — *2016 - 2019*

Santa Monica College — *Santa Monica, CA*
AA.T Degree — *2014 - 2016*

Research Interests

Climate Models - Remote Sensing - Community Ecology - Atmospheric Teleconnections - Data Visualization - Geopolitics

Experience

Antarctic Sea Ice Phase *2021-Present*

- The study focuses on understanding spatiotemporal variations in the timing od sea ice advance and retreat, it's *phase*.
- It isolates two types of annual cycles:
  Invariant annual cycle: Controlled by incident solar radiation
  Residual annual cycle: Driven by internal factors like ocean-atmosphere interactions.
- Partitioning the influence of the solar cycle on sea ice can help reveal the impact of atmospheric modes of variability on sea ice melt and freeze.

The Influence of the SAO on Timing of Antarctic Sea Ice Breakup *2021-2023*

- Previous studies suggest that breakup within the ice pack is due to the divergence forced by the circumpolar trough (CPT)
- This work aimed to determine sea ice breakup dates around Antarctica and explored the relationship between the timing and location of the CPT
- Highlighting the linkage between sea ice breakup and the CPT can elucidate variations in the annual cycle.

Investigating SIT and SIV Around Antarctica *2019-2021*

- Studies on Sea Ice Thickness (SIT) and Sea Ice Volume (SIV), are limited yet critical for understanding energy flux exchange between the Southern Ocean and the atmosphere.
- Analyzed SIT and SIV data and correlated to surface air temperature and sea surface temperature across different sea ice sectors over a 15-year period.
- Utilized satellite and reanalysis data to investigate these correlations.

UC Natural Reserve Systems Ecology and Conservation *April-May 2019*

- Participated in a 50-day field research immersion in protected natural areas across California.
- Applied skills in science, public speaking, scientific writing, statistics, and plant identification.
- Covered topics including serpentine soils, native plant communities, and land management.

Sea Ice Decline: Reduction of the Equator-Pole Temperature Gradient *March-May 2019*

- Investigated the effects of sea ice decline in the Arctic and its direct link to the reduction of the Equator-Pole temperature gradient.
- Analyzed data from the last three decades using satellite and reanalysis data.

Drying Effects on Roots *January-April 2018*

- Worked as a field technician at the Smithsonian Tropical Research Institute.
- Assisted in research on understanding landscape-scale variation in tropical soil carbon storage and predicting how drying will alter these carbon pools.
- Helped build PVC exclusion zones, conducted soil analyses, and measured above and underground biomass for analysis.

Presentations/Posters

Timing of Antarctic Sea Ice Advance and Retreat Apr 18 2024
American Association of Geographers: Honolulu, Hawaii

Antarctic Sea Ice Retreat and the Influence of the Semi-Annual Oscillation Dec 13 2023
American Geophysical Union: San Francisco, California

The Distribution of SIT and SIV Around Antarctica Feb 25 2022
American Association of Geographers: Denver, Colorado

An Analysis of SIT during the Anomalous Antarctic Sea-Ice Retreat of 2016 Dec 15 2021
American Geophysical Union (Virtual)

The Spatial and Temporal Distribution of SIT and SIV Around Antarctica Dec 14 2021
American Geophysical Union (Virtual)

Legacy of Land Use History in Meadow Plant Communities of Coast Range May 19 2019
Blue Oak Ranch Reserve UC Berkeley

The Link between Sea Ice Decline and a Reduction of the Equator-Pole May 21 2019
UCLA Undergraduate Research Symposium

Publications

Perez, Frida et al. (Apr. 2019). "Mendocino meadow memory: legacy effects of land use on plant communities of Angelo Coast Range Reserve". In: *California Ecology and Conservation Research.*

Teaching and Mentoring

Mentorship 23'- Present

Graduate to Graduate Student Mentor

Tutoring 19' & Present

Tutor students K-12 -School on Wheels

Biodiversity in a Changing World Fall 24'

Teaching Fellow

Population Geography Spring 24'

Teaching Fellow

People and Earth's Ecosystem Fall 23'

Teaching Associate

Climatology Spring 21',22',23'

Teaching Assistant

Cartography Winter 22'

Teaching Assistant

Tropical Climatology Fall 21',22'

Teaching Assistant

Professional Travel

ICTP School and Workshop on Polar Climates Jul. 22-31, 24'

Arctic and Antarctic Theoretical, Observational, and Modelling Advances: Trieste, Italy, International Centre for Theoretical Physics

ForceSMIP Hackathon Aug. 29-31, 23'

Hackathon and Statistical Method Inter-comparison Project on Estimating the Forced Component of Climate Change: ETH Zürich, Switzerland, Institute for Atmospheric and Climate Science

CESM Tutorial Aug. 10-13, 21'

National Center for Atmospheric Science (Virtual)

Affiliations/Memberships

American Geophysical Union (AGU) 20'-Present

Member

American Association of Geographers (AAG) 20'-Present

Member

Skills

- **Statistical Software**: R, JMP, GeoDa
- **Geographic Information Systems**: ArcGIS, ArcGIS Online, QGIS
- **Remote Sensing Software**: ENVI, IDLE, Google Earth Engine

- **Programming**: Python, NCL Command Language, SQL
- **Modeling**: NCAR's Cheyenne, CESM, CMIP5/6

Personal Interests

Cooking, Photography, Music, Backpacking, Film, Cycling, Vegetable Gardening, Architecture