FLORA PERLMUTTER

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EDUCATION

DARTMOUTH COLLEGE (2022-2027)

- Ecology, Evolution, Environment and Society Ph.D. student, advised by Justin Mankin

WASHINGTON UNIVERSITY IN ST. LOUIS, MO (2018-2022)

- Majors: Geochemistry, Environmental Biology
- Relevant Coursework: Chemistry+Lab, Biology+Lab, Physics+Lab, Statistics, Calculus III, Biogeochemistry, Geochemistry, The Earth's Climate System, Paleoclimatology

SCRIPPS RANCH HIGH SCHOOL, SAN DIEGO, CA (2014-2018)

RESEARCH INTERESTS

- Hydroclimate, climate change, climate modeling, modes of variability, ocean-atmosphere interactions,

RESEARCH EXPERIENCE

Undergraduate Research Assistant, Konecky Lab (February 2021- present)

- Constructed age models for climate proxy records in the Iso2k database using the R package geoChronR.
- Conducted Superposed Epoch Analysis (SEA) to understand hydroclimate response to volcanic eruptions in the Common Era.
- Research will culminate in a Senior Honors Thesis.

Tyson Research Center, Mangan Lab (May- August 2019)

- Maintained 2 large scale research projects studying interactions between soil microbes and Missouri native prairie plants to better understand the underlying mechanism of how ecosystems benefit from biodiversity.
- Created and conducted a project that analyzed soil samples. Extracted nutrients from 300 soil samples using KCl and analyzed them with a discrete nutrient analyzer and a CHNS analyzer. Connected a trend in phosphate levels under drought conditions to mycorrhizal fungi.

UCSD Center for Energy Research Internship, Saikat Thakur (December 2016- June 2018)

- Conducted research on and learned about plasma turbulence in order to make nuclear fusion a viable source of energy because the environment in which fusion takes place is plasma.
- Collected data with cameras, probes, and spectroscopy and then analyzed it with programs on MATLAB.

WORK EXPERIENCE

Matched Academic Mentoring, The Learning Center (January 2020- present)

- Mentored 10+ students in Intro to Statistics courses (AP Stats, Math 1011, Math 2200).
- Held 2 hour weekly sessions throughout the semester for groups of 1-3 students.

Undergraduate Assistant to the Instructor, 131 Natural Disasters (January- May 2021)

- Attended class and brought student questions to the attention of the professors.
- Held 2 hour weekly office hours throughout the semester.
- Graded student homework and exams, weekly.

Undergraduate Assistant to the Instructor, 323 Biogeochemistry (January- May 2022)

SERVICE AND LEADERSHIP EXPERIENCE

Green Action Club at Washington University in St. Louis (September 2018- May 2020)

- Co-president (January 2019- May 2020)
- Worked to solve local and global environmental justice issues.
- Planned and coordinated engaging activities for club members such as participating in national public lands day, educational events, movie screenings, poster making, and camping.
- Worked with local community organizations surrounding the West Lake Landfill, a Superfund site, and the Veolia Incinerator in East St. Louis to provide support in collecting public comments, making educational materials, conducting health surveys, and more.

Natural Ties (September 2019- present)

- Treasurer (September 2020- May 2021)

- Attended weekly dinners and weekend events with WashU students and individuals who live with intellectual or developmental disabilities in the St. Louis community.
- Fostered friendships, inclusion, advocacy, and awareness for the disability community.

Student Sustainability Board at Washington University in St. Louis (September 2018- May 2020)

- Coordinated getting compostable plates and utensils to events on campus.
- Promoted sustainability efforts on campus such as eliminating plastic straw use, finding more sustainable ways to advertise events, and bringing composting to the dorms.

SKILLS

- Proficient with coding in R, Python, and Java.
- Able to conduct literature searches in scholarly databases and format APA-style citations using the reference software Mendely.

PRESENTATIONS

Undergraduate Research Symposium at Washington University in St. Louis (November 2, 2019)

- Presented a poster on my project entitled "Managing Soil Health in a Changing Climate" that I conducted through the Tyson Undergraduate Fellows Program.

Mentor Assistance Program Symposium at University of California San Diego (May 31, 2017)

- Presented a poster and PowerPoint on my project entitled "Using Plasma Spectroscopy to Understand Mode Transition Dynamics" that I conducted during the Center for Energy Research Internship.

PUBLICATIONS

Hydroclimate Response to Volcanic Eruptions in the Common Era from a Globally Distributed, Multi-Archive Network of Water Isotope Proxy Records

- American Geophysical Union Fall Meeting, New Orleans, LA, December 13-17, 2021.
- Perlmutter, Flora; Falster, Georgy; Konecky, Bronwen

Parametric studies of axial plasma detachment using multiple diagnostics

- 60th Annual Meeting of the APS Division of Plasma Physics, Tuesday, November 6, 2018.
- Yu, Jannie; Bianca Luansing; Noah Jacobson; Harker Russell; Kelly Garcia; Flora Perlmutter; Haruki Ebina; Saikat Chakraborty Thakur; George R Tynan.