Elmera Azadpour

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EDUCATION

Master of Environmental Science and Management (Expected June 2022)
Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)
Specialization: Energy & Climate | Awards: Forest Sustainability Fellowship (Awarded $12,590)
Highlighted/Anticipated Coursework: Environmental Modeling, Earth System Science, Advanced Data Analyses for Environmental Science and Management, Climate Change Impacts and Adaptation, Management of Scientific Data, Remote Sensing & Environmental Data

Honors Bachelor of Sciences in Environmental Biology (December 2019)
University of Utah, Salt Lake City (SLC), Utah
Honor's Thesis: The effect of inorganic vs organic fertilizer on an urban lawn in Salt Lake City, Utah
Awards: Department of Biology Undergraduate Research Stipend (Awarded $2,000)

MASTERS GROUP PROJECT

Creating a Region-wide Green Infrastructure Strategic Plan for Maunalua Bay (4/21-Present)
Role: Data Co-Manager | Client: Mālama Maunalua
Advisor: Dr. Samantha Stevenson

- Wrangled, analyzed and visualized precipitation data to apply to EPA's SWMM5.1 hydrological model
- Extracted CMIP6 data in Python for O'ahu, Hawai'i to obtain multiplicative change factor (MCF) to apply to SWMM model input and view differences in stimulated runoff based on climate change projections (SSPs)
- Maintained the group's shared online information and managed the use of databases for group project
- Organized data and created metadata so, after the project is completed, other users may access and utilize the data and open-source code

PROFESSIONAL EXPERIENCE

Arnhold Environmental Graduate Fellowship (6/21-Present)
Environmental Market Solutions Lab (emLab) and Conservation International (CI), Santa Barbara, CA
Advisors: Dr. Ashley Larsen and Dr. Patrick Roehrdanz

- Gathering and reviewing literature relating to projected land use change and agricultural abandonment
- Managing spatial and remote sensing data in Google Earth Engine (GEE) related to land use/land cover, agriculture, climate, & biodiversity
- Contributing to presentations and publications to aid in the advancement of the Spatial Planning for Conservation in Response to Climate Change (SPARC) project
- Mentoring and providing support to undergraduate student researcher relating to geospatial analyses

Curriculum Collaborator (10/21-12/21)
Environmental Studies Program, UCSB, Santa Barbara, CA
Advisor: Dr. Debra Perrone

- Designed and collaborated on lab content in R Markdown relating to cleaning data, preparing data for analyses, and data visualization for Introduction to Collecting, Wrangling, and Exploring Water Data course
- Provided feedback on course design, structure, and content for 25 undergraduate students
- Redesigned labs to reflect organized data management practice including: file structure, best naming practices, and GitHub/Git for version control to better equip students with data management skills

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WAter, VEgetation, & Society (WAVES) Laboratory Intern (3/21-9/21)
Earth Research Institute (ERI), Santa Barbara, CA
Advisor: Dr. Kelly Caylor

- Investigated water use in riparian forests along Frances Rhône River to aid in the NSF funded project
- Utilized remote sensing and raster data to identify long-term correlations between evapotranspiration and precipitation
- Conducted geospatial and visual analyses in R and Python

Spring Science Undergraduate Laboratory Intern (1/20-5/20)
Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA
Advisor: Dr. Lara Kueppers

- Conducted research project that analyzed the effects of rainfall gradients on future gross primary productivity (GPP) across the Isthmus of Panama to aid in the advancement of NGEE- Tropics project
- Extracted data from published literature and NOAA databases and analyzed the data in coding program R
- Compared empirical data to vegetation model (FATES) output to draw conclusions
- Generated data visualizations in R for 23-page final write up and poster presentation at LBNL

Summer Science Undergraduate Laboratory Intern (5/19-8/19)
Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA
Advisor: Dr. Trevor Keenan

- Organized literature review of photosynthetic capacity (V_{cmax}) plasticity observed within forest canopies to establish clear hypotheses for research project
- Collaborated with three lab team members on research project
- Generated data visualizations in R for 26-page final write up and poster presentation at LBNL
- Presented final poster at American Geophysical Union (AGU) 2019 conference and Ecological Society of America (ESA) 2020 conference

Research Associate (8/17-12/19)
Urban Ecology Research Lab, The University of Utah
Advisor: Dr. Diane Pataki

- Conducted three-month field campaign on University of Utah campus
- Collected soil and grass samples for δ15N, δ13C, %N and ANPP data analysis
- Executed various sample preparation techniques (KCl extractions, soil moisture, and preparing samples for mass spectrometer) and conducted statistical analyses in R
- Submitted 30-page honors thesis write up

PUBLICATIONS

Powell T; **Azadpour E**; Faybishenko B (2020): Wind speed data from NCEI Marcos A Gelabert station, Panama, Jan 2008 – Dec 2019. 1.0. NGEE Tropics Data Collection. (dataset). http://dx.doi.org/10.15486/ngt/1633769

CONFERENCES AND SEMINARS

Presented research papers at the following conferences: AGU, San Francisco, CA: “The effect of rainfall gradients on gross primary productivity (GPP) across the Isthmus of Panama” (December 2020); ESA, Salt Lake City, UT: "Constraints on Global Photosynthetic Capacity (Vcmax) Within Canopies" (August 2020); AGU, San Francisco, CA: "Constraints on Global Photosynthetic Capacity (Vcmax) Within Canopies" (December 2019)

Attended the following conferences: The Institut Pierre-Simon Laplace (IPSL), Climate Change: Challenges and Issues for the Earth Sciences, Paris, FR (July 2020); Berkeley Atmospheric Sciences Center (BASC) Symposium, Berkeley, CA (February 2020)

SKILLS AND AFFILIATIONS

Computer: R for Statistics, Python (Jupyter Notebooks), Google Earth Engine (GEE) API, Bash Shell, DB Browser for SQ Lite, Microsoft Office Suite, GitHub, ArcGIS/QGIS, Land-Surface Modeling (ELM), Dynamic Global Vegetation Model (DGVM): Functionally Assembled Terrestrial Ecosystem Simulator (FATES), Adobe Suite, Slack, Microsoft Teams, Canva

Language: English (Native) and Farsi (Advanced Working Proficiency)

Affiliations: Student Member of Ecological Society of America, Student Member of American Geophysical Union, Diversity Scholar for R-Studio 2020 Conference, Student Member of Middle Eastern Resource Center, Forest Sustainability Fellow, Environmental Justice Club Member, Minorities in R Member, Women in Science and Engineering Member