Cassandra Huneau
College of Arts & Sciences Merit Fellow
Ph.D. Student, Department of Geography, Texas A&M University
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EDUCATION

Ph.D.	**Geography**	2025 –
	Department of Geography, Texas A&M University, College Station, TX	
BA.	**Liberal Arts, Minor: Geography,**	2021 – 2023
	Certificates: Honors Interdisciplinary Liberal Arts, Race & Social Justice	
	University of New Mexico, Albuquerque, NM	
	Graduated Summa Cum Laude	

RESEARCH EXPERIENCE

Research Assistant 2025 –

Department of Geography, Texas A&M University, College Station, TX

- Train in coastal oceanographic and hydrodynamic field/lab methods (e.g., sediment dynamics, shoreline monitoring)
- Assist with collection and processing of field and remote sensing datasets (e.g., CTD, drone/LiDAR, satellite)
- Support ongoing research on sediment transport, nearshore hydrodynamics, and coastal ocean processes

Collaborator 2024 – 2025

Department of Geography, University of Wisconsin, Madison WI

- Assisted with exploring a hydrology-focused machine learning model using geospatial data
- Performed basic data handling and ran model workflows for exploratory purposes
- Gained familiarity with Graph Neural Networks (GNNs) and hydrological datasets

Research Assistant 2023 – 2024

Department of Geography, San Diego State University, San Diego, CA

- Analyzed quantitative data on environmental dynamics and policy at the Tijuana Estuary and International Boundary sites.
- Supported a bathymetry survey with Xylem, contributing to hydrological insights.
- Applied hyperspectral imaging and lab equipment for wastewater experiments, advancing water management methods.
- Developed data visualizations with R for indicators like tides, salinity, and tryptophan.
- Collaborated with Dr. Mladenov's Lab on hydrological research in the Water Innovation and Reuse Lab

- Deployed and collected Sondes

Volunteer Researcher   2023 – 2024

Coastal and Marine Institute Laboratories, San Diego State University, San Diego, CA

- Supported the maintenance of EC towers at Scripps Institution of Oceanography's Ellen Browning Pier, ensuring reliable data collection.
- Participated in fieldwork on Air-Sea Interactions using eddy covariance technology and served on the research vessel for the Air-Sea CO_2 project.
- Contributed to calibrating CO_2 analyzers and maintaining eddy covariance equipment, ensuring accurate data collection.

Field and Lab Researcher Volunteer   2023 – 2024

Tijuana River National Estuarine Research Reserve, Imperial Beach, CA

- Assisted in ecological research on vegetation mapping, minnow trapping, and laboratory analyses.
- Supported comprehensive field studies to examine the dynamics of the estuarine ecosystem.

Firesense 2023 Campaign Member   2023 – 2024

National Aeronautics and Space Administration, Santa Ynez, CA

- Executed comprehensive ground data collection activities at Sedgwick Reserve.
- Demonstrated qualifications as a proficient Qualified Non-Crew Member (QNC).
- Contributed as an SDSU Fall 2023 Volunteer Research Member.

Undergraduate Researcher   2022 – 2023

University of New Mexico, Geography and Environmental Studies - Albuquerque, NM

- Established an extensive database cataloged recognized Disaster Risk Reduction (DRR) Games.
- Formulated precise Boolean search terms for efficient data retrieval.
- Conducted a systematic literature review, identifying research gaps on DRR games and addressing issues of availability and accessibility.
- Orchestrated and conducted testing and evaluations for existing DRR games.
- Contributed to science communication for the NSF Post-Wildfire Flooding in Ohkay Owingeh project.
- Member of the NSF Civic Innovation Challenge.
- Demonstrated self-directed research capabilities with minimal advisor intervention.
- Resulted in four conference presentations.

PRESENTATIONS AND INVITED TALKS   **(**P) Poster, (T) Talk

- ***Modeling Water Quality Dynamics in the Tijuana Estuary: A CE-QUAL-W2 Approach***, 17th Annual SDSU Student Symposium, San Diego, CA, March 2024 *(P)*
- ***Basic Needs in New Mexico Data Sharing Symposium***, Albuquerque, NM, May 2023 *(T)*

- ***Investigating the Landscape of Disaster-Related Games***, UNM Department of Geography and Environmental Studies GIS Day, Albuquerque, NM, November 2022 *(T) (P)*
- ***Game On! Investigating the Landscape of Disaster-Related Games,*** Southwest Association of Geographers, Fayetteville, AR, November 2022 *(T)*
- ***Disaster Risk Reduction Games***, New Mexico Geographic Information Council (NMGIC), Albuquerque, NM, April 2022 *(T)*
- ***Greater Preparedness and Resilience to Post-Wildfire Flooding in Native American Communities***, Undergraduate Research Opportunity Conference (UROC), Albuquerque, NM, April 2022 *(P)*

Other Publications (Non-Journal)

- ***Sustainable Water Resources: Visualizing Post-Wildfire Flood Data for Indigenous Communities***, Environment-Focused Learning Academy, University of New Mexico, Albuquerque, NM, July 2022 *(P)*.

Other Research Contributions & Featured

- ***Sustainable Water Resources Project*** – A project I developed was featured in: Donohue, S., et al. *"Engaging Early-Stage Undergraduate Students in Research Through a Science Communication Fellowship."* Presented at the American Society for Engineering Education Conference, 2023.

TEACHING EXPERIENCE

Teaching Associate   2023 – 2024

Department of Geography, San Diego State University, San Diego, CA

- Instructed two sections per semester as the Instructor of Record for Geography 101L, totaling four sections.
- Led engaging classroom and laboratory sessions for Geography Lab 101.
- Managed distribution of course materials to students.
- Administered examinations and evaluated student performance.
- Provided tutoring and academic support to enhance student understanding.
- Developed instructional materials to improve teaching effectiveness.
- Assessed, assigned, and submitted course grades.

FELLOWSHIPS, GRANTS, AWARDS, SHORT COURSES, AND RESEARCH TRAVEL

Fellowships and Small Grants

2025   Texas A&M College of Arts and Sciences, Merit Fellowship, ($30,000)

2022   UNM Interdisciplinary Science Cooperative, Undergraduate Fellowship in Water Management ($2,000)

2021   UNM Sustainable Water Resources Grand Challenges Research Communication Scholar ($1,000)

Awards and Travel/Workshop grants

2024   San Diego State University, Geography Graduate Student Association, Conference Travel Grant ($3,000)
2023   University of New Mexico Inspiring Graduate
2023   University of New Mexico, Department of Geography, Certificate of Recognition
2023   University of New Mexico, Leadership and Involvement Award
2023   Associated Students of UNM, Conference Travel Grant ($1,000)
2022   Associated Students of UNM, Conference Travel Grant ($1,000)
2022   University of New Mexico, Leadership and Involvement Award
2022   University of New Mexico, Department of Geography, GIS Day Poster Competition – First Place (People's Choice)
2021   New Mexico Geographic Information Council, Jesse Rossbach Memorial Student Scholarship ($1,000)
2020   Eastern Michigan University, Regents Scholarship ($4,000)
2020   Eastern Michigan University Honors College, Thomas Sidlik and Rebecca Boylan Scholarship ($3,000)
2018   Henry Ford College, Michael Adray Memorial Scholarship Medal ($500)
2018   Henry Ford College, Ida Murray Endowment Scholarship Medal ($250)
2017   Comevo, Comevo National Scholarship ($1,000)

Research travel, Short Courses, and Field Experience

2025   NASA Open Science Essentials Workshop
2024   NASA Open Science Workshop
2024   San Diego Bay Boat Surveys data collection using Sondes and Eddy Covariance, San Diego CA
2023   NASA FireSense 2023, Santa Ynez, CA
2023   Bathymetry Survey w/Xylem, Tijuana Estuary, Imperial Beach, CA
2023   Contributed to calibrating CO_2 analyzers and maintaining eddy covariance equipment at UC Scripps Institute of Oceanography Pier, San Diego, CA

PROFESSIONAL SERVICE

2024   Exhibitor, American Society for Photogrammetry and Remote Sensing (ASPRS), ESRI UC
2023   Co-Event Organizer and Planner, UNM GES Geo Week and GIS Day Conference, University of New Mexico.
2023   Secretary, UNM Student Association of Geography and Environmental Studies (SAGES), University of New Mexico
2022   UNM Honors Diversity Task Team (JEADI) Honors College, University of New Mexico
2022   UNM Honors Council, Honors College, University of New Mexico

CONFERENCES

2024   ESRI User Conference, San Diego, CA
2024   Association of Geographers, Honolulu, HI

2023   Association of Geographers, Denver, CO
2023   UNM GIS Day, Albuquerque, NM
2022   New Mexico Geographic Information Council Spring Conference, Albuquerque, NM
2022   Southwest Association of Geographers, Fayetteville, AR

PROFESSIONAL DEVELOPMENT

Coastal & Ocean Science
2025   Wave Life Cycle II: Propagation & Dispersion, UCAR
2025   Visualizing NetCDF Data, UCAR
2025   Subsetting and Appending NetCDF, UCAR
2025   Reading NetCDF Metadata, UCAR
2025   Shallow Water Waves, UCAR
2025   Wave Types and Wave Characteristics, UCAR
2025   Wave Life Cycle I: Generation, UCAR
2025   Sea Level Change: Basics, UCAR
Remote Sensing & Satellite Applications
2025   The Importance of Accurate Coastal Elevation and Shoreline Data, UCAR
2025   Satellite Remote Sensing Capabilities for Ocean Color, UCAR
2025   Remote Sensing and Mapping of Coral Reefs, Conservation Network
2025   NASA Fundamentals of Remote Sensing, NASA
Weather & Environmental Hazards
2025   Winds in the Marine Boundary Layer
2025   SKYWARN Weather Spotter, National Weather Service (Houston/Galveston)
Pedagogical and Research Development
2025   Texas A&M Graduate Mentoring Academy Fellow
2025   NASA Open Science Essentials Workshop, NASA
2024   NASA Open Science Workshop, NASA
2023   Qualified Non-Crew Member, NASA
2023   Lab Chemical Safety, CITI Program
2023   College Geography Teaching Workshop Letter, San Diego State Geography

AFFILIATIONS

American Association of Geographers
American Society for Photogrammetry and Remote Sensing (ASPRS)
American Geophysical Union
Association of Environmental Professionals
Women in Ocean Science
Women in Coastal Geoscience & Engineering