

Jessica O'Connell

Department of Marine Science
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Education

- 2012 Oklahoma State University, Stillwater, OK 74074. Ph.D. Dissertation title: *Influences on plant species distributions and soil organic carbon in playa catchments of the High Plains*; GIS certificate; Mentor: Loren Smith
- 2006 Louisiana State University, Renewable Natural Resources, Baton Rouge, LA 70803. M.S. Thesis title: *Coastal marsh restoration using terraces: effects on waterbird habitat in Louisiana's Chenier Plain*; Mentor: Andy Nyman
- 2003 Sonoma State University, 1801 East Cotati Ave, Rohnert Park, CA 94928
B.A. in Biology. *Emphasis in Ecology and Evolution*

Postgraduate Professional Experience

- 2020-present Assistant Professor. Department of Marine Science, University of Texas at Austin, Marine Science Institute.
- 2019-2020 Assistant Research Scientist. Department of Marine Sciences, University of Georgia.
- 2014-2019 Postdoctoral researcher. Department of Marine Sciences, University of Georgia, Athens, GA. With: Merryl Alber, Deepak Mishra. *Emphasis in coastal plant productivity and phenology modeling.*
- 2012-2013 Postdoctoral researcher. Department of Environmental Sciences, Policy and Management, University of California, Berkeley, in collaboration with USGS. With: Maggi Kelly (UC Berkeley) and Kristin Byrd (USGS). *Emphasis in remote sensing models of coastal plant productivity.*

Research Grants

- 2021-2025 Assessing the Climate Change Mitigation Potential of Wetland Restoration in the Conservation Reserve Program: Measurements, Modeling, and Scaling Changes in Soil Carbon and Greenhouse Gas Fluxes. Ellen Herbert (Ducks Unlimited), Sheel Bansal (USGS), Shannon Osborne (USDA ARD), Chenhui Li (University of Missouri), **Jessica O'Connell (UT Austin)**, M. Siobhan Fennessy (Kenyon College, Thomas O'Halloran (Clemson University), Kimberly Van Meter (Pennsylvania State). USDA Conservation Reserve Program, Climate Change Mitigation Assessment Initiative Call for Proposals. UT Sub-contract: **\$516,899**
- 2021-2022 Mapping wetland and aquatic habitat change on Mustang and San Jose Islands, TX. PI: **Jessica L. O'Connell**. Coastal Bend Bays & Estuaries Program. **\$51,657**
- 2021-2024 LTER: Georgia Coastal Ecosystems - IV,. NSF OCE Long-term Ecological Research proposal. PI: Merryl Alber, CO-PI: Steven C. Pennings. UT Sub-contract: **\$94,500**

- 2020-2022 Automating the measurement of annual wetland ponding in the Prairie Pothole Region. PI: Kaylan Kemink (Ducks Unlimited); Co-PI: **Jessica L. O'Connell** (UT). Prairie Pothole Joint Venture, Internal funding call through Ducks Unlimited. UT-Subcontract: **\$50,000**
- 2017-2020 A tidal and species based MODIS GPP product for estimating marsh blue carbon across the Southeastern United States. PI: Deepak R. Mishra (UGA), CO-PIs: **Jessica L. O'Connell** (UGA) and David L. Cotton (UGA). NASA Roses Carbon Cycle. **\$994,963**
- 2016-2018 A novel hybrid approach for mapping belowground productivity and carbon sequestration potential within Georgia salt marshes. PI: Deepak R. Mishra (UGA), CO-PIs: **Jessica L. O'Connell** (UGA), Merryl Alber (UGA) and Kristin B. Byrd (USGS). Georgia Sea Grant. **\$212,808**
- 2009-2010 Interaction of prairie wetlands, grasslands, and croplands with soil organic carbon and vegetation communities. PI: Loren Smith (Oklahoma State), CO-PI: O'Connell, Jessica. German Academic Exchange Service- DAAD Rise in North America. **\$1,680**

Fellowships

- 2009-2012 Oklahoma State University fellowship for retention of outstanding graduate students. **\$15,000**

Press

PBS Documentary on the Georgia Coastal Ecosystems Long Term Ecological Research program; Belowground Biomass work featured: <https://www.changingseas.tv/season-13/1302/>

Publications

18. Sahour H, Kemink KM, **O'Connell JL**. 2021. Integrating SAR and optical remote sensing for conservation-targeted wetlands mapping. *Remote Sensing* 14: 159.
17. **O'Connell, JL**, Mishra, DR, Alber, M, Byrd, KB. 2021. BERM: A Belowground Ecosystem Resiliency Model for estimating *Spartina alterniflora* belowground biomass. *New Phytologist*. 232: 425-439. <https://doi.org/10.1111/nph.17607>
16. Hawman, P, Mishra, DR, **O'Connell, JL**, Cotten, DL, Narron CR, Mao, L. 2021. Salt marsh light use efficiency is driven by biophysical gradients and species-specific physiology and morphology. *Journal of Geophysical Research: Biogeosciences* 126: e2020JG006213. <https://doi.org/10.1029/2020JG006213>.
15. **O'Connell, JL**, Alber M, Pennings SC. 2019. Microspatial differences in soil temperature cause phenology change on par with long-term climate warming in salt marshes. *Ecosystems*. <https://doi.org/10.1007/s10021-019-00418-1>
14. Alber, M, **O'Connell, JL**. 2019. Elevation drives gradients in surface soil temperature within salt marshes. *Geophysical Research Letters* 46: 5313-5322.
13. Tao, J., Mishra, D R, Cotten, D L, **O'Connell, JL**, Leclerc, M, Nahrawi, HB, Zheng, G, Pahari, R. 2018. A comparison between the MODIS product (MOD17A2) and a tide-robust empirical GPP model evaluated in a Georgia wetland. *Remote Sensing*, 10(11), 1831.

12. **O'Connell, JL**, Mishra DR, Cotten DL, Wang L, Alber M. 2017. The Tidal Marsh Inundation Index (TMII): An inundation filter to flag flooded pixels and improve MODIS tidal marsh vegetation time-series analysis. *Remote Sensing of Environment* 201:34–46.
11. **O'Connell, JL**, Alber, M. 2016. A smart classifier for extracting environmental data from digital image time-series: applications for PhenoCam data in a tidal salt marsh. *Environmental Modelling and Software* 84: 134–9.
10. **O'Connell, JL**, Daniel, DW, McMurry, ST, Smith, LM, 2016. Soil organic carbon in playas and adjacent prairies, cropland, and Conservation Reserve Program land of the High Plains, USA. *Soil and Tillage Research* 156: 16–24.
9. **O'Connell, JL**, Byrd, KB, Kelly, M, 2015. A hybrid model for mapping relative differences in belowground biomass and root: shoot ratios using spectral reflectance, foliar N and plant biophysical data within coastal marsh. *Remote Sensing* 7: 16480–16503.
8. Mishra DR, Ghosh S, Hladik C, **O'Connell, JL**, Cho HJ. 2015. Wetland mapping methods and techniques using multi-sensor, multi-resolution remote sensing: Successes and Challenges. In: *Remote Sensing of Water Resources, Disasters, and Urban Studies*. Editor: Thenkabail PS. Taylor and Francis Group, Boca Raton FL, USA.
7. Byrd KB, **O'Connell, JL**, Di Tommaso S, Kelly M. 2014. Evaluation of sensor types and environmental controls on mapping biomass of coastal marsh emergent vegetation. *Remote Sensing of Environment* 149:166-180.
6. **O'Connell, JL**, Byrd KB, Kelly, M. 2014. Remotely-sensed indicators of N-related biomass allocation in *Schoenoplectus acutus*. *PLoS ONE* 9: e90870.
5. **O'Connell, JL**, Johnson, LA, Smith, LM, Haukos, DA, McMurry, ST. 2013. Effects of agricultural tillage and sediment accumulation on emergent plant communities in playa wetlands of the US High Plains. *Journal of Environmental Management* 120:10-17.
4. **O'Connell, JL**, Johnson, LA, Beas, BJ, Smith, LM, Haukos, DA, McMurry, ST. 2013. Predicting dispersal-limitation in plants: Optimizing planting decisions for isolated wetland restoration in agricultural landscapes. *Biological Conservation* 159; 343-354.
3. **O'Connell, JL**, Johnson, LA, Smith, LM, Haukos, DA, McMurry, ST. 2012. Influence of land-use and conservation programs on playa wetland ecosystem services in the U.S. High Plains. *Biological Conservation* 146:108-115.
2. **O'Connell, JL**, Nyman, JA. 2011. Effects of marsh pond terracing on coastal wintering waterbirds before and after Hurricane Rita. *Environmental Management* 48: 975-984.
1. **O'Connell, JL**, Nyman, JA. 2010. Marsh terraces in coastal Louisiana increase marsh edge and densities of waterbirds. *Wetlands* 30:125-135.

Oral Presentations

****invited presentation, ^student presentation***

33. **O'Connell, JL**. 2021. Eco-informatics and open science approaches provide powerful tools for forecasting coastal landscape vulnerability to sea level rise. University of Florida. Engineering School of Sustainable Infrastructure and Environment, Departmental Seminar.
32. **O'Connell, JL**. 2021. BERM, an eco-informatics approach for forecasting coastal marsh vulnerability. University of Texas at Austin. Integrative Biology, Departmental Seminar.

31. **O'Connell, JL**, Sahour, H, Kemink, K. 2020. Mapping the spatiotemporal variation in wetland habitat using remote sensing-based machine learning models. American Geophysical Union (AGU). Virtual meeting.
30. ***O'Connell, JL**, Alber, M, Mishra, DR, KB Byrd, KB. 2020. Structural heterogeneity in above vs belowground biomass pools differ for *Spartina alterniflora* monocultures, with consequences for forecasting ecosystem resiliency. Invited to the organized session: "Ecosystem Structural Diversity". Ecological Society of America (ESA). Virtual meeting.
29. Mishra, DR, Cotten, DL, **O'Connell, JL**, Mao, L, Narron, C, & Hawman, P. 2019. Salt marsh light use efficiency and gross primary productivity in response to environmental conditions. American Geophysical Union (AGU), San Fransisco, CA.
28. **O'Connell, JL**, Alber, M. 2019. Elevation drives gradients in surface soil temperature within salt marshes. Coastal and Estuarine Research Federation (CERF), Mobile, AL.
27. ^Narron, CR, Mishra, DR, **O'Connell, JL**, Cotten, DL, Hawman, P and Mao, L. 2019. Assessing tidal wetland above- and belowground net primary production using field and in situ measurements. Coastal and Estuarine Research Federation (CERF), Mobile, AL.
26. ^Hawman, P, Mishra, DR, Cotten, DL, **O'Connell, JL** and Mao, L, Narron, CR. 2019. Salt marsh light use efficiency and gross primary production in response to environmental conditions. Coastal and Estuarine Research Federation (CERF), Mobile, AL.
25. ***O'Connell, JL**. 2019. Patterns of *Spartina alterniflora* phenology and belowground biomass. Departmental Seminar, Dept. of Geosciences, University of Lafayette, Lafayette, LA.
24. ***O'Connell, JL**. 2019. Patterns of *Spartina alterniflora* phenology and belowground biomass. Departmental Seminar, Dept. of Marine Sciences, University of Georgia, Athens, GA.
23. ^Mao, L, Mishra, DR, Cotten, DL, **O'Connell, JL**, Narron CR, Hawman, P. 2019. Analyzing chlorophyll fluorescence in *Juncus roemerianus* by Pulse Amplitude Modulated (PAM) fluorometer at different plant heights. International Geoscience and Remote Sensing Society, Yokohama, Japan.
22. Nyman, JA, **O'Connell, JL**, Sullivan LR, Patton, BA. 2019. Accounting for edge effects; i.e., interspersions, on waterbirds and fish when creating and restoring emergent wetlands across estuarine gradients. Society for Wetland Scientists, Baltimore, MD.
21. ***O'Connell, JL**, Alber, M, Mishra, DR, KB Byrd, KB. 2018. Landsat models of *Spartina alterniflora* belowground biomass in coastal marshes. Invited to the organized session: "Cutting-Edge Remote Sensing Applications in Ecology: Spanning Scales, Sensors, and Ecosystems". Ecological Society of America (ESA). New Orleans, LA.
20. ***O'Connell, JL**, Alber, M, Mishra, DR, Byrd, KB. 2018. Importance of estimating spatial and temporal variation in *Spartina alterniflora* belowground biomass. Georgia Coastal Research Council, Savannah, GA.
19. ***O'Connell, JL**. Estimating tidal wetland resilience through plant productivity modeling. 2018. Departmental Seminar, Dept. of Biology, University of Central Florida, Orlando, FL.
18. ^Narron, C.R., Mishra, DR, **O'Connell, JL**, Cotten, DL. 2018. Estimating belowground biomass and root:shoot ratios of Gulf coast salt marshes using remote sensing and biophysical data. American Association of Geographers (AAG), New Orleans, LA.

17. ^Hawman, P., Mishra, DR, **O'Connell, JL**, Cotten, DL. 2018. Fine-tuning WDRVI for Salt Marsh Species Using Proximal Remote Sensing. American Association of Geographers (AAG), New Orleans, LA.
16. ***O'Connell, JL**, Alber, M, Mishra, DR, Byrd, KB. 2017. Remote sensing of *Spartina alterniflora* belowground biomass. Georgia Sea Grant Research Symposium. Athens, GA.
15. **O'Connell, JL**, Alber, M, Mishra, DR, Byrd, KB. 2017. Estimating patterns in *Spartina alterniflora* belowground biomass within salt marshes. American Geophysical Union (AGU). New Orleans, LA.
14. Forbrich, I, Nahrawi, HB, Leclerc, MY, **O'Connell, JL**, Mishra, DR, Fogarty, MC, Edson, JB, Vázquez-Lule, AD, Vargas, R, Giblin, AE, Alber, M. 2017. Variation in salt marsh CO₂ fluxes across a latitudinal gradient along the US Atlantic coast. American Geophysical Union (AGU). New Orleans, LA.
13. ***O'Connell, JL**. Coastal marsh plant productivity: implications for coastal resilience. 2017 Departmental Seminar. Department of Biology. Virginia Commonwealth University, Richmond, VA.
12. **O'Connell, JL**, Alber, M, Pennings, SC. 2017. Spatial and temporal variation in phenology in a Georgia salt marsh. Coastal and Estuarine Research Federation (CERF). Providence, RI.
11. Alber, M, **O'Connell, JL**, Sheldon, J. 2017. The application of early warning signals to brackish marshes. Coastal and Estuarine Research Federation (CERF). Providence, RI.
10. Forbrich, I, Nahrawi, HB, Leclerc, MY, **O'Connell, JL**, Mishra, DR, Giblin, AE, Alber, M, Vázquez-Lule, AD, Vargas, R, Fogarty, MC, Edson, JB. 2017. Variation in salt marsh CO₂ fluxes across a latitudinal gradient along the US Atlantic coast. Coastal and Estuarine Research Federation (CERF). Providence, RI.
9. **O'Connell, JL**, Alber, M, Mishra, DR. 2015. Remote sensing of *Spartina alterniflora* belowground biomass within salt marshes. Coastal and Estuarine Research Federation (CERF). Portland, OR.
8. **O'Connell, JL**, Byrd, KB, Kelly M. 2013. Remotely-sensed indicators of N-related biomass allocation in *Schoenoplectus acutus*. Ecological Society of America. Minneapolis, MN.
7. ***O'Connell, JL**. 2011. Plant species distributions and soil organic carbon in playas of the High Plains. Departmental Seminar, Texas A&M at Galveston, Galveston, TX.
6. ***O'Connell, JL**, Johnson, LA, Smith, LM, Haukos, DA, McMurry, ST. 2011. Land management effects on plant communities of playas. Rainwater Basin Joint Venture/Playa Lakes Joint Venture Research Symposium/Waterbird Society Conference. Grand Island, NE.
5. **O'Connell, JL**, Johnson, LA, Smith, LM, Haukos, DA, McMurry, ST. 2011. Influence of land-use on playas across the U.S. High Plains: Restoration may be mediated by plant traits. US-IALE Symposium, Portland, OR.
4. **O'Connell, JL**, Johnson, LA, Smith, LM, Haukos, DA, McMurry, ST. 2010. Land use effects on plants and services in High Plains playas. Society of Wetland Scientists. Salt Lake City, UT.

3. ***O'Connell, JL**, Nyman, JA. 2006. Waterbird use of terraced vs. unterraced ponds in coastal Louisiana. Earthen Terraces Symposium: Status of the Technique. Baton Rouge, LA.
2. **O'Connell, JL**, Nyman, JA. 2006. Coastal marsh restoration using terraces: Effects on waterbird habitat in Louisiana's Chenier Plain. North American Ornithological Society. Veracruz, MX.
1. **O'Connell, JL**, JA Nyman, JA. 2006. Effects of pond terracing on waterbirds, nekton, SAV and water quality in coastal marshes in Louisiana. The Ecological Society. Memphis, TN.

Poster Presentations

8. **O'Connell, JL**, Alber, M, Mishra, DR, KB Byrd, KB. 2019. Spatiotemporal variation in site-wide *Spartina alterniflora* belowground biomass may provide an early warning of tidal marsh vulnerability to sea level rise. American Geophysical Union (AGU). San Fransisco, CA.
7. **O'Connell, JL**, Alber, M, Mishra, DR, Byrd, KB. 2018. Remote sensing of *Spartina alterniflora* belowground biomass in Georgia salt marshes. Long Term Ecological Research (LTER) Network: All Scientists Meeting. Pacific Grove, CA.
6. Alber, M, **O'Connell, JL**, Pennings, SC. 2018. Phenological variation in a *Spartina alterniflora* marsh. Long Term Ecological Research (LTER) Network: All Scientists Meeting. Pacific Grove, CA.
5. ^Hawman, P, Mishra, DR, Cotten, DL, **O'Connell, JL**, Narron CR, Mao, L. 2018. Effects of cloud cover on light use efficiency in salt marsh species. American Geophysical Union, Washington D.C.
4. ^Narron, CR, **O'Connell, JL**, Mishra, DR, Cotten, DL. 2018. Reparameterization of the Tidal Marsh Inundation Index (TMII) to Improve Landsat Vegetation Time-Series in Georgia and Gulf Coast Tidal Marshes. American Geophysical Union, Washington D.C.
3. ^Mao, L, Mishra, DR, Cotten, DL, **O'Connell, JL**, Narron CR, Hawman, P. 2018. Measuring Chlorophyll Fluorescence in a *Juncus roemerianus* Dominated Marsh using a Pulse Amplitude Modulated (PAM) Fluorometer. American Geophysical Union, Washington D.C.
2. **O'Connell, JL**, Cotten, DL, Mishra, DR, Alber, M, and L Wang. 2016. An inundation filter and procedure to improve MODIS time-series analysis within tidal marshes. Southeastern Estuarine Research Society (SEERS). Jekyll Island, GA.
1. Cannaday, C, Gossman, B, **O'Connell, JL**, Nyman, JA, Le Peyre, M. 2005. Effects of terraces on vegetation, nekton, and waterbirds. CREST Symposium: Progress in understanding coastal land loss and restoration in Louisiana. Lafayette, LA.

Teaching

- 2021 MNS 193: Field and Analysis Methods in Remote Sensing. 1 credit hr. University of Texas, Fall Semester. Graduate course. This course teaches open source remote sensing methods from freely available satellite data. Experimental design, reproducible research workflows and data processing and analysis in R and Google Earth Engine were emphasized.

- 2021 MNS 352E: Marine Conservation Biology. 3 credit hrs. University of Texas, Spring Semester. Upper division undergraduate course, presenting marine conservation science, policy and management from a systems perspective. Emphasis is on skill building in critical thinking, long-form science writing, group cooperation, and science communication. This course also introduces students to the breadth of conservation employment opportunities.
- 2019 GEOG 4460/6460: Field and Lab Methods in Remote Sensing. Co-Instructor. 3 credit hrs. University of Georgia; Fall Semester. Upper division course with enrollment of upper level undergraduates and graduate students. This course taught remote sensing field techniques, experimental design, and data processing in R. Final grade was derived from an individual capstone field project that students design and implement.

Mentoring

Current Postdoctoral researchers and Graduate Students

Saket Gowravaram. Postdoctoral researcher, University of Texas at Austin Emphasis: Land cover and surface water mapping via satellite and drone data.

Kyle Runion, PhD Student, University of Texas at Austin. Likely project: PhenoCam analysis of microspatial variation in growing season dynamics across ecotones for common marsh plants/3-D modeling of *S. alterniflora* root phenometrics. Taught field skills, research skills, scientific writing, grant writing.

Current M.S., Ph.D. Guiding Committees

Kyle Capistrant-Fossa, Topic: Ecophysiology of seagrasses. PhD student. University of Texas at Austin Marine Science Institute.

Berit Batterton Topic: Drought induced changes in wetland plant carbon dynamics. Masters student, University of Texas at Austin Marine Science Institute.

Philip M. Souza Topic: Soundscape and cryptobenthic fish monitoring of a dynamic estuarine system. PhD Student, University of Texas at Austin Marine Science Institute.

Caroline Narron Topic: Remote sensing of carbon use efficiency and belowground net primary production to understand spatiotemporal variation in tidal wetland carbon storage and resiliency. Also taught field skills, research skills, scientific writing, R coding, grant writing, statistical skills, geospatial modeling, scientific presentations; Ph.D. student, UGA, Geography.

Lishen Mao Topic: Scaling-up Pulse Amplitude Modulation (PAM) Fluorescence Measurements to Develop a Satellite-based SIF-GPP Model for Tidal Marshes. Also taught field skills, research skills, scientific writing, grant writing, scientific presentations; Ph.D. student, UGA, Geography.

Peter Hawman Topic: Controls on light absorption and light use efficiency of salt marsh grass ecosystems through micrometeorological and field-based measurements to improve satellite derived productivity models. Also taught field skills, research skills, scientific writing, R coding, grant writing, statistical skills, geospatial modeling, scientific presentations; Ph.D. student, UGA, Geography.

Current Undergraduate mentees

Mark DeGraff 2021-2022. Working on field skills, research skills, scientific writing, statistical skills, geospatial modeling, scientific presentations; Guided in independent research as part of Semester by the Sea and honors thesis research, University of Texas at Austin Marine Science Institute. Mentored in collaboration with Kyle Runion, my PhD student.

Past postdoctoral research mentees

Hossein Sahour. University of Texas at Austin. Project: Automating the measurement of annual wetland ponding in the Prairie Pothole Region through open source remote sensing and Google Earth Engine.

Past Undergraduate mentees

Jennifer Ruiz 2021. Worked on machine learning and wetland plant habitat mapping via reproducible research coding in R and Google Earth Engine. Guided in independent research as part of an internship with the Georgia Coastal Ecosystems Long-Term Ecological Research Project in collaboration with Christine Hladik (Georgia Southern University). Ruiz was an undergraduate student at the University of Houston.

Ji Eun Jung 2021. Worked on research skills, experimental design, remote sensing, and geospatial modeling in Google Earth Engine; Guided in independent research as part of her honors thesis project in collaboration with Hossein Sahour (UT Austin). Jung was an undergraduate student at the University of Texas at Austin.

David Armstrong 2020. Hydroponics design, research skills, and scientific writing as part of the internship with the Georgia Coastal Ecosystems Long-Term Ecological Research Project. In collaboration with Steve Pennings, University of Houston. Armstrong collected preliminary data for our current greenhouse experiment on environmental drivers of *Spartina alterniflora* belowground biomass. He was an undergraduate student at the College of Coastal Georgia, Brunswick, GA.

Service

^^Upcoming

- ^^2022 Session proposal: "Measuring and Modeling Wetland-Climate Feedbacks to Meet Climate Mitigation Goals", Joint Aquatic Sciences Meeting. Session Co-chair, with Sheel Bansal, Ellen Herbert, M. Siobhan Fennessy, and Kimberly Van Meter. Proposal submitted.
- 2021 Session proposal: "Belowground ecosystem function: advances in measuring the unseen world", Coastal Estuarine Research Federation, Virtual Conference. Session Chair. Co-chairs: Christine Angelini (UF), and Amanda Spivak (UGA).
- 2021-22 Departmental Committee: GRE waiver proposal committee
- 2021-22 Departmental Committee: Student (Endowment) Awards
- 2020-21 Coastal Bend Bays and Estuaries Program: Habitat and Living Resources Needs Project Proposals; Attended meetings to help review/rank Texas Coastal Bend coastal ecosystem restoration/conservation project proposals
- 2020-21 Departmental Committee: Graduate and Schweppe Seminar Committee
- 2020-21 Departmental Committee: Library Committee

Training in Effective Teaching, Mentorship, Diversity, Equity and Inclusion

- 2022 Inclusive Graduate Education Network (IGEN) Workshop: Fundamentals of Equity in Graduate Admissions
- 2022 Inclusive Graduate Education Network (IGEN) Workshop: Strategies for Equity-based Holistic Review of Graduate Applicants
- 2021 Workshop: Working with and advising international students. University of Texas at Austin
- 2020 Teaching Discovery Days: Creating Resources for Active Online Learning. University of Texas at Austin
- 2020 Teaching Discovery Days: Trauma Informed Digital Pedagogy. University of Texas at Austin
- 2020 Teaching Discovery Days: Integrating Writing-Intensive Experiential Learning Projects into an Upper Division Science Class. University of Texas at Austin
- 2020 Teaching Discovery Days: Teaching STEM Research Writing. University of Texas at Austin
- 2020 Teaching Discovery Days: Replacing the Final Exam with a Video Project. University of Texas at Austin
- 2020 Teaching Discovery Days: Using Zoom for community building. University of Texas at Austin
- 2019 Workshop: Supervisory fundamentals. University of Georgia
- 2019 Workshop: Leadership through effective mentoring. University of Georgia
- 2019 Diversity and Inclusion certificate: Got your Six- Supporting UGA's student Veterans. University of Georgia
- 2019 Diversity and Inclusion certificate: Diversity at UGA: Beyond the Numbers. University of Georgia
- 2019 Diversity and Inclusion certificate: UGA's Non Discrimination Anti-Harrasment Policy. University of Georgia
- 2019 Diversity and Inclusion certificate: An LGBTQ Primer, Creating an Inclusive Community. University of Georgia

Outreach

- 2020 Undergraduate Marine Science Club Presentation, job panel; University of Texas at Austin
- 2020,2021 Science seminar guest lecture with undergraduate Marine Seminar Class at the University of Texas at Austin
- 2020,2021 Science expert interview with undergraduate Marine Ecology Class at the University of Texas at Austin
- 2019 Member, R-ladies Athens: Promoting diversity in the R statistics community
- 2017 Women in Science Summer Camp, UGA Marine Extension, Skidaway Island, GA. Taught marsh ecology and remote sensing to middle school girls

- 2016,2017 Guest Scientist, Summer Schoolyard Program for High School Teachers, GCE-LTER, Sapelo Island, GA,
- 2016 Island Scientists Summer Camp, UGA Marine Extension, Skidaway Island, GA. Taught remote sensing science to middle school children
- 2010 OSU Upward Bound. Mentored high school students who were potential first-generation college students with interests in biology careers

Volunteer

- 2020 Athens Land Trust/Athen-Clarke County Sustainability Office/Northeast Georgia Invasive Plants Council: rock and shoals habitat restoration
- 2019 Conference Student Presentation Judge. Coastal Estuarine Research Federation (CERF)
- 2014-2018 South Carolina Native Plant Society: native plant rescues and native plant sales to benefit conservation easement purchases
- 2016 South Carolina Botanical Garden: Invasive plant removal in the Piedmont Prairie Natural Heritage Garden
- 2013 Habitat for Humanity, Clemson, SC
- 2008-2009 Blue Thumb Volunteer: Oklahoma Conservation Commission (OCC)'s water quality monitoring and education outreach program, Stillwater, OK
- 2008-2009 Graduate and Professional Student Government Representative, OSU, Stillwater, OK.
- 2007 New Orleans Society for Conservation Biology, New Orleans, LA
- 2001-2002 Sonoma County Bird Rescue Center, Santa Rosa, CA

Professional Associations

- Coastal & Estuarine Research Federation
- American Geophysical Union
- Ecological Society of America