

ANA ROSA ARELLANO
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EDUCATION

- 2009-13 Ph.D. Marine Science,
Conc. Chemical Oceanography
College of Marine Science
University of South Florida, Tampa, FL.
Dissertation title: “Investigation of Colored Dissolved Organic Matter (CDOM) Optical Properties, Nutrients, and Salinity in Coastal Florida: Springshed to Estuaries” Conferred date: December 6, 2013. Faculty Advisor: Retired Professor: Paula Coble)
- July 2011 Summer class: Calibration and Validation for Ocean Color Remote Sensing, Class refined proper techniques for the use of optical instruments, in both a laboratory and field setting.
Darling Marine Center, Walpole, ME
University of Maine
- 1994-98 B. S. Biology; Minor Spanish
Roanoke College, Salem. VA

GRANTS AND AWARDS RECEIVED

- 2023 PI: **Arellano, A.R.** and J. Collins.
Title: REU Site: Making Waves: Science Communication and Interdisciplinary Ocean Research Experiences at USF, College of Marine Science.
Agency: NSF
Project dates: 4/15/2023-3/31/2026
Amount funded: \$551,397

EXPERIENCE

- 2023 *Assistant Professor of Instruction and Program Manager, USF St. Petersburg, FL*
Primary roles: Instruct the following courses: Introduction to Oceanography and Geologic History of Florida. PI for an NSF Research Experience for Undergraduates (REU) site and Program Manager for FIO Peerside.

EXPERIENCE (cont.)

- 2017-23 *Instructor and Diversity Director, USF* *St. Petersburg, FL*
Primary roles: Instruct the following courses: Introduction to Oceanography, Geologic History of Florida, and Coral Biology and Reef Ecology. Coordinate and manage graduate recruitment efforts targeted toward underrepresented minorities. Mentor underrepresented current graduate students. Provide workshop for professional and personal development. Manage budget of UCEM Alfred P. Sloan Foundation Sloan grant. Coordinated post-doctoral meetings with the Dean. Attend conferences, visits to various programs around the country to provide lectures regarding our program. Organized and managed an REU program with MSIs and NSF. Direct Research Experience for Undergraduates (REU) program.
- 2015- 17 *Postdoctoral Research Scientist, UF* *Gainesville, FL*
Primary Roles: Investigate wetland dissolved organic matter (DOM) or “blue carbon” loss from coastal wetlands to shelf waters in Barataria Bay, LA and Apalachicola Bay, FL; present research findings at conferences; mentor undergraduate and graduate students; manage laboratory; guest lecture for graduate-level courses, Chemical Biomarkers in Aquatic Environment and Estuarine Biogeochemistry. *Accomplishments:* Authored two manuscripts. Co-authored six manuscripts; Authored/co-authored eleven conference abstracts; Contributed to NSF and NASA projects; Co-PI on one project approved by the Department of Energy Joint Genome Institute: "The role of priming effects on the conversion of blue carbon to carbon dioxide in the coastal zone."
- 2014-15 *Online Course Developer, College of Marine Science, USF* *St. Petersburg, FL*
 Assisted faculty members and graduate student in the preparation of academic content and other associated activities in converting five marine science courses to an online format. Assisted and coordinated video recordings of educational field trips and demonstrations. Created lectures, discussions, and assignments. Served as a liaison between Innovative Education and faculty. Course names: Marine Aquaculture, Ports Sustainability, Ecosystem Modeling, Marine Microbiology, and Introduction to Oceanography.
- 2014-15 *Adjunct Professor, St. Petersburg College* *Tarpon Springs, FL*
 Develop and instruct Introduction to Oceanography Laboratory. Design and guide fieldtrips. Developed and edited laboratory exercises; guest lecture for Introduction to Oceanography lecture class.
- 2009-12 *Research Assistant, College of Marine Science, USF* *St. Petersburg, FL*
 Investigate the relationships between nutrients, color dissolved organic matter (CDOM), and salinity, determining a positive relationship between CDOM and salinity in a spring-fed ecosystem; characterize springs that contribute to nutrient loadings in Kings Bay, FL; present research findings at numerous

EXPERIENCE (cont.)

conferences and meetings, through reports, presentations, and visual demonstrations; mastered the utilization of spectrofluorometer and spectrophotometer; prepared for a research cruise and various sampling trips.

*Summer 1997 Internship, George Washington and Jefferson National Forest
Christiansburg, VA*

Implement wildlife habitat improvement projects, specifically assessing stream health using insect larvae; perform maintenance and improvement work to recreation facilities.

PUBLICATIONS

Kellerman, A. M., **Arellano, A.**, Podgorski, D. C., Martin, E. E., Martin, J. B., Deuerling, K. M., ... & Spencer, R. G. 2020. Fundamental drivers of dissolved organic matter composition across an Arctic effective precipitation gradient. *Limnology and Oceanography*, 65(6), 1217-1234.

Arellano, A. R., Bianchi, T. S., Osburn, C. L., D'Sa, E. J., Ward, N. D., Oviedo - Vargas, D., ... & Green, J. (2019). Mechanisms of Organic Matter Export in Estuaries with Contrasting Carbon Sources. *Journal of Geophysical Research: Biogeosciences*, 124(10), 3168-3188.

Bianchi, T.S., Morrison, E.S., Barry, S., **Arellano, A.R.**, Feagin, R.A., Hinson, A.L., Eriksson, M., Allison, M., Osburn, C.L. and Oviedo - Vargas, D., 2018. The fate and transport of allochthonous blue carbon in divergent coastal systems. *A blue carbon primer*. 27-49

Zhao, B., P. Yao, T. S. Bianchi, **A. R. Arellano**, X. Wang, J. Yang, R. Su, J. Wang, Y. Xu, and X. Huang (2018), The remineralization of sedimentary organic carbon in different sedimentary regimes of the Yellow and East China Seas, *Chemical Geology*, 495, 104-117.

Arellano, A.R., T. S. Bianchi, J. A. Hutchings, S., R. Shields, X. Cui. 2017. Differential effects of solid-phase extraction resins on the measurement of dissolved lignin-phenols and organic matter composition in natural waters. *Limnology and Oceanography Methods*.

Arellano, A.R., T. S. Bianchi, C.L. Osburn, J. D'Sa, N. D. Ward. E. I. Joshi, D. Oviedo-Vargas, G. Kurian. 2019. Mechanisms of Organic Matter Export in Estuaries with Contrasting Carbon Sources. *Journal of Geophysical Research: Biogeosciences* (Accepted)

Joshi, I. D., N. D. Ward, E. J. D'Sa, C. L. Osburn, T. S. Bianchi, and D. Oviedo-Vargas, **A. R. Arellano**, (2018), Seasonal Trends in Surface pCO₂ and Air - Sea CO₂ Fluxes in Apalachicola Bay, Florida, From VIIRS Ocean Color, *Journal of Geophysical Research: Biogeosciences*, 123(8), 2466-2484.

PUBLICATIONS (cont.)

- Joshi, I.D., D'Sa, E.J., Osburn, C.L., Bianchi, T.S., Ko, D.S., Oviedo-Vargas, D., **Arellano, A.R.**, Ward, N.D. (2017). Assessing chromophoric dissolved organic matter (CDOM) distribution, stocks, and fluxes in Apalachicola Bay using combined field, VIIRS ocean color, and model observations. *Remote Sensing of Environment*, *191*, 359-372.
- Bianchi T. S., D. Butman, Raymond P. A., Ward N. D, Rory J. S. Kates R. J., Flessa K. W., Zamora H., **A.R. Arellano**, Ramirez J., Rodriguez E. (2017). The Experimental Flow to the Colorado River Delta: Effects on Carbon Mobilization in a Dry Watercourse. *Journal of Geophysical Research: Biogeosciences*, *122*: 607-627.
- Zhang, X., J. A. Hutchings, T. S. Bianchi, Y. Liu, **A. R. Arellano**, and E. A. G. Schuur. 2017. Importance of lateral flux and its percolation depth on organic carbon export in Arctic tundra soil: Implications from a soil leaching experiment. *Journal of Geophysical Research: Biogeosciences* *122*: 796-810.
- Arellano, A.R.**, Coble, P.G. (2015). Assessing carbon and nutrient inputs in a spring-fed estuary using fluorescence spectroscopy and discriminatory classification. *Limnology and Oceanography*, *60*, 789-804.
- Liu, Y, T. S. Bianchi, **A.R. Arellano**, Ward, N.D., Molecular signature of organic composition along a salinity gradient in the Suwannee River Plume. (in prep)
- Oviedo-Vargas, D., C.L. Osburn, T.S. Bianchi, E. J. D'Sa, **A.R. Arellano**, N. D. Ward, I. Joshi, D.S. Ko. 2016. Examining the relative contribution of 'blue carbon' to coastal shelf environments via optical properties of dissolved and base-extracted particulate organic matter. (in prep)
- Shields. M., Bianchi, T. S., Osburn, C. L, Arellano, A. R., Kinsey J. D., Ziervogel, K. Schnetzer, A. Biomarker contribution of plankton-derived aggregates to open-ocean CDOM. (in prep)

AWARDS AND HONORS

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| 2017 | Carl Storm Underrepresented Minority Fellowship, GRC |
| 2011-13 | Sloan Minority PhD Fellowship |
| 2011-13 | Endowed Bridge to Doctorate (CMS Endowed Fellowship) |
| 2011-12 | ASLO Multicultural Participant |
| 2011 | Successful Latino Award, USF |
| 2010 | George Lorton Fellowship (CMS Endowed Fellowship) |
| 2010 | Scholars of Excellence, USF |
| 2009-10 | Diversity Student Success Fellowship, USF |

REPORTS

- Arellano, A.R.** et al. (18 authors). 2011. Portfolio of Measurements, Processing, and Analysis Techniques for Optical Oceanography Data. Prepared by Calibration and Validation for the Ocean Color Remote Sensing Class for NASA.

REPORTS (cont.)

Arellano, A.R., P.G. Coble, R.N. Conmy. 2012. Investigation of carbon, nutrients, and groundwater inputs in coastal Florida using colored dissolved organic matter. 2012. Report by University of South Florida, College of Marine Science for the Southwest Florida Water Management District. Contract #10C00000076.

PRESENTATIONS

Arellano, A.R., M.S. Rosenzweig. 1997. Microbial Diversity Assay to Non-point Pollutions Sources in Lick Run, a Tributary to the Roanoke River. Virginia Foundation for Independent Colleges (VFIC) Student Research Conference, Richmond, VA.

Arellano, A.R., M.S. Rosenzweig. 1998. Microbial Diversity Assay to Non-point Pollutions Sources in Lick Run, a tributary to the Roanoke River. Roanoke College Senior Research Fair, Salem, VA.

Arellano, A.R., P.G. Coble, R.N. Conmy. 2010. Optical characteristics of CDOM in King's Bay Springs: Preliminary results. Southwest Florida Water Management District, Tampa, FL.

Arellano, A.R., P.G. Coble, R.N. Conmy. 2010. Investigation of carbon, nutrients, and groundwater inputs in coastal Florida using colored dissolved organic matter. Ocean Optics XX, Anchorage, AK.

Arellano, A.R., P.G. Coble, R.N. Conmy. 2011. Investigation of carbon, nutrients, and groundwater inputs in coastal Florida using colored dissolved organic matter. CMS Graduated Student Symposium, St Petersburg, FL.

Arellano, A.R., **P.G. Coble**, R.N. Conmy. 2010. Investigation of carbon, nutrients, and groundwater inputs in coastal Florida using colored dissolved organic matter. AGU Fall Meeting, San Francisco, CA. December 2010.

Arellano, A.R., P.G. Coble, R.N. Conmy. 2011. Investigation of carbon, nutrients, and groundwater inputs in Kings Bay, Florida using colored dissolved organic matter. ASLO Aquatic Sciences Meeting, San Juan, PR.

Arellano, A.R., P.G. Coble, R.N. Conmy. 2011. Optical characteristics of CDOM in King's Bay Springs: Characterization of Groundwater Sources. Southwest Florida Water Management District, Brooksville, FL.

Arellano, A.R., P.G. Coble, R.N. Conmy. 2012. Investigation of carbon, nutrients, and groundwater inputs in coastal Florida using colored dissolved organic matter. Ocean Sciences Meeting, Salt Lake City, UT.

Chase, A. P. M. M. Omand, A. Dave, F. H. Freitas, A. Reisinger, A. R. Arellano. 2012. Obtaining Quality AC-S Meter Spectra: A Method for Temperature and Residual Scattering Corrections. Ocean Sciences Meeting, Salt Lake City, UT.

PRESENTATIONS (cont.)

- Neeley, A., A.R. Arellano, L. Powers.** 2012. Ocean Optics Summer Course 2011: Instrument Calibration to Satellite Validation. Ocean Sciences Meeting, Salt Lake City, UT.
- Arellano, A.R.** 2013. Investigation of Colored Dissolved Organic Matter (CDOM) Optical Properties, Nutrients, and Salinity in Coastal Florida: Springshed to Estuaries. Ph.D. Dissertation. University of South Florida.
- Arellano, A.R.** Sources of colored dissolved organic matter in coastal environments and in the open ocean. 2015. Invited seminar speaker. Department of Geological Science, University of Florida.
- Arellano, A.R., T. S. Bianchi, C.L. Osburn, N. D. Ward. E. J. D'Sa, I. Joshi, D. Oviedo-Vargas.** 2016. Assessing bulk carbon and biomarkers in two contrasting bays: blackwater-dominated versus particle-dominated. ASLO Ocean Sciences Meeting, New Orleans, LA.
- Arellano, A.R., T. S. Bianchi, C.L. Osburn, N. D. Ward. E. J. D'Sa, I. Joshi, D. Oviedo-Vargas.** 2016 Assessing bulk carbon and biomarkers in two contrasting bays: blackwater-dominated versus particle-dominated. North Florida Marine Science Symposium (NFMSS). Cedar Key, FL.
- Ko, D.S., E. J. D'Sa, T. S. Bianchi, C.L. Osburn, D. Oviedo-Vargas, A.R. Arellano, N. D. Ward, I. Joshi, D.S. Ko.** 2016. Study of Circulation in the Apalachicola Bay and the Surrounding Wetland Applying Triple-Nested Models Downscaling from Global Ocean to Estuary. ASLO Ocean Sciences Meeting, New Orleans, LA.
- Oviedo-Vargas, D., C.L. Osburn, T.S. Bianchi, E. J. D'Sa, A.R. Arellano, N. D. Ward, I. Joshi, D.S. Ko.** 2016. Examining the relative contribution of 'blue carbon' to coastal shelf environments via optical properties of dissolved and base-extracted particulate organic matter. ASLO Ocean Sciences Meeting, New Orleans, LA.
- Joshi, I., E. J. D'Sa, C.L. Osburn, T.S. Bianchi, A.R. Arellano, D. Oviedo-Vargas, N. D. Ward, D.S. Ko.** 2016. Assessing CDOM from VIIRS satellite ocean color data in an estuarine environment – initial results from Apalachicola Bay. ASLO Ocean Sciences Meeting, New Orleans, LA.
- Ward, N.D., T. S. Bianchi, C.L. Osburn, E. J. D'Sa, I. Joshi, A.R. Arellano, D. Oviedo-Vargas, D.S. Ko, J.D. Kinsey.** 2016. Methane and carbon dioxide exchange in two Gulf of Mexico coastal wetland environments—Apalachicola and Barataria bays. ASLO Ocean Sciences Meeting, New Orleans, LA.

PRESENTATIONS (cont.)

- Arellano, A.R.**, T. S. Bianchi, C.L. Osburn, N. D. Ward, E. J. D'Sa, I. Joshi, D. Oviedo-Vargas. 2016. Export and losses of blue carbon-derived particulate and dissolved organic matter (POC and DOC) in a blackwater river-dominated and particle-dominated estuaries. American Geophysical Union, San Francisco, CA.
- Liu, Y**, T. S. Bianchi, A.R. Arellano, Ward, N.D. 2016. Molecular signature of organic composition along a salinity gradient in the Suwannee River Plume. American Geophysical Union, San Francisco, CA.
- Joshi, I., **E. J. D'Sa**, C.L. Osburn, T.S. Bianchi, A.R. Arellano, D. Oviedo-Vargas, N. D. Ward, D.S. Ko. 2016. Seasonal estimates of DOC standing stocks in Apalachicola Bay estuary: Toward a better understanding using field, ocean color and model data. American Geophysical Union, San Francisco, CA.
- Zhang, X., T. S. Bianchi, **Hutchings, J.A.**, Liu, Y., A.R. Arellano, Schuur, E.A.G. 2016 Effects of enhanced thaw depth on the composition of arctic soil organic matter leachate. American Geophysical Union, San Francisco, CA.
- Osburn, C. L.**, T. S. Bianchi, E. J. D'Sa, D. Ko, D. Oviedo-Vargas, A.R. Arellano, I. Joshi, N. D. Ward. 2017. Linking carbon exchange between coastal wetland and shelf environments in the northeastern Gulf of Mexico. NACP Principal investigator Meeting, New Bethesda, MD.
- Morrison, E. S.**, T. S. Bianchi, N.D. Ward, Liu, Y., A.R. Arellano, A. Ogram. 2017. The role of priming effects on the conversion of blue carbon to CO₂ in the coastal zone. DOE JGI Genomics of Energy & Environment, Walnut Creek, CA.
- Kellerman, A. M.**, Arellano, A., Podgorski, D. C., Martin, E. E.; Martin, J. B., Deuerling, K., Bianchi, T. S., Spencer, R. 2017. Fundamental drivers of dissolved organic matter composition across an arctic effective precipitation gradient. ASLO, Honolulu, HI.
- Liu, Y.**; Bianchi, T. S.; Arellano, A. R., Ward, N. D., Tolic, N., Pasa-Tolic, L., Kuo, L., Rivas Ubach, A. 2017. Molecular signature of organic carbon along a salinity gradient in Suwannee River plume. ASLO, Honolulu, HI.
- Oviedo-Vargas, D.**; Osburn, C. L.; Bianchi, T. S., D'Sa, E. J., Ko, D. S., Arellano, A.R., Joshi, I. D. 2017. Extracellular enzyme activity in estuarine systems of the Gulf of Mexico and its links to organic matter biogeochemistry. ASLO, Honolulu, HI.
- Arellano, A.R.**, T. S. Bianchi, C.L. Osburn, N. D. Ward, E. J. D'Sa, I. Joshi, D. Oviedo-Vargas. 2017. Carbon cycling dynamics in blackwater river-dominated and particle-dominated estuaries. Gordon Research Conference, New London, NH.

PRESENTATIONS (cont.)

- Osburn, C. L.**, T. S. Bianchi, E. J. D'Sa, D. Ko, D. Oviedo-Vargas, A.R. Arellano, I. Joshi, N. D. Ward. 2018. Local and regional scale exchanges of dissolved organic carbon (DOC) between tidal wetlands and their adjacent coastal waters. AGU, New Orleans, LA.
- Morrison, E.** 2017. The role of priming effects on the conversion of blue carbon to CO₂ in the coastal zone. AGU, New Orleans, LA.
- Arellano, A.R.**, T. S. Bianchi, C.L. Osburn, N. D. Ward. E. J. D'Sa, I. Joshi, D. Oviedo-Vargas. 2017. Physical factors controlling carbon cycling dynamics in blackwater river-dominated and particle dominated estua
- Zhao, B.**, Peng Yao, Thomas S. Bianchi, Ana R. Arellano, Xuchen Wang. 2018. The effects of sedimentary regimes on the remineralization of sedimentary organic carbon in mud deposits of marginal seas. ASLO, Portland OR.
- Ward, N.D.**, Ishan Joshis, Alnie de matos Valerio, EUirco J. D'sa, Chris L. Osburne, Thomas S. Bianchi, Dong Ko, Diana Oviedo-Vargas, Ana Arellano, Henrique O. Sawakuchi. 2018. Remote sensing of carbon dioxide fluxes in coastal ecosystems across scales ASLO, Portland OR.
- Arellano, A.R.**, T. S. Bianchi, J. A. Hutchings, S., R. Shields, X. Cui. 2018. Differential effects of solid-phase extraction resins on the measurement of dissolved lignin-phenols and organic matter composition in natural waters. ASLO, Portland OR.

OCENOGRAPHIC CRUISES

- 2023 R/V *Western Flyer*. Geophysical mapping with side scan sonar and subbottom at three sites in the Gulf of Mexico. Trained and managed undergraduate and graduate students. St. Petersburg, FL.
- 2016 R/V LSU Catamaran. Filtered samples for DOM and POM bulk carbon and chemical biomarkers (lignin and amino acids), and dissolved gas measurements. Trained and managed undergraduate and graduate students. Barataria Bay, LA.
- 2016 R/V *Calcutta*. Filtered samples for DOM and POM bulk carbon, chemical biomarkers (lignin and amino acids). Trained and oversaw graduate and undergraduate student. Apalachicola Bay, FL.
- 2016 R/V LSU Catamaran. Filtered samples for DOM and POM bulk carbon and chemical biomarkers (lignin and amino acids), Trained and oversaw undergraduate student. Barataria Bay, LA.

OCENOGRAPHIC CRUISES (cont.)

- 2016 R/V UF Catamaran. Filtered samples for DOM and POM bulk carbon and chemical biomarkers (lignin and amino acids), Collected light measurements, Cedar Key, FL.
- 2015 R/V *Apalachee*. Filtered samples for DOM and POM bulk carbon and chemical biomarkers (lignin and amino acids), Apalachicola Bay, FL.
- 2015 R/V *Calcutta*. Filtered samples for DOM and POM bulk carbon and chemical biomarkers (lignin and amino acids), Apalachicola Bay, FL.
- 2015 R/V LSU Catamaran. Filtered samples for DOM and POM bulk carbon and chemical biomarkers (lignin and amino acids), Barataria Bay, LA.
- 2011 R/V *Ira C*. Obtained in situ optical data from Gulf of Maine and submitted to NASA SeaBASS (SeaWiFS Bio-optical Archive and Storage System). Chlorophyll and CDOM fluorescence and absorption. Backscattering and radiometric measurements.
- 2010-11 Florida Department of Environmental Protection (FDEP) airboat. Filtered samples for CDOM fluorescence and absorption in Florida's Nature Coast (St. Martin's Marsh Aquatic Preserve and Crystal River). Yellow Springs Instruments multiprobe *in situ* measurements.
- 2010 R/V *Weatherbird II*. Preparation and packing for research on oil spill to northern Gulf of Mexico. CDOM and oil fluorescence.
- 2009 R/V *Bellows*. Teaching cruise to West Florida Shelf and Tampa Bay, Florida. Plankton net, Trawling and CTD-rosette demonstrations.

AFFILIATIONS/PROFESSIONAL DEVELOPMENT

- 2022 USF DEI Council, USF
- 2022 CMS DEI Committee, USF
- 2021 All-ABOARD USF JEDI Team, USF
- 2020 CMS URGE Pod, USF
- 2019 Undergraduate Council, USF
- 2017-19 Status of Latino (SoL), USF
- 2018 Stem High Impact Educational Practices (HIPS) Workshop, USF
- 2017 Implicit Bias Conference, UF
- 2017 Flipped Classroom Workshop, UF
- 2016-17 Women in Geoscience Workshop (WiGS), Dept. of Geological Science, UF
- 2010-19 Association for the Science of Limnology and Oceanography (ASLO)

- 2013 Presentation Boot Camp (NSF funded)
- 2011 Jabil Toastmasters
- 2010 Marine Science Advisory Committee, Vice President
- 2009-19 American Geophysical Union (AGU)

COMMUNITY SERVICE

- 2023 *Planning Committee*, USF Diversity and Inclusion Conference, St. Petersburg, FL
- 2021 *Science Judge*, Spoonbill Oceanography Bowl, St. Petersburg, FL
- 2019 *Volunteer*, Taste of Science, St. Petersburg
- 2018-19 *Volunteer*, St. Petersburg Science Festival, Petersburg FL.
- 2018 *Judge*, Spoonbill Oceanography Bowl, St. Petersburg, FL
- 2017 *Judge*, Graduate Research Day, UF, Gainesville, FL
- 2017 *Volunteer*, Can you dig it? Florida Museum of Natural History, Gainesville, FL
- 2017 *Co-facilitator*, Challenges and Strategies for Women in Geoscience, Gainesville, FL
- 2017 *Speaker*, Talk Science with Her, UN Women in Science Celebration, Gainesville, FL
- 2016-17 *Speaker*, Geogators, Wiles Elementary School, Gainesville, FL
- 2015 *Judge*, Spoonbill Oceanography Bowl, St. Petersburg, FL
- 2014-15 *Volunteer*, PTA, Thurgood Marshall Fundamental School, St. Petersburg FL.
- 2014 *Volunteer*, Blue Ocean Film Festival and Conservation Summit
- 2014 *Judge*, Pinellas Regional Science Fair, Seminole Middle School St. Petersburg, FL
- 2011-14 *Volunteer*, St. Petersburg Science Festival, Petersburg FL.
- 2011-12 *Speaker*, Great American Teach-In, Shore Acres Elementary School, St Petersburg FL.
- 2008-09 *Volunteer*, Girl Scout Troop 5568, Daleville, VA
- 2006-09 *Volunteer*, PTA, Troutville Elementary School, Troutville, VA

SKILLS

ArcGIS 9 ESRI Software
 MATLAB, PARAFAC
 Extensive experience in Microsoft applications (Word, Excel, Power Point)
 Adobe Photoshop CS6
 Adobe Illustrator CS6
 Bilingual: English and Spanish
 Recreational Advanced Open Water Diver, Nitrox Certified
 Experience with the following instructional software: Canvas, Angel and D2L
 Camtasia