

Pamela R. Grothe (Medley), PhD

Assistant Professor, University of Mary Washington

CONTACT

Department of Earth and Environmental Sciences
University of Mary Washington
1301 College Avenue
Fredericksburg, VA 22401
540-847-8617
pgrothe@umw.edu

EDUCATION

Ph.D. in Earth and Atmospheric Sciences, Georgia Institute of Technology	2017
M.S. in Geology, University of Colorado, Boulder	2012
B.S. in Geology with Honors, <i>Summa cum laude</i> , University of Mary Washington	2006

PROFESSIONAL APPOINTMENTS

Assistant Professor, University of Mary Washington	2017 –
Visiting Instructor, University of Mary Washington	2016 – 2017
Graduate Research Assistant, Georgia Institute of Technology	2012 – 2017
Graduate Teaching Assistant, Georgia Institute of Technology	2012 – 2017
Professional Research Assistant, CIRES/NOAA, University of Colorado	2008 – 2012
Graduate Teaching Assistant, University of Colorado	2011
High School Teacher, Spotsylvania County Schools, VA	2007 – 2008
Teaching Assistant, University of North Carolina Wilmington	2006 – 2007
Teaching Assistant, University of Mary Washington	2005 – 2006

PEER-REVIEWED PUBLICATIONS

In preparation

(underline – advised/mentored student)

13. Miller, S.J., **Grothe, P.R.**, K.M. Cobb, T. Chen, H.R. Sayani, R.L. Edwards, H. Cheng, and D.M. Deocampo, *Favia corals: a new paleoclimate archive* (in prep for *Geochem. Geophys. Geosyst.*)
12. Chen, T., K.M. Cobb, **P.R.Grothe**, and H.R.Sayani, *Exploring the potential of Favia, Platygyra, and Pocillopora corals as paleoclimate archives in the central Pacific* (in prep for *Paleoceanography and Paleoclimatology*)
11. Hitt, N. T., Sayani, H.R., Cobb, K. M., **Grothe, P. R.**, Atwood, A. R., Ellis, S., Maupin, C., Lu, Y., Tianran, Cheng, H., Edwards, L.R. *20th century tropical Pacific trends: new estimates from a coral ensemble approach* (in prep for *Geophysical Research Letters*)
10. O'Connor, G. K., Cobb, K. M., Sayani, H. R., **Grothe, P. R.**, Atwood, A. R. *The 2015/16 El Niño Event as Recorded in Central Tropical Pacific Corals* (in prep for *Geophysical Research Letters*)
9. Sayani, H.R., K.M. Cobb, A. Khara, C.M. Stone, **P.R. Grothe**, T. Chen, H. Cheng, R.L. Edwards, *Central tropical Pacific SST and Salinity variability during the Little Ice Age*

Published

8. **Grothe, P.R.**, K.M. Cobb, G. Liguori, E. Di Lorenzo, A. Capotondi, Y. Lu, H. Cheng, R. L. Edwards, J. R. Southon, G.M. Santos, D.M. Deocampo, J. Lynch-Stieglitz, T. Chen, H.R. Sayani, K. Townsend, M. Hagos, G.K. O'Connor, D.M. Thompson, L.T. Toth, Jessica L. Conroy, and A.L. Moore, *Central Pacific El Nino-Southern Oscillation stronger in last decades than pre-industrial period* (currently accepted to *Geophysical Research Letters*)
7. Timmeran, A., S. An, J. Kug, F. Jin, W. Cai, A. Capotondi, K.M. Cobb, M. Lengaigne, M.J. McPhaden, M.F., Stuecker, K. Stein, A.T. Wittenberg, K. Yun, T. Bayr, H. Chen, Y. Chikamoto, B. Dewitte, D. Domenget, **P.R. Grothe**, E. Guilyardi, Y. Ham, M. Hayashi, S. Ineson, D. Kang, S. Kim, W. Kim, J. Lee, T. Li, J. Luo, S. McGregor, Y. Planon, S. Power, H. Rashid, H. Ren, A. Santoso, K. Takahashi, A. Todd, G. Wang, G. Wang, R. Xie, W. Yang, S. Yeh, J. Yoon, E. Zeller, X. Zhang, 2018, El Nino-Southern Oscillation Complexity, *Nature*, 559(7715), 535–545.
6. **Grothe, P.R.**, K.M. Cobb, S.L. Bush, H. Cheng, G.M. Santos, John R. Southon, R.L. Edwards, D.M. Deocampo and H.R. Sayani, 2016, A comparison of U/Th and rapid screening ¹⁴C and dates from Line Island fossil corals: implications for paleoclimate reconstruction, *Geochem. Geophys. Geosyst.*, 17, p. 833-845.
5. Toth, L.T., R.B. Aronson, H. Cheng, K.M. Cobb, R.L. Edwards, **P.R. Grothe** and H.R. Sayani, 2015, Climatic and biotic thresholds of coral-reef shutdown, *Nature Climate Change*.
4. Eakins, B.W. and **P.R. Grothe**, 2014, Challenges in building coastal digital elevation models, *Journal of Coastal Research*, v.30, n.5, p. 942-953.
3. **Grothe, P.R.**, N. Cardozo, K. Mueller, and T. Ishiyama, 2014, Propagation history of the Osaka-wan blind thrust, Japan, from trishear modeling, *Journal of Structural Geology*, v. 58, p. 79-94.
2. Cortese, G., R. Gersonde, Maschner, K., and **P. Medley**, 2012, Glacial-interglacial size variability in the diatom *Fragilariopsis kerguelensis*: possible iron/dust controls?: *Paleoceanography*, v. 27, PA1208, 14 pp.
1. **Medley, P.**, N.E. Tibert, W.P. Patterson, H.A. Curran, L. Greer, and J.P. Colin, 2007, Paleosalinity history of middle Holocene lagoonal and lacustrine deposits in the Enriquillo Valley, Dominican Republic based on pore morphometrics and isotope geochemistry of Ostracoda, *Micropaleontology*, v. 53, no. 5, p. 409-419.

REASERACH PRESENTATIONS

Invited Talks

1. **Grothe, P.R.**, K.M. Cobb, G. Liguori, E. Di Lorenzo, A. Capotondi, H. Cheng, R. L. Edwards, J., D.M. Deocampo, J. Lynch-Stieglitz, H.R. Sayani, Jessica L. Conroy, G. O'Conner, and A.L. Moore, Robust evidence for forced changes in ENSO: from the mid-Holocene to the 21st century: *Asia Oceania Geosciences Society 15th Annual Meeting, 2018, June 03-08, Honolulu, Hawaii.*

Presenting Author

12. **Grothe, P.R.**, K.M. Cobb, G. Liguori, E. Di Lorenzo, A. Capotondi, Y. Lu, H. Cheng, R. L. Edwards, J. R. Southon, G.M. Santos, D.M. Deocampo, J. Lynch-Stieglitz, T. Chen, H.R. Sayani, K. Townsend, M. Hagos, G. O'Connor, D.M. Thompson, L.T. Toth, Robust evidence for forced changes in ENSO: from the mid-Holocene to the 21st century: *PAGES Ocean Sciences Meeting, 2017, May 9-13, Zaragoza, Spain.* (Talk)
11. **Grothe, P.R.**, K.M. Cobb, G. Liguori, E. Di Lorenzo, A. Capotondi, Y. Lu, H. Cheng, R. L. Edwards, J. R. Southon, G.M. Santos, D.M. Deocampo, J. Lynch-Stieglitz, T. Chen, H.R. Sayani, K. Townsend, M. Hagos, G. O'Connor, D.M. Thompson, L.T. Toth, Robust evidence for forced changes in ENSO: from the mid-Holocene to the 21st century: *AGU Fall Meeting, 2016, December 12-16, San Francisco.* (Talk)
10. **Grothe, P.R.**, K.M. Cobb, R.L. Edwards, H. Cheng, D.M. Deocampo, J.R. Southon, and G.M. Santos, 2016, Central tropical Pacific corals constrain anthropogenic influence on recent ENSO extremes: *AGU Ocean Sciences Meeting 2016, February 21-26, New Orleans, LA.* (Talk)
8. **Grothe, P.R.**, K.M. Cobb, R.L. Edwards, H. Cheng, D.M. Deocampo, J.R. Southon, and G.M. Santos, 2015, Tropical Pacific corals reveal reduced ENSO variability 3-5kyBP: *AGU Fall Meeting 2015, December 14-18, San Francisco, CA.* (Poster)
7. **Grothe, P.R.**, K.M. Cobb, S.L. Bush, H. Cheng, G.M. Santos, J.R. Southon, and R.L. Edwards, 2014, A comparison of rapid-screening ¹⁴C dates and U/Th dates from fossil corals: implications for paleoclimate reconstruction: *AGU Fall Meeting 2014, December 14-19, San Francisco, CA.* (Poster)
7. **Grothe, P.R.**, K.M. Cobb, S.L. Bush, H. Cheng, G.M. Santos, J.R. Southon, and R.L. Edwards, 2013, A comparison of rapid-screening ¹⁴C dates and U-Th dates from fossil corals: implications for paleoclimate reconstruction: *GSA abstracts with Programs, vol. x, no. x, Denver, CO.* (Talk)
6. **Grothe, P.R.**, Mueller, K., Cardozo, N., and Ishiyama, T., 2012, 3D growth of the Osaka-wan thrust and fault-related fold- a detailed 1250 Ka record of rapid lateral outward propagation followed by higher rates of central uplift: *GSA abstracts with Programs, vol. 44, no. 6, Albuquerque, NM.* (Poster)
5. **Grothe, P.R.**, Eakins, B.E., Taylor, L.A., Carignan, K.S., Love, M.R., Amante, C.J., Friday, D.Z., and Lim, E., 2011, Strategies and techniques for integrating topographic and bathymetric data in a high-resolution digital elevation models: *AGU Fall Meeting 2011, December 5-9, San Francisco, CA.* (Poster)
4. **Medley, P.R.**, Leonard, L., and Davis, L., 2007, Evaluation of bottom boundary layer model output response to changing bottom characteristics in the near shore, Long Bay, North Carolina: Contributed Poster at *Atlantic Estuarine Research Society and Southeastern Estuarine Society Meeting, March 15-17, Pine Knoll Shores, NC.* (Poster)
3. **Medley, P.**, Tibert, N. E., Patterson, W. P., Curran, H. A., Colin, J.P., and Greer, L., 2006, Paleohydrology of Middle Holocene lagoonal & lacustrine deposits in the Enriquillo Valley, Dominican Republic: Pore Morphometrics and Isotope Geochemistry of Ostracoda, *GSA Abstracts with Programs, vol. 38, no. 7, pp. 444, Philadelphia PA* (Talk)
2. **Medley, P.**, Tibert, N. E., Curran, H. A., Patterson, W.P., and Greer, L., 2006, Paleosalinity history of a Holocene lagoon in the Enriquillo Valley, Dominican Republic: pore morphometrics

of ostracoda: *GSA Abstracts with Programs*, vol. 38, no. 2, pp. 76, Harrisburg, PA (Talk)

1. **Medley, P.**, Tibert, N. E., Curran, H. A., Patterson, W. P., and Greer, L., 2006, Paleosalinity History of a Holocene Lagoon in the Enriquillo Valley, Dominican Republic: Pore Morphometrics of Ostracoda: *Annual Keck Research Symposium in Geology, Amherst MA*. (Talk and poster)

Contributing Presentations

(underline – advised/mentored student)

24. Elliott, K., **P.R. Grothe**, B.L. Konecky, The seasonality of oxygen and hydrogen isotopes of rain, stream and groundwater in Fredericksburg, VA: *GSA Southeast Meeting, 2019, March 23 – 30, Charlestown, S.C.*
23. Moore, A.L., **P.R. Grothe**, A.R. Atwood, H.R. Sayani, K.M. Cobb, Constraining the mid-Holocene ENSO minimum in the Central Pacific using geochemistry of a 5,000-year-old Porites coral: *AGU Fall Meeting, 2018, December 10-14, Washington D.C.*
22. Palmo, C. and **P.R. Grothe**, Survey of paired $\delta^{18}\text{O}$, δD and salinity for the Chesapeake Bay and its tributaries: applications to regional paleohydrology: *AGU Fall Meeting, 2018, December 10-14, Washington D.C.*
21. Atwood, A.R., K.M. Cobb, J.C.H. Chiang, **P.R. Grothe**, C. Tabor, B. Otto-Bliesner, H.R. Sayani, A. Jones, N.T. Hitt, J.R. Southon, R.L. Edwards, H. Cheng, D.M. Deocampo, Tropical Pacific climate over the last 6,500 years – insights from a coral ensemble approach: *AGU Fall Meeting, 2018, December 10-14, Washington D.C.*
20. Atwood, A.R., K.M. Cobb, A. Jones, **P.R. Grothe**, H.R. Sayani, J.C.H. Chiang, **P.R. Grothe**, H.R. Sayani, N.T. Hitt, T. Chen, D.M. Deocampo, J.R. Southon, R.L. Edwards: A coral ensemble approach to reconstructing mean climate and seasonality from the central Pacific: *Goldschmidt, 2018, August 12-17, Boston, MA.*
19. Atwood, A.R., K.M. Cobb, J.C.H. Chiang, C. Tabor, B. Otto-Bliesner, **P.R. Grothe**, H.R. Sayani, J.R. Southon, R.L. Edwards, H. Cheng, D.M. Deocampo, N. T. Hitt, T. Chen, The influence of mean state changes on ENSO during the mid-Holocene: insights from coral records and an isotope-enabled GCM, *AGU Ocean Sciences Meeting, 2018, February 11-16, Portland, OR.*
18. Moore, A.L., P.R. Grothe, H.R. Sayani, A. Atwoor, K.M.Cobb, Evaluating the integrity of El Nino-Southern Oscillation reconstructions from Northern Line Islands Holocene-aged corals, *AGU Fall Meeting, 2017, Virtual Poster.*
17. Atwood, A.R., K.M. Cobb, **P.R. Grothe**, H.R. Sayani, J.R. Southon, R.L. Edwards, D.M. Deocampo, N.T. Hitt and J. Chiang. A Coral Ensemble Approach to Reconstructing Central Pacific Climate Change During the mid-Holocene: *GeoBremen2017, 2017, September, Bremen, Germany.*
16. Sayani, H.R.*, D.M. Thompson, J.E. Carilli, T. Ireland, K.M. Cobb, A.R. Atwood, **P.R. Grothe**, S.J. Miller, N.T. Hitt, G. O'Connor. Constraining 20th century Pacific trade-wind variability using coral Mn/Ca: *GeoBremen2017, 2017, September, Bremen, Germany.*

13. Sayani, H.R., D.M. Thompson, J.E. Carilli, T. Ireland, K.M. Cobb, A.R. Atwood, **P.R. Grothe**, O'Connor. Constraining 20th century Pacific trade-wind variability using coral Mn/Ca: *AGU Fall Meeting, 2017, December, New Orleans, LA.*
14. Atwood, A.R., K.M. Cobb, **P.R. Grothe**, H.R. Sayani, J.R. Southon, G.M. Santos, R.L. Edwards, D.M. Deocampo, T. Chen, K. Townsend, M. Hagos, J. Chiang, An ensemble approach to constraining Central Pacific climate change during the Holocene: *AGU Fall Meeting, 2016, December 12-16, San Francisco.*
13. Cobb, K.M.*, N. Westphal, C. D. Charles, H.R. Sayani, R.L. Edwards, H. Cheng, P. R. Grothe, T., Chen, N.T. Hitt, G. O'Connor, and A.R. Atwood. Tropical Pacific climate during the Medieval, Climate Anomaly: progress and pitfalls: *AGU Fall Meeting, 2016, December 12-16, San Francisco.*
12. Hitt, N.T., K.M. Cobb, H.R. Sayani, **P.R. Grothe**, A.R. Atwood, T. Chen, M. Hagos, D.M. Deocampo, R. L. Edwards, H. Cheng, Y. Lu, An ensemble approach to reconstructing 20th century climate trends in data-sparse regions of the tropical Pacific using young fossil corals: *AGU Fall Meeting, 2016, December 12-16, San Francisco.*
11. O'Connor, G.K., K.M. Cobb, H.R. Sayani, **P.R. Grothe**, The 2015/16 El Niño event as recorded in Central Tropical Pacific corals: temperature, hydrology, and ocean circulation influences: *AGU Fall Meeting, 2016, December 12-16, San Francisco.*
9. Sayani, H.R., K.M. Cobb, G.K. O'Connor, A. Khare, A.R. Atwood, **P.R. Grothe**, T. Chen³ M. Hagos, N.T. Hitt, D.M. Thompson, D.M. Deocampo, Y. Lu, H. Cheng, R.L. Edwards., Coral ensemble estimates of central Pacific mean climate during the Little Ice Age: *AGU Fall Meeting, 2016, December 12-16, San Francisco.*
8. Hitt, N.T., K.M. Cobb, H.R. Sayani, **P.R. Grothe**, T. Chen, H. Cheng, R.L. Edwards, An ensemble approach to reconstructing mid-20th century climate using young fossil corals: pitfalls and opportunities: *AGU Ocean Sciences Meeting 2016, February 21-26, New Orleans, LA.*
8. Cobb, K.M., J.L. Conroy, J.W. Moerman, C. Bosma, L. Everitt, S. Stevenson, D. Noone, **P.R. Grothe**, N. Schneider, M. Merrifield, 2015, Precipitation and seawater isotopic variability from Hawaii to the equator: the 2015-2015 ENSO cycle: *AGU Fall Meeting 2015, December 14-18, San Francisco, CA.*
7. Sayani, H.R., K.M. Cobb, A. Khara, C.M. Stone, **P.R. Grothe**, T. Chen, H. Cheng, R.L. Edwards, Central tropical Pacific SST and salinity variability over the Little Ice Age: *AGU Fall Meeting 2015, December 14-18, San Francisco, CA.*
6. Miller, S.J., K.M. Cobb, **P.R. Grothe**, T. Chen, H.R. Sayani, K. Townsend, R.L. Edwards, H.Cheng, D.M. Deocampo, 2015, Favia corals: a new paleoclimate archive: *AGU Fall Meeting 2015, December 14-18, San Francisco, CA.*
5. Morales-Collazo, J.A., W. Ramirez-Martinez, W. Amos, H. Santos Mercado, K.M. Cobb, H. Sayani, **P.R. Grothe**, R.L. Edwards, A. Min, H. Cheng, 2015, Reconstructing sea surface temperatures in the Caribbean during the early-mid Holocene from a reef exposure in Canado Honda, Enriquillo Valley, Dominican Republic: *GSA Abstracts with Program*, vol. xx, no.x, pp.xx, Baltimore, MD.

4. Morales-Collazo, J.A., W. Ramirez-Martinez, W. Amos, H. Santos, K.M. Cobb, H. Sayani, **P.R. Grothe**, M. Gonzalez-Tavarez, R.L. Edwards, H. Cheng, V. Cedeno, R. Medez-Tejeda, and A. Ramirez, 2015, Reconstrucción paleoclimática de la temperatura superficial marina durante el Holoceno temprano producida de corales fosiles presents en las laderas del lago enriquillo, República Dominicana, 11 Congreso Internatcional de Investigación Científica, Santo Doming, República Dominicana.
3. Eakins, B.W. and **P.R. Grothe**, 2014, Challenges in building coastal DEMs: *2014 AAG Annual Meeting, Tampa, FL*.
2. Morales-Collazo, J.A., W. Ramirez-Martinez, W. Amos, K.M. Cobb, H. Sayani, **P. Grothe** and M. Gonzalez-Tavarez, 2013, Developing a two thousand year record of climate variability from a reef exposure in Canada Honda, Enriquillo Lake, Dominican Republic: *29th Annual Symposium of Caribbean Geology*.
1. Eakins, B.W, Carignan, K.S., **Medley, P.R.**, and Taylor, L.A., 2010, DEM research to support tsunami modeling and forecasting efforts: *AGU's 2010 Ocean Sciences Meeting, February 22-26, Portland, OR*.

GRANTS

UMW Undergraduate Student Research Grant – Kathleen Elliott \$1850	Spring 2019
UMW Undergraduate Student Research Grant – Andrea Moore \$1200	Spring 2019
UMW Undergraduate Student Research Grant – Cheyenne Palmo \$1100	Spring 2019
UMW Undergraduate Student Research Grant – Kathleen Elliott \$800	Fall 2018
UMW Undergraduate Student Research Grant – Andrea Moore \$1,176	Fall 2018
UMW Undergraduate Student Research Grant – Cheyenne Palmo \$500	Fall 2018
UMW Faculty Supplemental Grant \$790	Fall 2018
UMW Undergraduate Student Research Grant – Andrea Moore \$2,515	Summer 2018
UMW Undergraduate Student Research Grant – Cheyenne Palmo \$2,500	Summer 2018
UMW Faculty Supplemental Grant \$1,000	Summer 2018
UMW Undergraduate Student Research Grant – Andrea Moore \$2,600	Fall 2017
UMW Faculty Supplemental Grant \$2,000	Fall 2017

TEACHING

Instructor

Our Dynamic Earth (EESC 111), University of Mary Washington
 Sedimentation and Stratigraphy (EESC 311), University of Mary Washington
 Oceanography w/lab (EESC 210/211), University of Mary Washington
 Icehouse/Greenhouse Earth (EESC 355), University of Mary Washington
 UMW in Bonaire – Corals, Climate and Conservations (EESC360D), University of Mary Washington
 Teaching Assistant Preparation Course (CELT 8000), Georgia Institute of Technology

Teaching Assistant

Sustainable Communities and Systems, Georgia Institute of Technology
 Earth Processes, Georgia Institute of Technology
 Oceanography, Georgia Institute of Technology

Paleoceanography and Paleoclimatology, Georgia Institute of Technology
Active Tectonics Field Course, University of Colorado
Environmental Geology Lab, University of North Carolina Wilmington

Guest Lectures

“Earth’s Climate System” in *Earth Processes*, Georgia Institute of Technology
“Corals as Paleoclimate recorders” in *Paleoceanography*, Georgia Institute of Technology
“Coral Reef Ecology” in *Oceanography*, Georgia Institute of Technology
“Ice Ages” in a *Habitable Planet*, Georgia Institute of Technology
“Evolution of Earth’s Atmospheric Oxygen” in *Our Changing Planet*, University of Colorado Boulder
“Coastal Morphology” in *Environmental Geology*, University of Mary Washington

High School Teacher

Earth Science and Earth Science II, Spotsylvania County Schools, Virginia

Educational Coursework

Course Design
Teaching Practicum
Education and Technology Foundations
Fundamentals of Teaching and Learning
Teaching and Learning Science
Teaching Climate

Certificates

Teaching Certificate, Georgia Tech’s Tech to Teaching
NAUI open water SCUBA certified
NAUI advanced SCUBA certified
PADI rescue SCUBA certified
PADI NITROX SCUBA certified
PADI O2 provider certified
PADI Reef Renewal certified
American Heart Association first aid and CPR certified

SERVICE

Mentoring Students

Kathleen Elliott, UMW, <i>EESC Department Honors, GSA Presenter</i>	2018 - 2019
Emily Richardson, UMW	Fall 2018
Robert Brown and Rina Murasaki, <i>UMW Jepson Scholars</i>	Summer 2018
Cheyenne Palmo, UMW, <i>UMW Summer Science, AGU Presenter</i>	2018 –
Andrea Moore, UMW, <i>UMW Summer Science, AGU Presenter</i>	2017 – 2019
Gemma O’Connor, Georgia Tech, <i>AGU Fall Meeting Presenter</i>	2016 – 2017
Melat Hagos, Georgia Tech	2016 – 2017
Kayla Townsend, Georgia Tech	2015 – 2016
Nicholas T. Hitt, Georgia Tech, <i>AGU and OSM Fall Meeting Presenter</i>	2015 – 2016
Shellby J. Miller, Georgia Tech, <i>AGU Fall Meeting Presenter</i>	2014 – 2016

Outreach

Fredericksburg Carbon Conference presenter – State of the Climate Address	July 2018
Rappahannock Group Sierra Club presenter	Dec. 2017
UMW Environmental Colloquium presenter	Oct. 2017
Free Lance Star Letter to Editor on Hurricanes and Climate Change	Oct. 2017
Atlanta Science Festival presenter – Columbia Middle School, Dekalb County	Mar. 2016
Atlanta Science Festival STEM presenter – ILM Academy, Islamic School	Mar. 2016
Springdale Park Elementary School family STEAM night presenter	Oct. 2015
Three-minute thesis presentation to Georgia Tech Community	Oct. 2015
Atlanta Science Festival STEM presenter to Brandon Hall College Prep	Mar. 2015
Atlanta Science Festival STEM presenter to 6 th grade Earth Science class	Mar. 2014
Interview - Showtime's "Years of Living Dangerously" climate change TV series	Aug. 2013
Atlanta Science Tavern presenter	July 2013
Interview - digital elevation models for tsunami modeling, NOAA Visualization	Dec. 2011
Presenter for NOAA's Science on a Sphere in Boulder, CO	2010 – 2012
Science Judge for Ocean Science Bowl, Boulder, CO	Spring 2009

Synergistic Activities

UMW President's Council for Sustainability Member	2018 –
UMW Field Hockey Faculty Mentor and Liaison	2018 –
UMW EESC Social Media Coordinator	2018 –
UMW EESC Alumni Liaison	2018 –
Science Museum of Virginia Science Advisory Panel Member	2018 –
UMW Destination Day Lecturer	April 2018
Phi Beta Kappa Fellowship Review	Spring 2018
UMW Faculty Candidate Search	Spring 2018
Co-organizer - Screening of "Chasing Ice"	Oct. 2013
Founder and Co-organizer - Women in geosciences (WiGs) at Georgia Institute of Technology	2014 – 2015
Co-organizer – Graduate Student Symposium for EAS, Georgia Institute of Technology	2013 – 2014
Graduate Student Recruitment Co-organizer, Georgia Institute of Technology	2013 – 2014

FELLOWSHIPS AND AWARDS

Provost's Office Grand Prize, CRIDC Poster Competition at Georgia Tech	March 2016
People's Choice Award and third place, Georgia Tech 3 Minute Thesis Competition	Nov 2015
SDE/GWIS Eloise Gerry Fellowship and Hartley Corp Fellowship	2014-2015
NSF USSP Scholarship – Urbino Paleoclimate Summer School	2014
Georgia Tech Presidential Fellowship	2012 – 2016
CIRES Silver Medal Award	2013
Victor Zullo Memorial Research Award	2007
The Sylvia and B.D. Schwartz Graduate Fellowship Award	2007
Outstanding Graduate Poster, Atlantic Estuarine Research Society/SEET Meeting	2007
Research Center Ocean Margins Fellowship	2006
Keck Geology Consortium Research Fellowship	2005 – 2006
Phi Beta Kappa Honor Society	2005

FIELD EXPERIENCE

Chesapeake Bay Tributaries

Summer 2018

- Installed temperature and salinity loggers near oyster reefs in the Rappahannock River
- Collected paired water samples and temperature and salinity measurements at surface and depth along transect lines in the James, Rappahannock, and Potomac river

Christmas Island, Republic of Kiribati

Aug. 2013, Sept. 2014, Mar. 2015, July 2015, Nov. 2015, Mar. 2018

- Install temperature and salinity loggers on the reef and lagoon to monitor El Niño
- Service existing loggers on the reef and collect data from them
- Install meteorological station
- Tag *Porites* modern corals for long-term monitoring
- Collect *Porites* coral tissue samples for genomics work
- Drill mini 1” diameter cores from *Porites* corals for geochemistry
- Collect seawater and rainwater for isotope and salinity analyses
- Perform reef surveys using video and photography to document coral bleaching
- Collect fossil corals from storm deposits for paleoclimate reconstruction
- Drill large 2-3” diameter cores using a hydraulic and pneumatic drill on modern and fossil corals

Southwestern, California

Spring 2010

- Map tectonic faults across the Death Valley region up to Owens Valley, California

Southeast Alaska NOAA Research Cruise

Summer 2010

- Perform shallow-water high-resolution multibeam sonar mapping

Enriquillo Valley, Dominican Republic

June 2005

- Sample lacustrine sediments from uplift terraces for microfossil analysis
- Map the stratigraphy of the uplifted terraces

PROFESSIONAL TRAINING AND WORKSHOPS

Assignment Alignment Workshop, UMW

2017 – 2018

NSF Expert Witness Training Academy, Hamlin School of Law, St. Paul, MN

August 2017

PAGES Young Scientist Meeting, Morillo de Tou, Spain

May 2017

PAGES Holocene Climate Change Workshop, Portland, OR

Oct. 2014

PROFESSIONAL AFFILIATIONS

American Geophysical Union

Geological Society of America

Association for Women Geologists

PAGES – Past Global Changes

Virginia Academy of Sciences