Laura J. Moore

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Biography

Laura J. Moore is a Professor in the Department of Earth, Marine and Environmental Science and the Environment, Ecology and Energy Program at The University of North Carolina at Chapel Hill where she is Director of the Coastal Environmental Change Lab. Dr. Moore also serves as the Director of C-CoAST, Collaboratory for Coastal Adaptation over Space and Time, a multi-disciplinary, multi-university, multi-agency effort, which is currently funded as a Research Coordination Network by the National Science Foundation Coast and People (CoPe) Program, with additional support from UNC Chapel Hill and Duke University.

Dr. Moore's interdisciplinary research program in coastal geomorphology/geology focuses on the response of low-lying coastal environments to climate change. Her recent and ongoing work merges observational and numerical approaches to investigate barrier island response to sea level rise; coastal foredune dynamics and the role of dunes in island evolution; couplings among barrier islands, back-barrier marshes and bays; large-scale coastline response to changing wave climate; feedbacks and interactions between human activities and natural processes that affect coastline evolution; and novel arts-based approaches to science education. Her research involves collaboration with ecologists, geomorphologists, economists, engineers, hydrologists, oceanographers, education researchers, behavioral scientists, computer scientists and dramatic artists, as well as coastal practitioners and stakeholders.

Dr. Moore has been an Investigator at the Virginia Coast Reserve Long-term Ecological Research site since 2008. She served as a member of the National Academy of Sciences Committee, "Long-term Coastal Zone Dynamics: Interactions and Feedbacks between Natural and Human Processes along the U.S. Gulf Coast;" was the lead editor of *Barrier Dynamics and Response to Changing Climate* published in 2018 by Springer; and delivered a keynote address at the bi-annual River, Coastal and Estuarine Morphodynamics Symposium in Auckland, New Zealand in 2019. Dr. Moore is also a communicator of climate change impacts on coastal environments, a playwright, an Editor for Cambridge Prisms *Coastal Futures,* and Chair of the North Carolina Coastal Resource Commission's Science Panel on Coastal Hazards.

Education

Postdoc	Department of Geology and Geophysics, Woods Hole Oceanographic Institution
Ph.D.	Earth Sciences, University of California Santa Cruz, March 1998.
B.A.	Geology, Colgate University, Hamilton, New York, May 1993. Magna cum Laude and High Honors.

Professional Experience

Professor **2021 – present**
University of North Carolina at Chapel Hill, Department of Earth, Marine and Environmental Sciences; Environment, Ecology and Energy Program

Professor **2020 – 2021**
University of North Carolina at Chapel Hill, Department of Geological Sciences; Environment, Ecology and Energy Program

Associate Professor **2015 – 2020***
University of North Carolina at Chapel Hill, Department of Geological Sciences; Environment, Ecology and Energy Program

Assistant Professor **2010 – 2015**
University of North Carolina at Chapel Hill, Department of Geological Sciences; Curriculum for the Environment and Ecology

Visiting Assistant Professor **AY2009 – 2010**
Duke University, Earth and Ocean Sciences Division
University of North Carolina at Chapel Hill, Department of Geological Sciences

Assistant Professor **2008 – 2010**
University of Virginia, Department of Environmental Sciences

Visiting Scientist **AY2005 – 2006**
U.S. Geological Survey, Woods Hole Science Center, Woods Hole, MA

Assistant Professor **2002 – 2007**
Oberlin College, Department of Geology, Oberlin, OH

Research Associate **2000 – 2002**
University of South Florida, College of Marine Science/USGS Center for Coastal Geology, St. Petersburg, FL

Postdoctoral Scholar **1998 – 2000**
Woods Hole Oceanographic Institution, Department of Geology and Geophysics, Woods Hole, MA

Instructor **1998**
University of California Santa Cruz, Department of Earth Science, Santa Cruz, CA

Graduate Student Researcher/Research Assistant **1993 – 1998**
University of California Santa Cruz, Department of Earth Science, Santa Cruz, CA

Honors and Awards

Ocean Decade Champion, National Science Foundation and Every Page Foundation, 2024.

Competitive Senior Faculty Research Leave, University of North Carolina at Chapel Hill, Fall '24

Competitive Senior Faculty Research Leave, University of North Carolina at Chapel Hill, Spr. '17

Mellon-8 Consortium Sabbatical Fellowship Award, September 2006.

W.M. Keck Foundation Fellowship in the Natural Sciences, May 2005.

Nominated to Project Kaleidoscope Faculty for the 21st Century, July 2004.

Meyers Oceanographic Trust Research Award, April 1997.

ARCS Scholarship, Achievement Rewards for College Scientists Foundation, June 1996.

Meyers Oceanographic Trust Research Award, March 1995.

William Beye Heald Scholarship, Long Marine Laboratory, UC Santa Cruz, April 1994.

Norma Vergo Prize in Geology, Department of Geology, Colgate University, May 1993.

**Research and Study Leave, Spring 2021*

Creative Activities

Science/Art Public Scholarship and Creative Work

Public reading of *Rollover,* a 90-minute play about the impacts of climate change on barrier islands. New version Spring 2022, Produced by the UNC Process Series, Written by Laura J. Moore, Directed by Jules Odendahl-James, Dramaturgy by Jules Odendahl-James and Kathryn Hunter Williams. Staged at the Gillings Center for Dramatic Art, March 24 & 25, University of North Carolina at Chapel Hill.

Public reading of *Rollover,* a 90-minute play (work in progress) about the impacts of climate change on barrier islands. Written by Laura J. Moore, Directed by Kathryn Hunter-Williams, Dramaturgy by Jules Odendahl-James. Staged at Current Art Space, April 28, 2018, University of North Carolina at Chapel Hill.

Publications

Science/Art Public Scholarship and Creative Work

Moore, L.J. (playwright), *in revision*, *Rollover,* a 90-minute play about the impacts of climate change on barrier islands. Directed by Kathryn Hunter-Williams, Dramaturgy by Jules Odendahl-James. Staged public reading April 28, 2018 at Current ArtSpace, University of North Carolina at Chapel Hill.

Books and Chapters

Moore, L.J., *Anarde, K.A., *Reeves, I.R. B., Murray, A.B., *Goldstein, E.B., and Zinnert, J., 2023. Dune-storm interactions, shrubs and management decisions drive coastal barrier behavior and affect future habitation. Coastal Sediments 2023, pp. 2240-2247. https://doi.org/10.1142/9789811275135_0206

Murray, A.B., Coco, G., Ashton, A.D., **Moore, L.J.**, McNamara, D.E., Limber, P., 2021, Modeling Nearshore, Barrier, Cliff, and Coastline Morphodynamics, In: *Treatise in Geomorphology (Second Edition),* Schroder, J.F (Ed.). pp. 50-61. doi: 10.1016/B978-0-12-818234-5.00148-6

Hovenga, P.A., Ruggiero, P., Cohn, N., Jay, K. R., Hacker, S. D., Itzkin, M., & **Moore, L. J.**, 2019. Drivers of Dune Evolution in Cape Lookout National Seashore, NC. *Coastal Sediments 2019 - Proceedings of the 9th International Conference*, 1283–1296. doi: 10.1142/9789811204487_0112

Hovenga, P.A., Ruggiero, P., Cohn, N., Jay, K., Hacker, S.D., *Itzkin, M., and **Moore, L.J.**, 2019. Drivers of dune evolution in Cape Lookout National Seashore, NC. In: *Coastal Sediments 2019,* edited by P. Wang and J. D. Rosati, World Scientific, Miami, FL, USA, pp. 1283-1296.

Raubenheimer, B., Chen, Q, Elgar, S., Michael, H., **Moore, L.J.**, Stark, N. 2019 (Keynote Address). The nearshore water-land system during major storms. In: *Coastal Sediments 2019,* edited by P. Wang and J. D. Rosati, World Scientific, Miami, FL, USA, pp. 13-24.

Moore, L.J. and Murray, A.B., eds., 2018. *Barrier Dynamics and Response to Changing Climate*. Springer, New York, 395p, https://doi.org/10.1007/978-3-319-68086-6

Murray, A. B., and **Moore, L. J.**, 2018. Geometric constraints on long-term barrier migration: from simple to surprising. In: Moore LJ, Murray AB (eds). *Barrier dynamics and response to changing climate*. Springer, New York, pp. 211-241.

*student or postdoctoral associate author advised, co-advised, or mentored by L.J. Moore
**undergraduate student author advised by L.J. Moore

Moore L. J., *Goldstein E. B., *Vinent O. D., *Walters D., Kirwan M., Lauzon R., Murray A. B., Ruggiero P., 2018. The role of ecomorphodynamic feedbacks and landscape couplings in influencing the response of barriers to changing climate. In: Moore L.J., Murray A.B. (eds) *Barrier dynamics and response to changing climate*. Springer, New York, pp. 305-336.

Moore, L.J., *Duran Vinent, O., Walters, D., and *Goldstein, E.B., 2015. Ecomorphodynamic feedbacks and couplings between landscape units affect barrier island response to changing climate. In: *Coastal Sediments 2015,* edited by P. Wang and J. D. Rosati, World Scientific, Miami, FL, USA. (digital only, no page numbers available)

Smith, M. D., Murray, A.B., Gopalakrishnan, S., Keeler A. G., Landry, C.E., McNamara, D., **Moore, L.J.**, 2015. Geoengineering Coastlines? From accidental to intentional. In: Baztan, J, Chouinard, O., Jorgensen, B., Tett, P. Vanderlinden, J. and Vasseur, L., Eds. *Coastal Zones: Solutions for the Twenty-first Century*, Elseveir, Netherlands, pp. 99-123.

Guy, D.E. and **Moore, L.J.**, 2011. *Geologic Setting and Processes along Lake Erie from Fairport Harbor to Marblehead*. Department of Natural Resources, Ohio Division of the Geological Survey, Cleveland, OH, 78p.

Moore, L. J., J. H. List, S. J. Williams, and *K. Patsch, 2011. Barriers on the brink: the complex intertwined roles of geologic framework, sediment availability and sea-level rise in island evolution. In: *Coastal Sediments 2011,* edited by P. Wang, J. D. Rosati and T. M. Roberts, pp. 272-285, World Scientific, Miami, FL, USA.

*Wolner, C. V., **L. J. Moore**, D. R. Young, S. T. Brantley, and S. N. Bissett, 2011. Dune builders vs. overwash maintainers: the potential influence of an ecomorphodynamic overwash feedback on barrier island response to climate change. In: *Coastal Sediments 2011,* edited by P. Wang, J. D. Rosati and T. M. Roberts, pp. 258-271, World Scientific, Miami, FL, USA.

Moore, L.J., List, J.H., Williams, S.J. and Stolper, D., 2007, Modeling barrier island response to sea-level rise. In: Kraus, N. and Rosati, J., (eds.), In: *Coastal Sediments 2007*, American Society of Civil Engineers, *3*, pp. 1153-1164.

Moore, L.J., Jol, H.M., Kaminsky, G.M., and Kruse, S., 2003. Severe winter storm effects revealed in stratigraphy of prograding coastal barrier, Southwest Washington, USA. In: Davis, R.A., Sallenger, A., and Howd, P, (eds.), In: *Coastal Sediments 2003*. American Society of Civil Engineers, pp. 1-9.

Moore, L.J., and Griggs, G.B., 1998. Measuring shoreline erosion: Techniques, accuracy and strategy. In: Magoon, O.T., Converse, H., Baird, B., Miller-Henson, M., (eds.), In: *California and the World Ocean '97*, American Society of Civil Engineers, Reston, VA, pp.719-730.

Benumof, B., **Moore, L. J.**, and Griggs, G.B., 1998. Coastal erosion: The state of the problem and the problem of the state. In: Magoon, O.T., Converse, H., Baird, B., Miller-Henson, M., (eds.), In: *California and the World Ocean '97*, American Society of Civil Engineers, Reston, VA, pp. 505-514.

Benumof, B.T., **Moore, L.J.**, and Griggs, G.B., 1998. FEMA and state-of-the-art coastal erosion mapping along the San Diego County coastline, California. *In:* Ewing, L. and Sherman, D. (eds.), In: *California's Coastal Natural Hazards*. USC Sea Grant Program, pp.719-730.

Peer-reviewed Consensus Study Report

National Academies of Sciences, Engineering, and Medicine, 2018. *Understanding the Long-Term Evolution of the Coupled Natural-Human Coastal System: The Future of the U.S. Gulf Coast*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25108. (**Moore, L.J.** one of 12 appointed committee members)

Manuscripts Review and Preparation

Moore, L.J., Mullin, M., DeMattia, E.A., Anarde, K., Corbett, D., Gopalakrishnan, S., Lobo, R., Luettich, R., McNamara, D., Murray, A.B., Miller, T., Smith, M., White, H., Enabling Co-produced, Coupled Human-Natural Dynamics Research in support of Coastal Resilience: The activities and outcomes of the Collaboratory for Coastal Adaptation over Space and Time (C-CoAST), to be submitted to *Coastal Futures.*

Moore, L.J., Hacker, S.D., Breithaupt, J., deVries, S., Miller, T., Ruggiero, P.R., Zinnert, J. *(In revision)*. Ecomorphodynamics of coastal foredune evolution. *Nature Earth and Environment Reviews (invited).*

Hovenga, P.A., Ruggiero, P.,R. **Moore, L.J.**, Hacker, S.D., Hallin, C., Cohn, N., and *Itzkin, M., *(In preparation).* Assessing the skill of beach-dune evolution models: Introducing an open-source multi-scale model testbed. To be submitted to *Shore and Beach.*

*Biel, R., **Moore, L.J.**, and *Goldstein, E.B., (*In revision*). Influence of wrack on foredune development, *Journal of Geophysical Research-Earth Surface*.

Moore, L.J., *Ingram, B., Hacker, S.D., Jay, K., Biel, R., and Ruggiero, P.R., *(In preparation)*. The role of *Spartina patens* colonization in dune recovery and growth following storms. *Scientific Reports (invited)- Collection on the Ecological Effects of Extreme Events.*

Peer-Reviewed Journal Articles

Jay, K., Hacker, S. D., Hagen, C.D., Stepanek, S., **Moore, L.J.**, and Ruggiero, P.R. (*In press)* Quantifying the relative importance of sand deposition and dune grasses to carbon storage in U.S. Central Atlantic Coast dunes. *Estuaries and Coasts*.

*Franklin, B., **Moore, L.J.**, and Zinnert, J., 2024. Predicting barrier island shrub presence using remote sensing products and machine learning techniques. *Journal of Geophysical Research-Biogeosciences.129 (5),* doi.org/10.1029/2023JF007465

*Anarde, K. A., **Moore, L. J.**, Murray, A.B., and *Reeves, I. R. B., 2024. The future of developed barrier systems: 1. Pathways toward uninhabitability, drowning, and rebound. *Earth's Future*, 12, e2023EF003672. https://doi.org/10.1029/2023EF003672

*Anarde, K. A., **Moore, L. J.**, Murray, A.B., and *Reeves, I. R. B., 2024. The future of developed barrier systems: 2. Alongshore complexities and emergent climate change dynamics. Earth's Future, 12, e2023EF004200. https://doi.org/10.1029/2023EF004200

*Reeves, I.R.B., **Moore, L.J.,** K. Valentine, S. Fagherazzi, and M. L. Kirwan, 2023. Sediment exchange across coastal barrier landscapes alters ecosystem extents. *Geophysical Research Letters, 50(14),* e2023GL103680. doi: 10.1029/2023GL103680

Hovenga, P. A., Ruggiero, P.R., *Itzkin, M.I., Jay, K.R., **Moore, L.J**., Hacker, S.D., 2023. Quantifying the relative influence of coastal foredune growth factors on the U.S. Mid-Atlantic Coast using field observations and the process-based numerical model Windsurf. *Coastal Engineering*, *181*, https://doi.org/10.1016/j.coastaleng.2022.104272.

Jay, K., Hacker, S., Hovenga, P., **Moore, L.J.**, Ruggiero, P., 2022. Sand supply and dune grass species affect foredune shape along the US Central Atlantic Coast, *Ecosphere*, e4256, DOI: 10.1002/ecs2.4256

*Reeves, I.R.B., Goldstein, E.B., **Moore, L.J.**, & Zinnert, J.C., 2022. Exploring the impacts of shrub-barrier feedbacks with an ecological-morphological model, *Journal of Geophysical Research: Earth Surface, 127,* e2021JF006397. https://doi.org/10.1029/2021JF006397.

*Itzkin, M., **Moore, L.J.**, Ruggiero P., and Hacker, S.D., 2022. Combining process-based and data-driven approaches to forecast beach and dune change, *Environmental Modeling and Software*, 153, 105404, https://doi.org/10.1016/j.envsoft.2022.105404.

*Itzkin, M., **Moore, L.J**., Ruggiero, P., Hacker, S.D., & Biel, R.G., 2021. The relative influence of dune aspect ratio and beach width on dune erosion as a function of storm duration and surge level, *Earth Surface Dynamics,* 9, 1223-1237, https://doi.org/10.5194/esurf-9-1223-2021.

Hovenga, P.A., Ruggiero, P., Goldstein, E.B., Hacker, S.D., and **Moore, L.J.**, 2021. The relative role of constructive and destructive processes in dune evolution on Cape Lookout National Seashore, North Carolina, USA. *Earth Surface Processes and Landforms: Women in Geomorphology Special Issue*. *46(14),* 2824-2840. https://doi.org/10.1002/esp.5210

*Reeves, I.R.B., **Moore, L.J.**, Murray, A.B., *Anarde, K.A., & Goldstein, E.B., 2021. Dune dynamics drive discontinuous barrier retreat. *Geophysical Research Letters*, 48(13) , e2021GL092958, https://doi.org/10.1029/2021GL092958

*Reeves, I.R.B., Goldstein, E.G., *Anarde, K.A., and **Moore, L.J.**, 2021. Remote bed level change and overwash observation with low-cost ultrasonic distance sensors. *Shore & Beach*, 89(2), 22-30. https://doi.org/10.34237/1008923.

*Straub, J., Rodriguez, T., Luettich, R., **Moore, L.J.**, *Itzkin, M., Ridge, J.T., Seymour, A.C., Johnston, D.W., and Theuerkauf, E.J., 2020. The role of beach state and the timing of pre-storm surveys in determining the accuracy of storm impact assessments, *Marine Geology, 425*. DOI: 10.1016/j.margeo.2020.106201.

*Reeves, I., **Moore, L.J.**, Goldstein, E.B., Murray, A.B., Carr J., and Kirwan, M., 2020 Impacts of seagrass dynamics on the coupled long-term evolution of barrier-marsh-bay systems. *Journal of Geophysical Research-Biogeosciences*.

*Itzkin, M., **Moore, L.J.**, Ruggiero, P., Hacker, S.D., 2019, Effects of sand fencing on on the morphology of natural dune systems, *Geomorphology*, DOI: 10.1016/j.geomorph.2019.106995

Woods, N., Dows, B.L., *Goldstein, E.B., **Moore, L.J.**, and Young, D.R., and Zinnert, J.Z., 2019, Interaction of seed dispersal and environmental filtering affects woody encroachment patterns in coastal grassland, *Ecoshpere, 10(7).* DOI: e02818.10.1002/ecs2.2818

Ruggiero, P.R., Cohn, N., Hoonhout, B., *Goldstein, E.B., de Vries, S., **Moore, L.J.**, Hacker, S., Durán Vinent, O.D. 2019. Simulating dune evolution on managed coastlines: exploring policy options with the Coastal Recovery from Storms Tool, *Shore and Beach, 87(2)*, pp. 36-43.

Hacker, S.D., Jay, K.R., Cohn, N., *Goldstein, E.G., Hovenga, P.A., *Itzkin, M., **Moore, L.J.**, Mostow, R., *Mullins, E. and Ruggiero, P., 2019. Species-specific functional morphology of four U.S. Atlantic Coast dune grasses: biogeographic implications for dune shape and coastal protection. *Diversity*, *11*(5). DOI: 10.3390/d11050082

*Mullins, E.D., **Moore, L.J.**, *Goldstein, E.B., *Jass, T., Bruno, J.F. and *Duran, O.D, 2019. Investigating dune-building feedback at the plant level: insights from a multispecies field experiment. *Earth Surface Processes and Landforms*. DOI: 10.1002/esp.4607

Zinnert, J., Via, S., Nettleton, B., Tulley, P., **Moore, L.J.**, Stallins, J., 2019. Connectivity in coastal systems: barrier island vegetation influences upland migration in a changing climate. *Global Change Biology*. DOI: 10.1111/gcb.14635

Cohn, N., Hoonhout, B.M., *Goldstein, E.B., de Vries, S., **Moore, L.J.**, *Durán Vinent O., and Ruggiero, P.R., 2019. Exploring marine and aeolian controls on coastal foredune growth using a coupled numerical model, *In Special Issue of Journal of Marine Science and Engineering*, G. Ruessink and C. Schwarz, eds., *7(13)* DOI:10.3390/jmse7010013

*Goldstein E.B. *Mullins, E., **Moore, L.J.**, *Biel, R.G., Brown, J.K., Hacker, S.D., Jay, K.R., Mostow, R.S., Ruggiero, R., Zinnert J.K., 2018. Literature-based latitudinal distribution and possible range shifts of two US east coast dune grass species (*Uniola paniculata* and *Ammophila breviligulata*), *PeerJ*. DOI: 10.7717/peerj.4932

*Goldstein E.B. and **Moore L.J.**, 2018, A calibration workflow for coastal dune models, *Shore & Beach*, *86(3)*, pp. 47-51 DOI: 10.31223/osf.io/cd87u

*Lauzon, R., Murray, A.B., **Moore, L.J.**, *Walters, D., Kirwan, M., Fagherazzi, S., 2018. Effects of marsh edge erosion in coupled barrier island-marsh systems and geometric constraints on marsh evolution. *Journal of Geophysical Research-Earth Surface, 123(6),* pp. 1218-1234, DOI: 10.1029/2017JF004530

Antolínez, J.A., Méndez, F.J., Murray, A.B., **Moore, L.J.**, **Farley, G., and Wood, J., 2018. Downscaling changing coastlines in a changing climate: The hybrid approach, *Journal of Geophysical Research-Earth Surface.* DOI: 10.1002/2017JF004367

*Goldstein, E.B., **Moore, L.J.**, and *Durán Vinent, O., 2017. Lateral vegetation growth rates exert control on coastal foredune hummockiness and coalescing time. *Earth Surface Dynamics, 5(3)*, p. 417-427, DOI: 10.5194/esurf-5-417-2017

*Yousefi Lalimi, F., Silvestri, S., **Moore L.J.**, and M. Marani, 2017. Coupled topographic and vegetation patterns in coastal dunes: Remote sensing observations and ecomorphodynamic implications. *Journal of Geophysical Research-Biogeosciences, 122(1)*, pp. 119-130. DOI: 10.1002/2016JG003540

Moore, L.J., Ruggiero, P. and *Duran, O., 2016. Vegetation control allows autocyclic formation of multiple dunes on prograding coasts. *Geology*, *44(7)*. DOI: 10.1130/G37778.1

*Goldstein, E.B. and **Moore, L.J.**, 2016, Stability and bistability in a one-dimensional model of coastal foredune height. *JGR-Earth Surface, 121(5)*. DOI: 10.1002/2015JF003783

*Durán Vinent, O. and **Moore, L.J.**, 2016. Reply to Bistability and the future of barrier islands. *Nature Climate Change, 6(6).*

Elko, N., Brodie, K., Stockdon, H., Nordstrom, K., Houser, C., McKenna, K., **Moore, L.**, Rosati, J., Ruggiero, P., Thuman, R. and Walker, I., 2016. Dune management challenges on developed coasts. *Shore & Beach, 84(1),* pp. 15-28.

*Rogers, L., **Moore, L.J.**, *Goldstein, E.B., Hein, C., Lorenzo-Trueba, J., and Ashton, A., 2015. Anthropogenic controls on overwash deposition: Evidence and consequences, *Journal of Geophysical Research-Earth Surface, 120*, 2609–2624, DOI: 10.1002/2015JF003634.

*Brenner, O.T., **Moore, L.J.** and Murray, A.B., 2015. The complex influences of backbarrier deposition, substrate slope and underlying stratigraphy in barrier island response to sea level rise: Insights from the Virginia Barrier Islands, Mid-Atlantic Bight, U.S.A. *Geomorphology, 246(1),* pp. 334-350, DOI: 10.1016/j.geomorph.2015.06.014.

Pelletier, J.D., Murray, A.B., Pierce, J.L., Bierman, P.R., Breshears, D.D., Crosby, B.T., Ellis, M., Foufoula-Georgiou, E., Heimsath, A.M., Houser, C., Lancaster, N., Marani, M., Merritts, D.J., **Moore, L.J.**, Pederson, J.L., Poulos, M.J., Rittenour, T.M., Rowland, J.C., Ruggiero, P., Ward, D.J., Whipple, K.X., Wickert, A.D., Yager, E.M., 2015. Forecasting the response of Earth's surface to future climatic and land-use changes: An assessment. *Earth's Future, 3(7),* pp. 220-251, DOI: 10.1002/2014EF000290.

* Durán Vinent, O. and **Moore, L.J.**, 2015. Bistability of barrier islands induced by biophysical interactions. *Nature Climate Change*, *5*, pp. 158–162, DOI: 10.1038/nclimate2474.

*Johnson, J., **Moore L.J.,** Ells, K., Murray, B., Adams, P., Jaeger, J., MacKensize, R., 2015. Recent shifts in coastline change and shoreline stabilization linked to storm climate change. *Earth Surface Processes and Landforms, 40*, pp. 569-585, DOI: 10.1002/esp.3650.

*Walters, D., **Moore, L.J.**, *Duran, O., Fagherazzi, S., and Mariotti, G. 2014. Interactions between barrier islands and backbarrier marshes affect island system response to sea level rise: Insights from a coupled model. *Journal of Geophysical Research—Earth Surface, 119*, pp. 2013-2031, DOI: 10.1002/2014JF003091

*Brantley, S.T., *Bissett, S.N., Young, D.R., *Wolner, C.V., **Moore, L.J.**, 2014. Barrier island morphology and sediment characteristics affect the recovery of dune building grasses following storm-induced overwash. *PLOS One*, *9(8)*, e104747, DOI: 10.1371/journal.pone.0104747

Moore, L.J., *Patsch, K., Williams, S.J., and List, J.L., 2014. Barrier islands poised for geomorphic threshold crossing in response to rapid sea-level rise: Insights from numerical model experiments, Chandeleur Islands, Louisiana, USA, *Marine Geology*, *355(1)*, pp. 244-259, DOI: 10.1016/j.margeo.2014.05.022.

Moore, L.J., McNamara, D.E., Murray, A.B, and *Brenner, O., 2013. Observed changes in hurricane-driven waves explain the dynamics of modern cuspate shorelines. *Geophysical Research Letters, 40(22)*, pp. 5867-5871, DOI: 10.1002/2013GL057311.

*Durán Vinent, O. and **Moore, L.J.**, 2013. Vegetation controls on the maximum size of coastal dunes. *Proceedings of the National Academy of Sciences*, *110(43)*, pp. 17217-17222, DOI: 10.1073/pnas.1307580110.

*Grady, A.E., **Moore, L.J.**, Storlazzi, C., Elias, E., Reidenbach, M., 2013. The potential influence of future sea-level rise and changes in fringing reef morphology on gradients in alongshore sediment transport. *Geophysical Research Letters*. *40(12),* pp. 3096-3101. DOI: 10.1002/grl.50577

*Wolner, C.V., **Moore, L.J.**, Young, D.R., Brantley, S.T., Bissett, S.N., McBride, R.A., 2013. Ecomorphodynamic feedbacks and barrier island response to disturbance: Insights from the Virginia Barrier Islands, Mid-Atlantic Bight, USA, *Geomorphology*, *199*, pp. 115-128, DOI: 10.1016/j.geomorph.2013.03.035.

Moore, L.J., List, J.H., Williams, S.J. and Stolper, D., 2010. Complexities in barrier island response to sea-level rise: Insights from model experiments. *Journal of Geophysical Research—Earth Surface,* DOI: 10.1029/2009JF001299.

Moore, L.J., Ruggiero, P.R. and List, J., 2006. Comparing high water line and datum-based shorelines: Implications for shoreline change. *Journal of Coastal Research*, *22(4)*, pp. 894-905.

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(Invited) **Moore, L.J.**, Roelvink, J.A., Ruggiero, C., Cohn, N., Hoonhout, B., *Duran, O., *Goldstein, E.G. and deVries, S., 2016. Crossing the shoreline divide: Toward modeling the co-evolution of dune, beach and nearshore systems, American Geophysical Union, Ocean Sciences Meeting, February 21-26, New Orleans, LA, Abstract MG14A-1921.

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*Jones, M.B., **Moore, L.J.**, Murray, A.B., McNamara, D.E., and Fenster, M.S., 2015. Considering holistic coastal response to climate change and management scenarios, November 1-4, Baltimore, MD, Geological Society of America *Abstracts with Programs, 47(7)*, p. 328.

*Lauzon, R., **Moore, L.J.**, Murray, A.B., *Walters, D.C., Kirwan, M.L., and Fagherazzi, S., 2015. Effects of lateral erosion by wind waves in coupled barrier-island marsh systems, November 1-4, Baltimore, MD, Geological Society of America *Abstracts with Programs, 47(7)*, p.331.

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*Goldstein, E.G., **Moore, L.J.**, and *Duran Vinent, O., 2015. Morphodynamic consequences of species competition on coastal foredunes. 9th Symposium on River, Coastal and Estuarine Morphodynamics, August 30 - September 9, Iquitos, Peru.

*deVries, E., *Goldstein, E.B. and **Moore, L.J.**, 2015. Vegetation controls on coastal foredune size: Field and remote sensing. Ecological Society of America Annual Meeting, August 4-9, Baltimore, MD, Abstract PS 26-53.

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*Jass, T.L., **Moore, L.J.**, Young, D.R., Bruno, J.F., *Durán Vinent, O., and *Goldstein, E.B., 2014. Considering the different roles of *Ammophila breviligulata* and *Spartina patens* in coastal foredune formation and growth, American Geophysical Union Fall Meeting, AGU Fall Meet. Suppl., Abstract EP31C-3576.

*Lauzon, R., **Moore, L.J.**, Murray, A.B., *Walters, D., Fagherazzi, S., and Mariotti, G., 2014. Marsh edge erosion effects in coupled barrier island-marsh systems, American Geophysical Union Fall Meeting, AGU Fall Meet. Suppl, Abstract EP31B-3543.

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*Durán Vinent, O, and Moore L.J., 2014, Barrier island bistability induced by non-vegetated dune nucleation at the beach. International Conference on Aeolian Research.

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(Invited) **Moore, L.J.**, and *Durán Vinent, O., 2013. Barriers on the brink? Interactions between biological and physical processes lead to bistability and the potential for rapid response to gradually changing conditions Abstract EP21A-01, AGU Fall Meet. Suppl.

*Walters, D., **Moore, L.J.**, *Durán Vinent, O., Fagherazzi, S., and Mariotti, G., 2013. Overwash deposition stabilizes backbarrier marshes as sea level rises: Insights from experiments conducted using a coupled barrier island-marsh model, Abstract EP13A-0864, AGU Fall Meet. Suppl.

*Grady, A.E., Jenkins, C.J., **Moore, L.J**., Potts, D.C., Burgess, P.M., Storlazzi, C.D., Elias, E., and Reidenbach, M.A, 2013. Feedbacks between wave energy and declining coral reef structure: Implications for coastal morphodynamics, Abstract EP13A-0837, AGU Fall Meet. Suppl.

Moore, L.J., 2013 *Barriers on the Brink? The complex, intertwined roles of geologic framework, sediment availability and ecomorphodynamics in island response to changing climate,* Coastal Processes and Environments under Sea-Level Rise and Changing Climate: Science to Inform Management, First Joint Penrose/Chapman Conference, Galveston, TX, April 2013.

(Invited) **Moore L.J.**, * Durán Vinent, O, *Walters, D, Fagherazzi, S. *Mariotti, G., Young, D., and *Wolner, C.V., 2012. Biological-physical feedbacks determine coastal environmental response to climate change. American Geophysical Union Fall Meeting, San Francisco, December 3-7, Abstract B51H-06.

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(Invited) *Durán Vinent, O., **Moore L.J.**, and Young, D., 2012. The role of vegetation in shaping dune morphology. American Geophysical Union Fall Meeting, San Francisco, December 3-7, Abstract EP33B-0865.

*Grady, A.E., **Moore L.J.**, Storlazzi, C.D., Elias, E. and Reidenbach, M.A., 2012, Influence of climate change on wave dissipation over coral reefs: Effects on beach morphology. American Geophysical Union Fall Meeting, San Francisco, December 3-7, Abstract EP33B-0863.

*Johnson, J., **Moore L.J.**, Ells, K. and Murray, A.B., 2012. Potential geomorphic consequences of wave climate alterations along cuspate coastlines. American Geophysical Union Fall Meeting, San Francisco, December 3-7, Abstract EP33B-0866.

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*Walters, D., **Moore, L.J.**, *Durán Vinent, O., *Mariotti, G. and S. Fagherazzi, 2012, Modeling the dynamic interactions and feedbacks between barrier islands and fringing back-barrier marshes, *Abstracts with Programs - Geological Society of America.*

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*Wolner, C. V., **L. J. Moore**, D. R. Young, S. T. Brantley, and S. N. Bissett, 2011. Dune builders vs. overwash maintainers: the potential influence of an ecomorphodynamic overwash feedback on barrier island response to climate change. Coastal Sediments 2011, May 2-6, Miami, FL.

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Wilkins, C., Fenster, M.S., *Brenner, O.T., Gontz, A.M. and **Moore, L.J.**, 2010. The influence of nearshore geology on the northern Virginia barrier islands during sea-level rise. Joint Northeast-Southeast Geological Society of America Meeting, March 15-16, Baltimore, MD.

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External Grants

Pending

Assessing the Effects of Adaptation and Mitigation Strategies on the Evolution of Barrier Island Landscapes, Ecosystems and Communities Using Collaborative Science. National Oceanographic and Atmospheric Administration - Ecological Effects of Sea Level Rise Program. Lead-PI: L.J. More, Co-PIs: K. Anarde (NCSU) K. Busch (NCSU), R. Corbett (East Carolina U.), A.B. Murray (Duke U.), Total Proposed Cost and Budget Period: **$1,598,012 (UNC-CH Total)/$ $1,323,608 (UNC-CH Direct)**. July 2024 – June 2028. Submitted February 2024. Moore salary effort: 8.3 % of 12 month equivalent per year

Funded Grants

Understanding the Long-term Effects of Community Mitigation and Adaptation Strategies on North Carolina Barrier Island Futures through Collaborative Science, Sea Grant Core Funding, **$150,000 (UNC-CH Total)/ $108,241 (UNC-CH Direct)**, **Lead-PI: L.J. Moore**. February 2024 – January 2026. Moore salary effort: 8.3 % of 12 month equivalent per year.

Effects of Adaptation Strategies on Ocracoke Island, National Park Service, **$200,069 (UNC-CH Total)/$178,809 (UNC-Direct)**, **Lead-PI: L.J. Moore**. September 18, 2023 – September 17, 2025. Moore salary effort: 8.3 % of 12 month equivalent per year.

Examining the relationship between quantifiable coastal features and overwash at regional scales, U.S. Army Corps of Engineers, **$85, 243 (UNC-CH Total)/$59,036 (UNC-CH Direct)**. **PI: L.J. Moore**. January 1, 2022 – December 31, 2022. Moore salary effort: 8.3 % of 12 month equivalent per year.

CoPe: RCN: Building a Collaboratory for Coastal Adaptation over Space and Time (C-CoAST), National Science Foundation Coasts and People (CoPe) Program, **$499,864 (UNC-CH Total)/$382,532 (UNC-CH Direct)**, **Lead-PI: L.J. Moore**, Co-PIs R. Luettich (Engineering), D. McNamara (Non-linear dynamics; UNC-W), M. Mullin (Political Science; Duke) and M. Smith (Economics; Duke). April 1, 2019 – March 30, 2025. Moore salary effort: 8.3 % of 12 month equivalent per year.

Convergence: RAISE: The Nearshore Water-Land Interface During Extreme Storms, convergent science prospectus submitted in response to Dear Colleague Letter, National Science Foundation, $991,941 (total**)/$78,785 (UNC-CH Total)/$50,704 (UNC-CH Direct)**, Lead-PI: B. Raubenheimer (WHOI), Co-PI: S. Elgar (WHOI), Senior Personnel: Q.J. Chen (Northeastern U), S. Elgar H. Michael (U. Del), **L. J. Moore** (UNC-CH), Nina Stark (Virginia Tech). September 15, 2018 **–** August 31, 2021. Moore salary effort: 8.3 % of 12 month equivalent per year.

LTER (Long-term Ecological Research): Climate drivers, dynamics, and consequences of ecosystem state change in coastal barrier systems**,** National Science Foundation, Division of Environmental Biology, ~$5,990,000 (total)/**$307,330 (UNC-CH Total)/$239,460 (UNC-CH Direct)**, Lead-PI: K.McGlathery, Coversheet Co-PIs: P. Wiberg (UVA); M. Reidenbach (UVA); J. Porter (UVA), LTER PIs: S. Fagharazzi (BU), S. Karpanty (Virginia Tech); M. Kirwan (VIMS); D. Johnson (VIMS); **L.J. Moore** (UNC-CH), M. Pace (UVA), J. Zinnert (VCU). November 30, 2018 – November 29, 2024. Moore salary effort: 0%.

CNH-L: Climate Change in a Coupled Geomorphic-Economic System. National Science Foundation, Coupled Natural Human Systems, $1,499,752 (total)/ **$223,123 (UNC Total)/$149,140 (UNC-CH Direct)**. UNC-CH Lead PI: D. McNamara (UNC-W), UNC-CH PI**: L.J. Moore**, Co-PIs: M. Smith and A.B. Murray (Duke), S. Golpalakrishnan (OSU) and C. Landry (UG). August 1, 2017 – July 31, 2020. Moore salary effort: 8.3 % of 12 month equivalent per year.

The Role of Vegetation in Coastal Response to Sea Level Rise. National Oceanic and Atmospheric Administration, Ecological Effects of Sea Level Rise Program, $629,550 (total)/**$186,112 (UNC-CH Total)/$144,142 (UNC-CH Direct)**, Lead-PI: P. Ruggiero (OSU), **PIs**: S. Hacker (OSU) and **L. Moore**, September 15, 2015 – September 14, 2019. Moore salary effort: 8.3 % of 12 month equivalent per year.

LTER (Long-term Ecological Research): Drivers, dynamics and consequences of non-linear change in coastal barrier systems, National Science Foundation, Division of Environmental Biology, $5,880,000 (total)/**$215,000 (UNC-CH Total)/$178,629 (UNC-CH Direct)**, Lead-PI:K.McGlathery, **Co-PIs:**, P. D'Odorico (UVA), S. Fagharazzi (BU), **L.Moore** (UNC-CH), M. Pace (UVA), J. Porter (UV0041), M. Reidenbach (UVA), P.

Wiberg (UVA), D. Young (VCU), November 1, 2012 – October 31, 2018. Moore salary effort: 0%.

Modeling dune growth on managed coasts, Engineer Research and Development Center, Army Corps of Engineers, **$49,987 (UNC-CH Total)/ $42,452 (UNC-CH Direct)**, **PI: L. Moore**, August 15, 2016 – December 14, 2017. Moore salary effort: 8.3 % of 12 month equivalent per year.

Collaborative Research: Exploring the role of Ecomorphodynamic Feedbacks in Barrier Island Response to Climate Change. National Science Foundation, Geomorphology and Land Use Program, $481,982 (total)/ **$382,784 (UNC-CH Total)/ $307,196 (UNC-CH Direct)**. **Lead PI: L. Moore**, Co-PIs: J. Bruno (UNC-CH), D. Young (VCU). September 15, 2013 – September 14, 2018. Moore salary effort: 8.3 % of 12 month equivalent per year.

Enhancing Coastal Resilience on Virginia's Eastern Shore, National Federation for Fish and Wildlife (NFWF) via subcontract from The Nature Conservancy, $1,250,000 (total)/**$105,668 (UNC-CH Total)/$91,832 (UNC-CH Direct)**, **Lead PI: L. Moore**, Co-PIs: M. Fenster (Randolph Macon College), A.B. Murray (Duke), D. McNamara (UNC-W), August 15, 2014 – March 14, 2017. Moore salary effort: 8.3 % of 12 month equivalent per year.

Collaborative Research: Coastal Geomorphic Consequences of Wave Climate Change, National Science Foundation, Geomorphology and Land Use Program, $515,000 (total)/ **$155,071 (UNC-CH Total)/$108,424 (UNC-CH Direct)**. Lead-PI: P. Adams (UF), **Co-PIs: L.Moore**, D. McNamara (UNC- W) and A.B. Murray (Duke), September 1, 2011 – August 31, 2015. Moore salary effort: 8.3 % of 12 month equivalent per year.

Biogeomorphic Controls on Barrier Island Evolution in Response to Climate Change, Subaward from University of Virginia for remainder of NICCR-DOE award (below). **$25,241 (UNC-CH Direct)**. **Lead PI: L. Moore**., Co-PI: D. Young (VCU), January 2011 – August 2012. Moore salary effort: 8.3 % of 12 month equivalent per year.

Collaborative Research: Biogeomorphic Controls on Barrier Island Evolution in Response to Climate Change, National Institute for Climatic Change Research, Department of Energy, $249,000 (total)/ **$142,000 (UVA Total)**. **Lead PI: L. Moore**, Co-PI: D. Young (VCU), August 2009 – August 2012.

Seismic Data Collection, National Science Foundation Subcontract via Randolph Macon College in support of collaborations with Michael Fenster, **$8,700 (UVA Total)**. **Lead PI: L. Moore**.

Modeling the Holocene and potential future evolution of the Chandeleur Islands, Louisiana, U.S. Geological Survey, **$60,800 (UVA Total)**. **Lead PI: L. Moore**, Jan. 2008 – Dec. 2009.

S-STEM Scholarships at Oberlin College: Supporting Undergraduate Engagement in Computation and Modeling, National Science Foundation, **$541,000 (Total)**. Lead PI: R. Salter, **Co-PIs: L. Moore** and D. Stinebring, 2007 – 2010.

Modeling the Holocene and potential future evolution of the Chandeleur Islands, Louisiana, U.S. Geological Survey, **$88,372 (Total)**. **Lead PI: L. Moore**, 2007– 2008.

Barrier island response to sea-level rise, Mellon 8 Consortium Semester Research Leave, **$30,000 (Total)**. **Lead PI: L. Moore**, 2005 – 2006.

Quantifying the bias between proxy-based and datum-based shorelines, U.S. Geological Survey, **$28,828 (Total)**. **Lead PI: Moore**, 2003 – 2004.

Quantification of beach change and coastal erosion hazards, U.S. Geological Survey, **$125,000 (Total)**. Lead PI: P. Howd, **Co-PI: L. Moore**, 2001 – 2002.

Exploring late-Holocene hurricane activity as recorded in salt ponds and lagoons of the Caribbean region. National Science Foundation SGER – Earth System History, **$40,000 (Total)**. **Lead PI: L. Moore**, Co-PI: A. Cohen, 2000 – 2002.

Operational creation of aerial mapping data products for Vital Signs Monitoring within northeastern national seashores, National Park Service, **$50,000 (Total)**. Lead PI: Brock, **PI: L. Moore**, 2001 – 2002.

Coastal erosion hazard mapping in Santa Cruz and San Diego Counties, Federal Emergency Management Agency, **$77,760 (Total)**. Lead PI: G. Griggs, **Co-Author: L. Moore**, 1996 – 1998.

Acquisition of hardware and software for an Imaging and GIS Facility for the study of Earth Sciences, National Science Foundation, Instrumentation and Facilities Program, **$42,000 (Total)**. Lead PI: G. Griggs, PI: R. Anderson, **Author: L. Moore**, 1996 – 1997.

Selected Funded Internal Grants

Senior Faculty Competitive Leave, sole PI, University of North Carolina at Chapel Hill, *Understanding the Long-term Effects of Adaptation and Mitigation Strategies on the Evolution of Coastal Communities and Landscapes through Co-Production*, Awarded Spring 2024, for Fall 2024, UNC-CH, Office of the Provost.

Funding Interdisciplinary Research Explorations (FIRE) Grant, PI, Co-PI K. Hunter Williams, *Performing Science to Promote Shifts in Cultural Perception: Developing a Play to Communicate the Impacts of Climate Change on Barrier Islands*. Provided funds for research, travel, workshops and staged reading in support of development of *Rollover* (Playwright - Laura J. Moore; Dramaturg - Jules Odendahl-James; Director - Kathryn Hunter Williams), $25,000, UNC-CH, Office of the Vice Chancellor for Research, May 2016 - June 2018.

Senior Faculty Competitive Leave, sole PI, University of North Carolina at Chapel Hill, *A Trans-disciplinary Investigation of the Role of Coastal Dunes in Coastal Resilience*, one semester of Research and Scholarly Leave for Spring 2017, UNC-CH, Office of the Provost.

Junior Faculty Development Award, sole PI, summer salary in support of development of a proposal (solicited by Springer) and preparation of an introductory chapter for an edited volume on barrier island response to climate change, $7468, Office of the Provost, August 2014.

Writing Grant, Professors as Writers Program, sole PI, University of Virginia, $1000, Fall 2009 - Spring 2010.

Research Grant, Modeling Barrier Island Response to Sea-Level Rise, sole PI, Oberlin College Grant-in-Aid, $2400, 2007.

Research Grant, Using Oxygen isotopes to identify hurricane overwash deposits, St. Croix, USVI, sole PI, Oberlin College-University of Michigan Cooperative, $10,000, 2005 - 2006.

Science-Art Program Grant, Interdisciplinary collaborations: Campus visit by coastal geologist Dr. Orrin Pilkey and American artist Mary Edna Fraser, sole PI, Mead-Swing Lecture Fund, Oberlin College, $3500, 2004.

Research Grant, Reconstructing late-Holocene climate change and sea-level variations, St. Croix, U.S.V.I., sole PI, Oberlin College AIRE grant, $3650. Funding for summer research assistant, 2003.

First Year Seminar Development Grant, Developing first year seminar "Coasts in Crisis," First Year Seminar Program, sole PI, Oberlin College, $3500, 2003.

Travel Grant, Exploring linkages between coastal progradation and climate variability, PI, University of South Florida Travel Grant Program, $5000, 2001.

Specialized Voluntary Trainings

The Chronicle's Academic Leadership Crash Course: Practical Tools for the 'Admin-Curious,' Offered by Denver Justice in collaboration with the Chronicle for Higher Education, August 2024.

Bystander Intervention Training, provided by ADVANCEGeo, attended in 2021. This interactive session highlights academic practices and institutional structures that allow for the persistence of harassment, bullying and hostile behaviors and provides guidance in personal intervention strategies to protect and support those who are targets of harassment.

Tackling Implicit Bias and Recognizing Microaggressions in the Workplace, provided by ADVANCEGeo, attended in February 2022. This interactive session informs participants of how to recognize unconscious bias and microaggressions, how these behaviors impact the workplace, interactions among colleagues and productivity.

Chancellor's Workshop on Human-Centered Design, hosted by Innnovate Carolina. This interactive two-day workshop, offered by invitation only, provided training in human-centered design principles and provided practical guidance in implementing them in the context of research and education, June 2019.

Teaching Record

Courses Taught

University of North Carolina

Undergraduate Research in EMES (EMES 395), May 2024, 1 student

Advanced Coastal Environmental Change (EMES/ENEC 512), Spring 2024, 6 students

Coastal Environmental Change (EMES/ENEC 310), Fall 2023, 21 students

Undergraduate Research in EMES (EMES 395), Spring 2023, 2 students

Advanced Coastal Environmental Change (EMES/ENEC 710), Spring 2023, 3 students

Coastal Environmental Change (GEOL/ENEC 310, MASC 316), Fall 2022, 18 students

Advanced Coastal Environmental Change (GEOL 710, ENEC 710, MASC 730), Spring 2022, 4 students

Advanced Coastal Environmental Change (GEOL 710, ENEC 710, MASC 730), Fall 2020, 9 students

Coastal Environmental Change (GEOL 310, ENEC 310, MASC 316), Spring 2020, 8 students

Coasts in Crisis First Year Seminar (GEOL 79), Fall 2019, 19 students

Coastal Environmental Change (GEOL 310, ENEC 310, MASC 316), Spring 2019, 14 students

Coastal Environmental Change (GEOL 310, ENEC 310, MASC 316), Spring 2018, 12 students

Advanced Coastal Environmental Change (GEOL 710, ENEC 710, MASC 730), Spring 2018, 6 students

Advanced Coastal Environmental Change (GEOL 710), Fall 2016, 4 students

Coastal Environmental Change (GEOL 310), Spring 2016, 12 students

Advanced Coastal Environmental Change (GEOL 710), Spring 2016, 4 students
Advanced Coastal Environmental Change (GEOL 710), Spring 2015, 6 students, 1 auditor
Introductory Graduate Seminar (GEOL 700), Fall 2014, 9 students
Coasts in Crisis First Year Seminar (GEOL 79), Fall 2014, 19 students
Introductory Graduate Seminar (GEOL 700), Fall 2013, 11 students
Coastal Environmental Change (GEOL 310), Fall 2013, 19 students
Advanced Coastal Environmental Change (GEOL 710), Spring 2013, 6 students, 1 auditor
Introduction to Geology (GEOL 101), Spring 2013, 114 students
Coasts in Crisis First Year Seminar (GEOL 079), Fall 2012, 20 students
Coastal Sedimentary Environments (GEOL 430), Spring 2012, 3 students
Introduction to Earth and Climate for Science Majors (GEOL 110), Spring 2012, 27 students, 1 auditor.
Introduction to Earth and Climate for Science Majors (GEOL 110), Spring 2011, 23 students.
Independent Study (Geol 390), Spring 2011, Marcelaine Tanner, 1.0 credit.

University of Virginia
Independent Study (EVSC 494), Fall 2010, Nicholas Brockemeir, co-advised with R. Davis
Coastal Processes (EVSC 485), Spring 2009, 14 students and 1 auditor, 1 TA, team-taught with R. Dolan
Independent Study (EVSC 494), Spring 2009, Danielle LaRock, co-advised with P. Wiberg,
Independent Study (EVSC 494), Spring 2009, Caleb Buller, co-advised with M. Reidenbach,
Climate Change Impacts on Coastal Processes (EVSC 493/793), Fall 2008, 3 students and 2 auditors
Independent Study (EVSC 494), Fall 2008, Danielle LaRock, co-advised with P. Wiberg,

Oberlin College
Coasts in Crisis (First-year Seminar), Fall 2003, 2004, 2005, 2007
Earth's Environments, Spring 2003, 2004, 2005, 2007
Geographic and Geologic Mapping and Analysis, Spring 2003, 2004
Earth Surface Processes, Fall 2002, 2003, 2004, 2005, 2007

University of California Santa Cruz
Remote Sensing and GIS: Geologic Applications, Spring 1998

Teaching Workshops
Attended or co-organized the following Cutting Edge Workshops: Early Career Faculty Workshop (2002); Innovative Course Design (2004); Teaching Quantitative Methods in the Geosciences (*Invited Participant*, 2005); and Teaching Geomorphology in the 21st Century (*Invited co-organizer*, 2008).

Current UNC-CH Graduate and Undergraduate Students
Sofia Gurevich (M.S. Student), August 2023 – present
Benton Franklin (Ph.D. Student) August 2020 – present
Makayla Paige (B.S. Student) April 2024 - present

Previous Postdoctoral Associates and Graduate Students/Research Assistants

Previous Postdoctoral Associates:
Ian Reeves, May 2021 – May 2022
Katherine Anarde, October 2019 – July 31, 2021
Reuben Biel, October 2017 – January 31, 2019
Evan Goldstein, June 2014 – December 2017.
Orencio Duran Vinent, August 2011 – July 2013
Kiersten Patsch (UVA) October 2009 – December 2010

Previous Graduate Students/Research Assistants:
Bri Ingraham (M.S. Student), August 2020 – December 2022
Thesis: The role of Spartina patens on U.S. Atlantic dunes and beaches: A review, examples from the North Carolina Coast and implications for dune building and recovery.
Eve Eisemann (Ph.D. Student), August 2021– August 2022
Thesis Work: Examining the relationship between quantifiable coastal features and overwash at regional scales
Michael Itzkin (Ph.D. Student), August 2016 – August 2021
Dissertation: Anthropogenic influences on coastal dune dynamics: Exploring past and future effects of management interventions on a developed barrier island
Ian Reeves (Ph.D. student), August 2016 – May 2021
Dissertation: Controls on sediment exchange and connectivity in coastal barrier systems and implications for long-term evolution.
Elsemarie deVries (M.S. student), August 2014 – May 2018
Thesis: Investigating the dune-building feedback at the plant level: Insights from a multi-species field experiment.
Margaret Jones (M.S. student), August 2014 – August 2016
Thesis: Considering holistic coastal response to climate-change induced shifts in natural processes and anthropogenic modifications
Laura Rogers (M.S. student), August 2013 – July 2015
Thesis: Anthropogenic Controls on Overwash Deposition: Evidence and Consequences
Theo Jass (M.S. student), August 2013 – July 2015
Thesis: Environmental Controls on the Growth of Dune-building Grasses and the Effect of Plant Morphology on Coastal Foredune Formation, August 2013 – July 2015
David Walters (M.S. student), August 2011 – August 2013
Thesis: Overwash deposition increases back-barrier marsh resiliency to sea level rise: Insights from a coupled barrier island-marsh model
Jennifer Johnson (M.S. student), August 2011 – August 2013
Thesis: The Geomorphic Consequences of Wave Climate Change along Cuspate Coastlines
Owen Brenner, (M.S. student- UVA), September 2010 – April 2012
Thesis: The complex influences of back-barrier deposition, substrate slope and underlying stratigraphy in barrier island response to sea level rise: Insights from the Virginia Barrier Islands, Mid-Atlantic Bight, USA
Dana Oster, (M.S. student- UVA), September 2010 – April 2012
Thesis: The influence of morphology on barrier island recovery following storms: Insights from the Virginia Barrier Islands, Mid-Atlantic Bight, USA
Catherine Wolner, (M.S. student-UVA), September 2009 – July 2011
Thesis: Ecomorphodynamic feedbacks and barrier island evolution, Virginia Coast Reserve, USA.

Owen Brenner (Research Assistant, full-time-UVA), September 2008 – August 2009

Graduate Student Awards and Honors (beyond awards of research funding)

Benton Franklin, Disser Completion Fellowship, UNC-CH, August 2024 - May 2025
Ian Reeves, U.S. Geological Survey Mendenhall/Woods Hole Oceanographic Fellowship, August 2022.
Michael Itzkin, U.S. Geological Survey Mendenhall Fellowship, August 2021.
Michael Itzkin, Dissertation Completion Fellowship, UNC-CH, August 2020 - May 2021.
Ian Reeves, Syvitski Student Modeler Award, May 2020
Ian Reeves, Mackin Award, GSA Quaternary Geology and Geomorphology Division, May 2018
Elsemarie deVries, NSF Graduate Student Fellowship, July 2016 - June 2018
Margaret Jones, Best Graduate Student Talk, 3rd Place, Anadarko Symposium, April 2016
Margaret Jones, Best Presentation, Young Coastal Scientists and Engineers, July 2015
Laura Rogers, Best Graduate Student Talk, 3rd Place, Anadarko Symposium, April 2015
J.J. Johnson, Best Graduate Student Talk, 3rd Place, Anadarko Symposium, April 2013
J.J. Johnson, Best First-year Graduate Student Poster, Anadarko Symposium, April 2012
Amy Grady, NSF Graduate Fellowship, August 2011 - July 2016
Catherine Wolner, Best Poster Award, UVA EnviroDay, January 2011
Dana Oster, Best Poster Award runner-up, UVA EnviroDay, January 2011
Amy Grady, NSF Graduate Fellowship Honorable Mention, August 2010

Additional Graduate Student Committee Service

Ana Bastos (Ph.D. student), Department of Geosciences, University of Lisbon, September 2020 – present.
Emily Ruffe (Ph.D. student), Department of Biology, Virginia Commonwealth University, Fall 2020 – present.
Lauren Brideau (Ph.D. student), Department of Environmental Sciences, University of Virginia, May 2024 – present.
Lexi VanBlunt (Ph.D. student), Department of Civil Engineering, NC State University, April 2022 – 2023.
Ted Langhorst (Ph.D. student), Department of Geological Sciences, University of North Carolina Chapel Hill, January 2020 – May 2021.
Sarina Little (M.S. student), Department of Geological Sciences, University of North Carolina at Chapel Hill, March 2019 – May 2020.
Kaia Findlay, (M.S. student), School of Media and Journalism, University of North Carolina Chapel Hill, January 2019 – July 2019.
Jessamin Straub (M.S. student), Department of Marine Sciences, University of North Carolina at Chapel Hill, January 2018 – August 2019.
Wayana Dolan (Ph.D. student), Department of Geological Sciences, University of North Carolina Chapel Hill, June 2016 – May 2018.
Maggie Esch (Ph.D. student), Department of Marine Sciences, University of North Carolina Chapel Hill April 2015 – August 2016.
Mejs Hasan (Ph.D. student), Department of Geological Sciences, University of North Carolina Chapel Hill December 2014 – December 2016.
Wayana Dolan (M.S. student), Department of Geological Sciences, University of North Carolina Chapel Hill, January 2014 – May 2016.
Liz Humphries (Ph.D. student), Department of Geological Sciences, University of North Carolina Chapel Hill, January 2014 – May 2018.

Rebecca Lauzon (Ph.D. student), Earth and Ocean Sciences Division, Duke University, September 2013 – May 2016.
Fateme Yousefi (Ph.D. student), Earth and Ocean Sciences Division, Duke University, September 2013 – May 2018.
Katherine Murray (Ph.D. student), Earth and Ocean Sciences Division, Duke University, May 2013 – December 2015.
Sierra Schelegle (Ph.D. student), Curriculum for the Environment and Ecology, University of North Carolina Chapel Hill, April 2013 – December 2015.
George Allen (Ph.D. student), Department of Geological Sciences, University of North Carolina Chapel Hill, January 2012 – May 2017.
Emily Timmons (Ph.D. student), Department of Marine Sciences, University of North Carolina-Chapel Hill, January 2012 – June 2013.
Evan Goldstein (Ph.D. student), Earth and Ocean Sciences Division, Duke University, January 2011 – July 2013.
Jodi Smith (Ph.D. student), Department of Environmental Sciences, May 2008 – June 2010

Previous Undergraduate Research Assistants and Honors Students

Rachel Geyer (Undergraduate) January 2023 – May 2023.
Haley Schierlmann (Undergraduate) January 2023 – May 2023.
Jack Boucher, University of North Carolina, Geology Major, January 2021 – April 2021.
Graham Farley, University of North Carolina, Geology Major, September 2016 – May 2017.
Klio Stroubakis, Chancellor's Science Scholar, UNC-CH, January 2016 – present
Francesca Peay, IDEA Program Researcher, UNC-CH, August 2015 – present
Sara Hahne, Wheaton College, Environmental Science major, June 2015 – August 2015
Amber Oliver, Duke University, Earth and Ocean Sciences Major, June 2015 – August 2015
Meredith Fish, University of North Carolina, Math Major, August 2014 – December 2014
Sarah Margolis, Boston University, Environmental Sciences Major, June 2014 – December 2014
CJ Cornette, University of North Carolina, Geological Sciences Major, 2013
Nicholas Brockemeir, University of Virginia, Environmental Sciences Major, 2009
Michael Rose, Oberlin College, Geology Major, 2005
Margaret Reitz, Oberlin College, Geology Major, 2005
Ting Fong Lee, Oberlin College, Environmental Studies Major, Honors Student, 2004
Andrew Donnellycolt, Oberlin College, Geology Major, 2004
Susan Powell, Oberlin College, Geology Major, 2003
Benjamin Stanley, Oberlin College, Geology Major, 2003
Lindsey Kraatz, Eckerd College, USGS Research Assistant, 2001
Charlene Sullivan, WHOI Summer Student Fellow, 1999
Carrie Randolph, UCSC, Earth Sciences Major, 1998

Professional Service

Editor, Coastal Futures, a new journal by Cambridge Press. Contributing to development of the scope of this new journal, including planning for solicited journal articles, along with regular editorial duties. November 2021 – present.

Appointed Standing Committee Member, Mississippi River Delta Transition Project, National Academies of Science, Engineering and Math. Providing iterative feedback (starting with proposal development) on this $22M cross-disciplinary, community-engaged project

involving numerous Gulf Coast universities and stakeholders, funded by the Gulf Research Program, January 2023 – present.

Chair, North Carolina Coastal Resources Commission's Science Panel on Coastal Hazards. November 2021 – present. Leading the Science Panel in preparing a North Carolina Sea Level Rise Update and the 5-year Inlet Hazard Area Update at the request of the NC Coastal Resource Commission.

Co-Founder and Director, Collaboratory for Coastal Adaptation over Space and Time (C-CoAST;), a collective of coastal researchers, practitioners, and stakeholders working to promote transdisciplinary coupled human-natural coastal research and informed decision making that considers interactions between short-term and long-term system dynamics, https://c-coast.org/, January 2019 – present.

- Serving as Lead-PI for the NSF CoPe Research Coordination Network award involving eight institutions, representation from ~20 disciplines, practitioners from state and federal agencies, and stakeholders from multiple communities.
- Led development of Listening Sessions, Gallery Walk, the Disciplines 101 Series and a Research Agenda Workshop.
- Currently leading development and completion of final products, refinement of website for long-term preservation, and working with collaborators to identify next goals and funding for the C-CoAST Network.

Research Oversight Committee Member and Principal Investigator, National Science Foundation Virginia Coast Reserve—Long-term Ecological Research (VCR-LTER) Site, January 2008 – present.

- Leading interdisciplinary research team in investigations of the role of ecomorphodynamic processes and landscape couplings in barrier island evolution.
- Proposal writing team for $6+M renewals in 2024; 2018, 2012; Mid-term review, research team lead, 2022, 2015; Annual All-hands meetings.

Leadership Team/Steering Committee Member, (lead: Raubenheimer, WHOI) founding and developing the Nearshore Extreme Event Reconnaissance (NEER) Association framework to provide coordination across the nearshore/coastal research community for rapid pre- and post-storm deployment to collect perishable data in support of storm impact assessments, https://neerassociation.org/about-us/, January 2019 – present.

- Senior Personnel on an NSF Convergence RAISE award to support development of a framework for a NEER Association; contributed to a CoPe EAGER proposal (recommended for funding as of July 2019) to fund set up and piloting of NEER activities.
- Initial Development Workshop, Washington D.C., August 5-6, 2019.

Collaborator and Contributor, Participatory modeling for coastal resilience along the U.S. Gulf Coast, funding awarded to Gulf Research Program and NASEM Early-Career Fellow, Katherine Anarde, 2022-present.

Invited Participant and Consultant to U.S. Congressman Murphy, 3rd District in North Carolina, Presented Impacts of Sea-Level Rise on Eastern North Carolina at the Water Adaptations to Ensure Regional Success (WATERS) Summit (October 2021), and the Albemarle-Pamlico Roundtable hosted by Rep. Luria, 2nd District in Virginia (November 2021).

Invited Presenter, Albemarle-Pamlico Roundtable hosted by U.S. Representative Luria, 2nd District in Virginia (November 2021).

Appointed Member, North Carolina Coastal Resources Commission's Science Panel on Coastal Hazards. July 2019 – August 2021.

Appointed Member, National Academy of Sciences and Medicine Committee on *Long-term Coastal Zone Dynamics: Interactions and Feedbacks between Natural and Human Processes along the U.S. Gulf Coast*, May 2017 - August 2018.

- Served a leading role in the writing of report chapters 2 and 3.
- Committee worked via weekly conference calls & meetings and workshops: May 17-18, 2017, Washington, DC; July 18-20, 2017, Houston, TX; September 18-19, 2017, New Orleans, LA; November 15-16, 2017, St. Petersburg, FL; January 17-18, 2018, Galveston, TX, April 16-17, 2018, Chapel Hill, NC.

Invited Participant, National Science Foundation Coasts and People (CoPe) Virtual Scoping Workshop, September 26-28, 2018.

Invited Instructor, CoastTools, International summer school institute for graduate students from 12 countries. University of the Algarve, Portugal, August 2017.

International external project consultant, *EVREST – Evolution and resilience of barrier island systems*, funded by the Portuguese Foundation for Science, Lead PI Anna Matias, University of Algarve, Portugal. September 2016.

Invited Editor, *Barrier Dynamics and Response to Changing Climate*, Springer, Environmental Sciences. December 2014 – January 2018.

Session Co-convener, "Barrier island dynamics in a changing climate." Ocean Sciences Meeting of the American Geophysical Union, New Orleans, LA, February 2018.

Coastal Working Group Member, Community Surface Dynamics Modeling System (CSDMS), Multi-year NSF- funded Community Modeling Effort, March 2008 – present. Attended all-hands CSDMS meeting, March 2013.

Steering Committee Member, for the NFWF-funded project, Enhancing Coastal Resilience on Virginia's Eastern Shore, National Federation for Fish and Wildlife, led by The Nature Conservancy. August 2014 – March 2017.

Session Co-convener, "Relevant Science for our Changing Coasts: A Tribute to Gary Griggs." Organizing special session to be held at Coastal Sediments '15, May 11-15, 2015, San Diego, CA.

Invited Participant, Dune Management Challenges on Developed Coasts, American of Shore and Beach Preservation Association, Community of Practice Workshop, October 26-28, 2015, Kitty Hawk, NC.

Invited Participant, Predicting Landscape Response to Climate Change, NSF-Funded Workshop for 25 participants from the field of geomorphology invited to consider future directions for the study of landscape response to climate change. September 25-27, 2013, Tucson, AZ.

Participant, Coastal Processes and Environments under Sea-Level Rise and Changing Climate: Science to Inform Management, Joint Penrose/Chapman Conference, sponsored by the American Geophysical Union and The Geological Society of America). A gathering of 85 coastal specialists to assess our current understanding of climate change impacts on coastal environments, April 14-19, 2013, Galveston, TX.

Invited Panelist, Shifting Shorelines: Combining Insights from Biological, Physical and Social Sciences, October 27-29, 2010, Duke University Marine Lab. Workshop to present results of National Science Foundation Biocomplexity Project, "Coupling Human and Natural Influences on Coastline Evolution as Climate Changes" and to discuss further scientific work and future policy and management applications.

Facilitator, Community Surface Dynamics Modeling System (CSDMS) Meeting: Modeling for Environmental Change, October 14-17, 2010. Facilitator for multi-session breakout group titled "Couplings between physical, biological and human processes in earth surface and ocean dynamics."

NASA Wallops Independent Review Team Member, Four-person team reviewed scientific studies and Draft EIS chapters for shoreline protection project at NASA Wallops, June 2009 - December 2010.

Invited Climate Change Workshop Participant, The Nature Conservancy, February 11 - 12, 2009 Virginia Beach, VA.

Technical Reviewer, Northeast Coastal and Barrier Network Geomorphological Monitoring Protocol, National Park Service, Vital Signs Program, September 2009.

Coastal Advisory Board Member, Southeastern University Research Association, May 2008 - present.

Invited Workshop Co-convener, "Teaching Geomorphology in the 21st Century." Four-day teaching workshop for geomorphologists from across the country and from abroad, sponsored by Cutting Edge with funding from the National Science Foundation and the National Association of Geoscience Teachers, July 2008.

Invited Session Co-Convener, Coastal Response to Climate Change and Sea-Level Rise, Coastal Sediments'07, New Orleans, May 2007.

Session Co-Convener, Coastal Geomorphology and Morphodynamics, American Geophysical Union Fall Meeting, San Francisco, December 2006.

Contributing Author, U.S. Climate Change Science Program, Product 1.4, Coastal Elevations and Sensitivity to Sea-Level Rise, March 2006.

Session Co-Chair, Coastal Processes and Hazards along Active Margin and Low Latitude Coasts, Special Session, Geological Society of America Annual Meeting, Seattle, November 2003.

Technical Reviewer, U.S. Cliffed Coasts: Status and Trends, Fall 2002

Session Co- Chair, Linking Climate Variability and Coastal Processes, Special Session, American Geophysical Union Fall Meeting, San Francisco, December 2000.

Non-Resident Director, California Shore and Beach Preservation Association, November 1998 - 2005.

Session Chair, Science and Engineering for Coastal Hazard Reduction, California's Coastal Natural Hazards Conference, November 12 - 14, 1997.

Director, California Shore and Beach Preservation Association, April 1997 - November 1998.

Academic Service

University of North Carolina

Postdoctoral Scholar Search Committee, Department of Earth, Marine and Environmental Sciences, AY 2023-2024.

Promotion and Tenure Committee, Department of Earth, Marine and Environmental Sciences, AY 2021-2022, AY 2022-2023, AY 2023-2024.

Chair, Diversity Committee, Department of Geological Sciences, AY 2020-2021.

Director of Graduate Admissions, May 2019 – May 2020.

Anadarko Research Symposium Organizer, Department of Geological Sciences, Spring 2019.

Admissions Committee, Department of Geological Sciences, 2017 & 2019.

Strategic Planning Committee, Department of Geological Sciences, Fall 2016.
Guest presenter, Natural Hazards Certificate Core Course, April 16, 2016.
Natural Hazards and Resilience Certificate Committee, August 2015 - present.
Colloquium Series Organizer, Department of Geological Sciences, March 2015 - March 2016; March 2017 - December 2017.
Geological Sciences X-ray Fluorescence Core Scanner Point of Contact, arranged for and supervised the process of returning the instrument to working status, address requests for use, Fall 2014 - present.
Sediment Analysis Lab, Department of Geological Sciences, designed the space and provided oversight during construction, June 2013 - March 2014.
Hydrology Search Committee, Department of Geological Sciences October 2012 - April 2013.
Executive Committee, Department of Geological Sciences, September 2012 - September 2014.
Colloquium Series Organizer, Department of Geological Sciences, August 2012 - November 2013.
Coastal Environmental Change Field Trip (developed and led) for 36 introductory geoscience students, Saturday, March 31, 2012 and Sunday, October 7, 2012.
Joint-Hires Committee, Curriculum for the Environment and Ecology, January 2011 - present.
B.S. Concentration Committee, Curriculum for the Environment and Ecology, January 2011 - January 2012.

University of Virginia
Seminar Speaker Host, Dr. Abby Sallenger (U.S. Geological Survey), December 2010.
Long-term Ecological Research - Virginia Coast Reserve, Co-Principal Investigator and Research Oversight Committee, September 2009 - June 2010.
Undergraduate Seminar Speaker, *Climate Change Impacts on Coastal Barriers: Field Observations and Model Insights*, April 2009.
Allocation and Policy Board, September 2008 - August 2009.
Climate Dynamics Faculty Search Committee**,** September 2008 - May 2009.
Moore Lectureship Committee, September 2008 - May 2009
Computational Science Advisory Committee, April 2008 - August 2009.

Oberlin College
Petrology Faculty Search Committee, Oberlin College Department of Geology, Fall 2006;
Visiting Faculty Search Committee, Oberlin College Environmental Studies Program, Fall 2006
Center for Instructional Technology Science Specialist Search Committee, Summer 2005;
Oberlin Center for Computation and Modeling (OCCaM), Co-founder and Steering Committee Member, Oberlin College, March 2005 – December 2007.
Oberlin Center for Computation and Modeling (OCCaM), Conference Planning Committee, 2005.
Oberlin College Admissions Committee, September 2004 – 2005.
Oberlin College Natural and Mathematical Sciences Advisory Committee, Sept. 2004 – May 2005.
Visiting Petrology Faculty Search Committee, Oberlin College Department of Geology, Spring 2004
Environmental Studies Program Committee, Sept. 2003 – May 2005.

Woods Hole Oceanographic Institution

Coastal Morphodynamics Symposium Convener, Woods Hole Oceanographic Institution, April 26, 2000.

University of California Santa Cruz

Graduate Commons Building Committee Co-Chair, January 1997 – August 1998.

Graduate Student Association President, June 1995 – June 1996.

Graduate Council Academic Senate Committee Ex-Officio Member, October 1995 – June 1996.

Graduate Student Association Secretary, October 1994 – June 1995.

Professional Development

Chancellor's Faculty Entrepreneurship Workshop, 2019. *The Entrepreneurial Mindset: Maximizing Faculty Impact*, 2019 Theme: Design Thinking, CURRENT ArtSpace at UNC-CH, Conducted by Innovate Carolina, May 14-16.

Science Communication

Playwright, Staged reading of *Rollover*. Produced by The Process Series, Gillings Center for Dramatic Art, UNC-CH, March 24 & 25, 2022.

Advisory Committee Member, The Outer Banks Documentary Project, The Tamassee Group, June 2020 – present.

Radio show guest, The State of Things with Frank Stasio on NPR Station WUNC, March 2019.

Content and copy consultant, *Earth Moves,* new 1.6-acre outdoor geomorphology exhibit at the North Carolina Museum of Life and Science, Spring 2019.

Presenter, Barrier Islands 101, for 80 4th grade students from Rashkis Elementary School, as well as teachers and parents. Ft. Fisher, NC, May 24, 2018.

Playwright, Public staged reading of *Rollover*. Current ArtSpace, UNC-CH, Funded by FIRE grant, April 27, 2018.

Interviewee, Moore et al., research on coastal dunes and barrier islands of North Carolina, featured by *College of Arts & Sciences Magazine* and UNC Research's *Endeavors*, written feature article and video by Mary Lide Parker, Spring 2017.

Featured researcher, Moore et al., coastal *dune research included in* Hurricane Matthew Infographic, UNC Research *Endeavors* Spring 2017.

Selected Invited Presentations

North Carolina Barrier Islands and Waterways Association, *The Collaboratory for Coastal Adaptation over Space and Time (C-CoAST): Enabling Co-produced, Coupled Human-Natural Dynamics Research in Support of Coastal Community Resilience Planning.* Fall Meeting, November 17, 2023, Wilmington, NC.

Eurocoast Zoominar Series, *Dune-storm interactions, shrubs and management decisions drive the evolution of coastal barriers and affect future habitation*. Seminar on Zoom attended by over 60 participants from across Europe, Australia, New Zealand and the United States, October 27, 2023, hosted by University of Bordeaux, France.

Coastal Sediments '23, *Dune-storm interactions, shrubs and management decisions drive coastal barrier behavior and affect future habitation*, New Orleans, LA, April 2023.

North Carolina State University, (speaker and panelist), *The power of interdisciplinary, inter-institutional collaboration: the C-CoAST experience and a broader discussion of what else might be possible*, February 2022.

North Carolina Coastal Resilience Community of Practice, Quarterly Meeting, *Building the Collaboratory for Coastal Adaptation over Space and Time*, September 2021.

(Keynote Address) Rivers, Coasts and Estuarine Morphodynamics Symposium, *The role of ecomorphodynamic feedbacks, landscape couplings and natural-human dynamics in determining the fate of coastal barrier systems.* Rivers, Coasts and Estuarine Morphodynamics Symposium, Auckland, New Zealand, November 19, 2019.

Oregon State University, College of Ocean and Atmospheric Science, *From stem to island: Vegetation controls on coastal foredune morphology, dune state and barrier response to climate change*, Corvallis, OR, April 27, 2017.

American Geophysical Union Fall Meeting, *Ecogeomorphology: Sediment-Biota Feedbacks That Shape Land and Seascape* (Session EP014), December 2016, San Francisco, CA.

University of the Algarve Marine and Coastal Systems Master Programme Kick-off Seminar, *Barrier island ecomorphodynamics and Response to Changing Climate*, Faro, Portugal, September 2016.

Ocean Sciences Meeting, *Morphological Evolution of Coastal Environments - Crossing the Land/Water Interface* (Session MG003), February 22-26, 2016, New Orleans, LA.

Geological Society of America Annual Meeting, *Field and Modeling Approaches to Understanding the Response of Coupled Barrier-Backbarrier Systems to Coastal Change* (Session T128), November 1-4, 2015, Baltimore, MD.

Dune Management Challenges on Developed Coasts, *Vegetation Controls on Maximum Dune Size and the Role of Biophysical Interactions in Determining Dune/Island State,* Sponsored by the American Shore and Beach Preservation Association, Army Corps of Engineers and the U.S. Geological Survey, October 26-29, 2015, Kitty Hawk, NC.

Second Annual UNC Climate Change Symposium, *How Climate Change and Humans are Altering the Fate of Barrier Island Coastlines*, Sponsored by Carolina Climate Change Scientist, April 10, 2015.

University of North Carolina, Department of Marine Sciences Seminar Series, *Ecomorphodynamic Feedbacks and Couplings Between Landscape Subsystems Influence Barrier Island Response to Changing Climate,* March 4, 2015.

American Geophysical Union Fall Meeting, *Ecomorphodynamic Feedbacks and Couplings Between Landscape Subsystems Influence Barrier Island Response to Changing Climate,* (Coastal Morphodynamics, Session EP22A), December 2013, San Francisco, CA.

Modeling Decadal Shoreline Change Workshop, *State of the Art in Cross-Shore Coastal Change Modeling*. Organized by the U.S. Geological Survey Coastal and Marine Geology Program, San Francisco, CA, December 2015.

Predicting Landscape Response to Climate Change, *The Fate of Coupled Barrier, Marsh and Bay Systems Depends on Sediment Supply, Geologic Framework and Ecomorphodynamics*, NSF-funded conference (for 25 invited participants) to provide guidance on research directions in the field of geomorphology, September 25-27, 2013, Tucson, AZ.

American Geophysical Union Fall Meeting, *Biological-physical feedbacks determine coastal environmental response to climate change* (Biogeodynamics and Earth System Sciences I Session B51H), December 2012, San Francisco, CA.

University of North Carolina, Department of Geological Sciences, *Barriers on the Brink? The complex, intertwined roles of geologic framework, sediment availability and sea-level rise in island evolution,* February 2010.

American Geophysical Union Fall Meeting, *Recent shifts in shoreline orientation along a cuspate coast potentially linked to climate change, North Carolina Outer Banks* (Coastal Geomorphology and Morphodynamics Session EP13), December 2009, San Francisco, CA.

USGS Coastal and Marine Geology Program, St. Petersburg, FL, November 2009

Virginia Institute of Marine Science, October 2008.

Duke University, Earth and Ocean Sciences Division, March 2007.

USGS Center for Coast and Watershed Studies, February 2007.

Press Conference at the American Geophysical Union Fall Meeting, December 2006.

Woods Hole Oceanographic Institution, July 2006.

USGS Pacific Science Center, Santa Cruz, CA June 2006.

University of Toledo, Department of Earth and Environmental Sciences, February 2004.

Bowling Green State University, Geology Department, April 2004.