

CURRICULUM VITAE  
for  
**Peter N. Adams**

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*Last edited: Jan. 6, 2025*

## PERSONAL

Born: 17 Dec. 1971, Philadelphia, PA    Citizenship: U.S.A.    Married (2005), 2 Children (2008, 2011)

## EMPLOYMENT

- 2024- present    Professor, Department of Geological Sciences, University of Florida, Gainesville, FL
- 2015 - 2024    Associate Professor, Department of Geological Sciences, University of Florida, Gainesville, FL
- 2007 - 2015    Assistant Professor, Department of Geological Sciences, University of Florida, Gainesville, FL
- 2005 - 2007    Assistant Project Scientist (Post-Doc), Scripps Institution of Oceanography, University of California at San Diego, La Jolla, CA
- 2004 - 2005    Visiting Assistant Professor, Department of Geology, Washington and Lee University, Lexington, VA

## EDUCATION

- 2004 Ph.D. Earth Sciences, University of California, Santa Cruz. Thesis Advisor: Robert S. Anderson, Dissertation Title: *Assessing Coastal Wave Energy and the Geomorphic Evolution of Rocky Coasts.*
- 1999 M.S. Geosciences, Penn State University. Thesis Advisor: Rudy L. Slingerland, Thesis Title: *The Origin and Characteristics of Natural Levees.*
- 1996 B.S. Geosciences, Penn State University. Thesis Advisor: Donald M. Fisher, Thesis Title: *Fold Kinematics of the Reedsville Shale.*
- 1996 B.S. Chemical Engineering, Minor in Environmental Engineering, Penn State University.

## RESEARCH

### **RESEARCH INTERESTS**

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**General:** Surface Processes; Landscape Evolution; Climate Change

**Specific:** Coastal Evolution in Response to Wave Climate Change; Mechanics of Sea Cliff Retreat; Influence of Physical Processes on Coastal Ecosystems; Quaternary Evolution of the Florida Peninsula

**Methods:** Field Instrumentation; Landscape Analysis; Numerical Modeling

## **RESEARCH FUNDING**

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### **Funding awarded while at University of Florida**

**Summary:** While employed at the University of Florida, I have been a PI or Co-PI on **19 funded projects** totaling **\$6.45M**, of which **\$1.79M** was my portion. These projects are listed below, with most recent funding at the top:

**(1) U.S. Army Corps of Engineers, Engineering with Nature Program:**

*Enhancing Engineering With Nature ® Design and Implementation in Coastal Systems through Multi-Sector and Interdisciplinary Collaboration*

Total Budget: **\$2,988,063**; Adams Portion: **\$490,409** (Direct: \$442,558 IDC Rate=17.5%),  
Proposal Submitted: 05/2021, Project Dates: 09/29/2021-09/28/2024, UF Project ID: P0230803  
Role: **Co-PI**, with Lead-PI Dr. Christine Angelini (UF ESSIE)

**(2) U.S. Fish and Wildlife Service (via Fish and Wildlife Foundation of Florida, Inc):**

*Preliminary Geomorphologic Assessment for Beach Mouse Habitat Restoration at Smyrna Dunes Park, Volusia County, Florida*

Total UF (Adams) Budget: **\$9,781** (Direct: \$7,824, IDC Rate=25%)  
Proposal Submitted: 03/2018, Project Dates: 05/2018-11/2018  
Role: **Lead-PI** (sole PI)

**(3) University of Florida College of Liberal Arts and Sciences:**

*Stream Table Teaching Tool Request*

Total Award: **\$9,344** (used for EmRiver2 stream table from Little River Research Co.) Proposal Submitted: 04/2018, Award Received: 07/2018  
Role: **Lead-PI** (sole PI)

**(4) Florida Fish and Wildlife Conservation Commission (FWC):**

*Recovering the Anastasia Island Beach Mouse from Hurricane Impacts; Sub-Project Title: Geomorphologic Assessment of Storm Impacts and Recovery*

Adams Portion of Budget: **\$10,000** (Direct: \$8,000, IDC Rate=25%)  
Proposal Submitted: 03/2018, Project Dates: 4/25/2018 - 9/30/2018, UF Project ID: P0084739  
Role: **Co-PI**, with Lead-PI Dr. Deborah Miller (UF Wildlife Ecology and Cons.)

**(5) Mathworks, Inc.:**

*Development of MATLAB Apps to Demonstrate Geomorphic Processes and Landform Evolution*

Total UF (Adams) Budget: **\$26,759** (Direct: \$26,759, IDC Rate=0%),  
Proposal Submitted: 03/2015, Project Dates: 11/2015-11/2017  
Role: **Lead-PI**, UF Project ID: Gift

**(6) U.S. Department of the Interior - U.S. Geological Survey:**

*Beach Morphologic Change at NASA Kennedy Space Center 2009-2014: Data Collection, Analysis, and Implications*

Total UF Budget: **\$10,793** (Direct: \$7,195, IDC Rate=49%),  
Proposal Submitted: 02/2015, Project Dates: 07/27/2015-07/26/2016, UF Project ID: 00124786  
Role: **Lead-PI** (sole PI)

**(7) U.S. Department of Interior - Bureau of Ocean Engineering Management:**

*Ecological Function and Recovery of Biological Communities within Dredged Ridge-Swale Habitats in the South-Atlantic Bight*

Total Budget: **\$2,100,002**; Adams Portion: **\$68,705** (Direct: \$58,472, IDC Rate=17.5%),  
Proposal Submitted: 07/2013, Project Dates: 03/21/2014-08/31/2019, UF Project ID: 00116509  
Role: **Co-PI**, with Lead-PI Dr. Deborah Murie (UF Fisheries and Aquatic Sciences)

**(8) U.S. Department of the Interior - U.S. Geological Survey – National Parks Research:**

*Development of a Framework for Coastal Vulnerability Forecasting at Fire Island National Seashore*

Total UF Budget: **\$48,633** (Direct: \$32,640, IDC Rate=49%),  
Proposal Submitted: 09/2012, Project Dates: 03/01/2013-08/31/2014,  
Role: **Lead-PI**, UF Project ID: 00106271

**(9) U.S. Department of Commerce - NOAA, subcontract through University of Georgia:**  
*Phase 2 Application of New Geospatial Tools for a Regional Vulnerability Assessment of Estuarine Shorelines of NC, GA, and FL*

Total UF Budget: **\$13,794** (Direct: \$11,495, IDC Rate=20%),  
Proposal Submitted: 12/2010, Project Dates: 12/01/2012-11/30/2013,  
Role: **Co-PI**, UF Project #00102944

**(10) U.S. Department of Commerce - NOAA, subcontract through University of Georgia:**

*Regional Hazard Vulnerability Assessment of Oceanfront And Estuarine Shorelines,*

Total UF Budget: **\$69,653** (Direct: \$58,044, IDC Rate=20%),  
Proposal Submitted: 12/2010, Project Dates: 03/01/2012-12/31/2013,  
Role: **Co-PI**, UF Project #00092088

**(11) National Aeronautical and Space Administration (Prime) – Innovative Health Applications (Sub):**

*Providing Geological and Oceanographic Support for the Kennedy Space Center Shoreline Protection*

Total UF Budget: **\$7,658**, (Direct: \$5,227, IDC Rate=46.5%),  
Project Dates: 10/10/2011-09/30/2013,  
Role: **Lead PI**, UF Project #00098450

**(12) National Aeronautical and Space Administration (Prime) – Innovative Health Applications (Sub):**

*Monitoring Shoreline and Beach Morphologic Change At Kennedy Space Center, Cape Canaveral, Fla.,*

Total UF Budget: **\$155,503** (Direct: \$106,145, IDC Rate=46.5%),  
Project Dates: 10/10/2011-09/30/2013,  
Role: **Lead PI**, UF Project #00098217

**(13) National Science Foundation (NSF) – Geomorphology and Landscape Dynamics:**

*Collaborative Research: Coastal Geomorphic Consequences Of Wave Climate Change,*

Total UF Budget: **\$231,632** (Direct: \$166,398, IDC Rate=46.5%),  
Proposal Submitted: 07/2010, Project Dates: 09/15/2011-08/31/2016,  
Role: **Lead PI**, UF Project #00089142

**(14) U.S. Department of the Interior - U.S. Geological Survey:**

*Cooperative Project to Assist In Dune Vulnerability Assessment At Kennedy Space Center, Cape Canaveral, Florida*

Total UF Budget: **\$33,329** (Direct: \$22,750, IDC Rate=46.5%),  
Project Dates: 09/15/2010-09/14/2011,  
Role: **Lead PI**, UF Project #00090816

**(15) National Aeronautical and Space Administration (Prime) – Innovative Health Applications (Sub):**

*Seasonal Datum-based Shoreline Change and Beach State Variability at Cape Canaveral, Florida, Phase 2*

Total UF Budget: **\$98,965** (Direct: \$67,553, IDC Rate=46.5%),  
Project Dates: 07/28/2010-09/30/2011,  
Role: **Co-PI**, UF Project #00085113b

**(16) National Aeronautical and Space Administration (Prime) – Innovative Health Applications (Sub):**

*Seasonal Datum-based Shoreline Change and Beach State Variability at Cape Canaveral, Florida, Phase 1*

Total UF Budget: **\$9,985** (Direct: \$6,816, IDC Rate=46.5%),  
Project Dates: 03/09/2010-09/30/2010,  
Role: **Co-PI**, UF Project #00085113a

**(17) National Aeronautical and Space Administration (Prime) – Dynamac Corp. (Sub):**

*Development of Shoreline Change Proxies from Satellite*

Total UF Budget: **\$20,345** (Direct: \$13,887, IDC Rate=46.5%),

Project Dates: 04/01/2009-09/30/2009,  
Role: **Co-PI**, UF Project #00079807

**(18) U.S. Department of the Interior - U.S. Geological Survey:**

*Assessment of Potential Hotspots of Coastal Erosion Along the Southern California Coast*,  
Total UF Budget: **\$7,325** (Direct: \$5,000, IDC Rate=46.5%),  
Project Dates: 10/01/2008-09/30/2009,  
Role: **Lead PI**, UF Project #00076458

**(19) California Energy Commission PIER Program:**

*Climate Change and Sea Level Rise: Implications for the California Coast*,  
Total UF Budget: **\$599,625** (Direct: \$479,700, IDC Rate=25%),  
Project Dates: 09/01/2006-12/31/2011,  
Role: **Lead PI**, UF Project #00063531

**Proposals currently in review**

**(1) U.S. Coastal Research Program:**

*Beach and Shoreline Management Effects on Sea Turtle Nesting Ecology across Florida*  
Total Budget: **\$499,990**; Total UF (Adams) Budget: **\$4,631**  
Proposal Submitted: 03/2024, Project Dates: 09/30/2024-09/30/2026  
Role: **Co-PI** (Lead PI is Dr. Marc Hensel, UF Nature Coast Biological Station)

**Funding prior to arriving at University of Florida**

2005: **Mendenhall Post-Doctoral Fellowship, U.S. Geological Survey** (*offer declined*)  
(<https://www.usgs.gov/centers/mendenhall-research-fellowship-program>)

2004: **City of Homer, Alaska, Funding of Coastal Hazard Research: Monitoring the Intertidal, Mixed Sediment Beaches of Homer, Alaska with Argus Imagery**, Total Budget: **\$8,106**, Project Dates: 07/01/2004-06/30/2005, Role: Lead Co-PI with USGS colleagues

2003 **National Estuarine Research Reserve Graduate 2-year Fellowship, NOAA: Wave Energy And Nearshore Sediment Dynamics on The North Shore of Kachemak Bay, Near Homer, Alaska**  
(<http://nerrs.noaa.gov/GRFAbstract.aspx?ID=264>), Total Budget: **\$37,500**, Project Dates: 06/01/2003-05/31/2005, Role: Graduate Student Fellow

1999 **Friends of Long Marine Lab Student Research Award, UCSC: Evaluation of wave energy delivery and dissipation along the Monterey Bay shoreline**, Total Budget: **\$800**, Project Dates: 12/01/1999-11/30/2000, Role: Graduate Student Fellow

1998 **P. D. Krynine Research Assistance Award, Dept. of Geosciences, Penn State Univ.**, Total Budget: **\$1,064**, Role: Graduate Student Fellow

1997 **Charles E. Knopf Memorial Fellowship, Dept. of Geosciences, Penn State Univ.**, Total Budget: **\$2,800**, Role: Graduate Student Fellow

1997 **Geological Society of America Grant-In-Aid of Research: Origin and Sedimentology of Natural Levees**, Total Budget: **\$1,750**, Role: Graduate Student Fellow

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**PUBLICATIONS**

**Summary:** 34 Peer-reviewed Journal Articles (First Authored= 9; Advised Student or Post-doc First Authored = 14); 83 Abstracts from Professional Meetings (First Authored = 23; Advised Student or Post-doc First Authored = 43); 3 Book Chapters; 5 Conference Proceedings; 2 Field Trip Guides; 16 Scientific Reports.

H-index = 18; i10-index = 26; Citations = 1663

(Updated 01-06-2025 by Google Scholar: <https://scholar.google.com/citations?user=YGqbWZUAAAAJ&hl=en>)

<sup>g</sup> = indicates authorship by graduate student mentored by Adams  
<sup>p</sup> = indicates authorship by post-doc mentored by Adams  
<sup>u</sup> = indicates authorship by undergraduate student mentored by Adams

### **Journal Articles - Peer Reviewed (34)**

1. **Adams, P. N.**, R. S. Anderson and J. Revenaugh, **2002**, Microseismic Measurement of Wave Energy Delivery to a Rocky Coast, *Geology*, v. 30, no. 10, p. 895-898. [https://doi.org/10.1130/0091-7613\(2002\)030<0895:MMOWED>2.0.CO;2](https://doi.org/10.1130/0091-7613(2002)030<0895:MMOWED>2.0.CO;2)
2. **Adams, P. N.**, R. L. Slingerland, and N. D. Smith, **2004**, Variations in Natural Levee Morphology in Anastomosed Channel Floodplain Complexes, *Geomorphology*, v. 61, no.1-2, p. 127-142. <https://doi.org/10.1016/j.geomorph.2003.10.005>
3. **Adams, P. N.**, C. D. Storlazzi and R. S. Anderson, **2005**, Nearshore Wave-Induced Cyclical Strain of Sea Cliffs: A Possible Fatigue Mechanism, *Journal of Geophysical Research – Earth Surface*, v.110, No. F2. <https://doi.org/10.1029/2004JF000217>
4. **Adams, P. N.**, P. Ruggiero, G. C. Schoch, and G. Gelfenbaum, **2007**, Intertidal Sand Body Migration Along a Megatidal Coast, Kachemak Bay, Alaska, *Journal of Geophysical Research – Earth Surface*, v.112, No. F2. <https://doi.org/10.1029/2006JF000487>
5. **Adams, P. N.**, D. L. Inman, and N. Graham, **2008**, Southern California Deep-Water Wave Climate: Characterization and Application to Coastal Processes, *Journal of Coastal Research*, v. 24, no. 4, p. 1022-1035. <https://doi.org/10.2112/07-0831.1>
6. **Adams, P. N.**, N. D. Opdyke, and J. M. Jaeger, **2010**, Isostatic Uplift Driven By Karstification and Sea Level Oscillation: Modeling Landscape Evolution In North Florida, *Geology*, v. 38, no. 6, p. 531-534. <https://doi.org/10.1130/G30592.1>
7. Young, A. P., **P. N. Adams**, W. C. O'Reilly, R. E. Flick, and R. T. Guza, **2011**, Coastal cliff ground motions from local ocean swell and infragravity waves in southern California, *Journal of Geophysical Research – Oceans*, v.116, C09007. <https://doi.org/10.1029/2011JC007175>
8. **Adams, P. N.**, D. L. Inman, and J. L. Lovering<sup>g</sup>, **2011**, Effects of Climate Change and Wave Direction on Hotspots of Coastal Erosion in Southern California, *Climatic Change*, v. 109, Suppl. 1, pp. S211-S228. <https://doi.org/10.1007/s10584-011-0317-0>
9. Pendleton, L., P. King, C. Mohn, D.G. Webster, R.K. Vaughn, and **P.N. Adams**, **2011**, Estimating The Potential Economic Impacts Of Climate Change On Southern California Beaches, *Climatic Change*, v. 109, Suppl. 1, pp. S277–S298. <https://doi.org/10.1007/s10584-011-0309-0>
10. Silliman, B. R., J. van de Koppel, M. W. McCoy, J. Diller, G. Kasozi, K. Earl, **P. N. Adams**, and Andrew R. Zimmerman, **2012**, Degradation and resilience in Louisiana salt marshes after the BP–Deepwater Horizon oil spill, *Proceedings of the National Academy of Sciences*, v. 109, no. 28, p. 11234–11239, <https://doi.org/10.1073/pnas.1204922109>
11. Young, A. P., R. T. Guza, **P. N. Adams**, W. C. O'Reilly, and R. E. Flick, **2012**, Cross-shore decay of cliff top ground motions driven by local ocean swell and infragravity waves, *Journal of Geophysical Research – Oceans*, Vol. 117, C06029, <https://doi.org/10.1029/2012JC007908>
12. Limber, P. W. <sup>p</sup>, A. B. Murray, **P. N. Adams**, and E. B. Goldstein, **2014**, Unraveling The Dynamics That Scale Cross-Shore Headland Relief On Rocky Coastlines, Part 1: Model development, *Journal of Geophysical Research – Earth Surface*, <https://doi.org/10.1002/2013JF002950>
13. Kline, S. W. <sup>g</sup>, **P. N. Adams**, and P. W. Limber, **2014**, The Unsteady Nature of Sea Cliff Retreat Due to Mechanical Abrasion, Failure, and Comminution Feedbacks, *Geomorphology*, <https://doi.org/10.1016/j.geomorph.2014.03.037>
14. Barnard, P. L., M. van Ormondt, L. Erikson, J. Eshleman, C. Hapke, P. Ruggiero, **P. N. Adams**, and A. Foxgrover, **2014**, Development of the Coastal Storm Modeling System (CoSMoS) for predicting the impact of storms on high-energy, active-margin coasts, *Natural Hazards*, <https://doi.org/10.1007/s11069-014-1236-y>

15. Johnson, J. M., L. J. Moore, K. Ells, A. B. Murray, **P. N. Adams**, R. A. MacKenzie III<sup>9</sup>, and J. M. Jaeger, **2014**, Recent Shifts in Coastline Change and Shoreline Stabilization Linked to Storm Climate Change, ***Earth Surface Processes and Landforms***, v. 40, pp. 569-585, <https://doi.org/10.1002/esp.3650>
16. Wilson, K. E. <sup>9</sup>, **P. N. Adams**, C. J. Hapke, E. E. Lentz, and O. Brenner, **2015**, Application of a Bayesian Network to Forecast Barrier Island Morphodynamics, ***Coastal Engineering***, v. 102, pp. 30-43, <https://doi.org/10.1016/j.coastaleng.2015.04.006>
17. **Adams, P. N.**, K. Malone Keough<sup>9</sup>, and M. Olabarrieta, **2016**, Beach Morphodynamics Influenced by an Ebb-Tidal Delta on the North Florida Atlantic Coast, ***Earth Surface Processes and Landforms***, v. 41, pp. 936-950, <https://doi.org/10.1002/esp.3877>
18. Limber, P. <sup>9</sup>, **P. N. Adams**, and A. B. Murray, **2017**, Modeling large-scale shoreline change caused by complex bathymetry in low-angle wave climates, ***Marine Geology***, v. 383, pp. 55-64, <https://doi.org/10.1016/j.margeo.2016.11.006>
19. Woo, H. B. <sup>9</sup>, M. P. Panning, **P. N. Adams**, and A. Dutton, **2017**, Karst-driven flexural isostasy in North-Central Florida, ***Geochemistry Geophysics Geosystems***, v. 18, no. 9, p. 3327–3339, <https://doi.org/10.1002/2017GC006934>
20. **Adams, P. N.**, **2018**, Geomorphic origin of Merritt Island-Cape Canaveral, Florida, USA: A paleodelta of the reversed St. Johns River? ***Geomorphology***, v. 306, p. 102–107, <https://doi.org/10.1016/j.geomorph.2018.01.005>
21. Paniagua-Arroyave, J. F. <sup>9</sup>, Correa, I. D., Anfuso, G., and **P. N. Adams**, **2018**. Soft-cliff Retreat in a Tropical Coast: The Minuto de Dios Sector, Caribbean Coast of Colombia. In: R. Almar, L. P. Almeida, N. T. Viet, M. Sall (eds.), Tropical Coastal and Estuarine Dynamics. ***Journal of Coastal Research***, Special Issue No. 81.
22. Paniagua-Arroyave, J. F. <sup>9</sup>, A. Valle- Levinson, **P. N. Adams** and S. M. Parra, **2019**, Coherence between infragravity waves and ambient water motions over cape-associated shoals, ***Continental Shelf Research***, <https://doi.org/10.1016/j.csr.2018.12.003>
23. Paniagua-Arroyave, J. F. <sup>9</sup>, **P. N. Adams**, S. M. Parra and A. Valle-Levinson, **2019**, Observations of surface-gravity-wave scattering and dissipation by an isolated shoal related to a cusped foreland, ***Continental Shelf Research***, <https://doi.org/10.1016/j.csr.2018.12.004>
24. Paniagua-Arroyave, J. F. <sup>9</sup>, A. Valle-Levinson, S. M. Parra, and **P. N. Adams**, **2019**, Tidal Distortions Related to Extreme Atmospheric Forcing Over the Inner Shelf, ***Journal of Geophysical Research – Oceans***, <https://doi.org/10.1029/2019JC015021>
25. Conlin M. P. <sup>9</sup>, **P. N. Adams**, B. Wilkinson, G. Dusek, M. Palmsten, J. Brown, **2020**, SurfRCaT: A tool for remote calibration of pre-existing coastal cameras to enable their use as quantitative coastal monitoring tools, ***SoftwareX***, <https://doi.org/10.1016/j.softx.2020.100584>
26. Conlin, M. P. <sup>9</sup>, **P. N. Adams**, J. M. Jaeger, and R. A. Mackenzie, **2020**, Quantifying Seasonal-to-Interannual-Scale Storm Impacts on Morphology Along a Cusped Coast With a Hybrid Empirical Orthogonal Function Approach, ***Journal of Geophysical Research – Earth Surface***, <https://doi.org/10.1029/2020JF005617>
27. AlYousif, A., Laurel-Castillo, J.A., So, S., **Adams, P.**, Valle-Levinson, A., **2021**. Subinertial hydrodynamics around a cape influenced by a western boundary current. ***Estuarine, Coastal and Shelf Science*** 251, 107199. <https://doi.org/10.1016/j.ecss.2021.107199>
28. AlYousif, A., Valle-Levinson, A., **Adams, P.N.**, Laurel-Castillo, J.A., **2021**. Tidal and subtidal hydrodynamics over ridge-swale bathymetry. ***Continental Shelf Research*** 219, 104392. <https://doi.org/10.1016/j.csr.2021.104392>
29. Johnson, H. A. <sup>9</sup>, **Adams, P.N.**, and Antonenko, P.D., **2021**. GEOAppS: Interactive numerical models of geomorphic processes and application in a post-secondary coastal processes course. ***Journal of Geoscience Education*** 69, 15. <https://doi.org/10.1080/10899995.2021.1890527>
30. Conlin, M. P. <sup>9</sup>, **Adams, P.N.**, and Palmsten, M., **2022**. On the Potential for Remote Observations of

Coastal Morphodynamics from Surf-Cameras. *Remote Sensing*, vol. 14, no. 7.  
<https://doi.org/10.3390/rs14071706>

31. Conlin, M. P. <sup>9</sup>, Cohn, N., and **P. N. Adams**, 2023. Total Water Level Controls on Dune Toe Retreat Trajectory. *Geomorphology*, vol. 438. <https://doi.org/10.1016/j.geomorph.2023.108826>
32. Fischman, H. S., C. W. Cromwell, J. P. Morton, R. J. M. Temmink, T. van der Heide, **P. N. Adams**, C. Angelini, 2024. Leveraging successional facilitation to improve restoration of foundational dune grasses along a frequently disturbed coastline. *Restoration Ecology*, vol. 32, no. 7, e14207. <https://onlinelibrary.wiley.com/doi/full/10.1111/rec.14207>

#### **Journal Articles (Peer Reviewed) – in press**

- Verhulst, S. A., M. P. Conlin, **P. N. Adams**, C. Reinhardt Adams, **accepted** (Dec. 16, 2024). Creek System and Regional Patterns of *Juncus roemerianus* Stress and Links to Salt Marsh Loss on the Florida Gulf Coast. *Wetlands*, Article ID: JPE14859, Article DOI: 10.1111/1365-2664.14859
- Morton, J. P., H. S. Fischman, O. Cordero, J. T. Crabhill, M. R. Anthony, M. A. Schnider, **P. N. Adams**, C. Angelini, **accepted** (Dec. 20, 2024). Strategic planting and nutrient amendments to accelerate the revegetation of rapidly retreating coastal dunes. *Journal of Applied Ecology*, Article ID: 13157\_2024\_1892\_Article, Article DOI: 10.1007/s13157-024-01892-7

#### **Journal Articles (Peer Reviewed) – in review**

#### **Journal Articles (Peer Reviewed) – in revision**

#### **Book Chapters (3)**

1. Acknowledged contributor to Syvitski, J.P.M., R.L. Slingerland, P. Burgess, E. Meiburg, A. B. Murray, P. Wiberg, G. Tucker, A.A. Voinov, 2010, Morphodynamic Models: An Overview. In: Vionnet et al. (eds) River, Coastal and Estuarine Morphodynamics: RCEM 2009, Taylor & Francis Group, London, ISBN 978-0-415-55426-8 CRC Press, p. 3-20.
2. Hapke, Cheryl J., **P. N. Adams**, Jonathan Allan, Andrew Ashton, Gary Griggs, Monty Hampton, Joseph Kelly, Adam Young, 2014, Sea Cliffs of the Continental USA, In: Kennedy, D. and W. Stephenson eds., **Rocky Coast Geomorphology: A Global Synthesis**. Geological Society of London Memoirs, v.40; p137-154. doi: 10.1144/M40.9
3. Karanci, A., Velásquez-Montoya, L., Paniagua-Arroyave, J.F. <sup>9</sup>, **Adams, P.N.**, and Overton, M.F., 2017, Beach Management Practices and Occupation Dynamics: An Agent-Based Modeling Study for the Coastal Town of Nags Head, NC, USA, in Botero, C.M., Cervantes, O.D., and Finkl, C.W. eds., **Beach Management Tools - Concepts, Methodologies and Case Studies**, Coastal Research Library, Springer International Publishing, Cham, p. 373–395.

#### **Conference Proceedings (5)**

1. **Adams, P.**, and P. Ruggiero, 2005, Wave Energy Dissipation By Intertidal Sand Waves On A Mixed-Sediment Beach, *Proceedings of the 5<sup>th</sup> International Conference on Coastal Dynamics*, Barcelona, Spain, April 4 – 8, 2005, 10 pp.
2. Ruggiero, P., **P. N. Adams**, and J. Warrick, 2007, Mixed sediment beach processes: Kachemak Bay, AK, *Proceedings of the Coastal Sediments '07 Conference*, New Orleans, LA: World Scientific Publishing, 14 pp.
3. Paniagua Arroyave, J. F. <sup>9</sup>, Parra, S. M., Valle-Levinson, A. and **P. N. Adams**, 2019, Observations of Bed Elevation Changes At Cape Canaveral Shoals. *Proceedings of the 9<sup>th</sup> Coastal Sediments Conference*. St. Petersburg, Florida: World Scientific Publishing, pp. 101-113.
4. Conlin, M. P. <sup>9</sup>, **Adams, P. N.**, Plant, N. G., Jaeger, J. M., and MacKenzie, R., 2019, Daily to Decadal Variability of Beach Morphology at NASA-Kennedy Space Center: Storm Influences Across Timescales. *Proceedings of the 9<sup>th</sup> Coastal Sediments Conference*. St. Petersburg, Florida: World Scientific Publishing, pp. 2268–2281.

- Johnson, H.<sup>9</sup>, Antonenko, P., and **Adams, P. N., 2020**, “Comparative Effects of Visualization Media on Understanding Mathematical Relationships in Post-secondary Geoscience.” In **2020 American Educational Research Association (AERA) Annual Meeting**, held 2020/04/17-2020/04/21, meeting held virtually due to COVID-19, instead of San Francisco, CA, USA. 8 pp.

### **Field Trip Guides (2)**

- Adams, P. N., 2004**, Wave Energy Delivery and the Shape of Rocky Coasts, in *Friends of the Pleistocene Field Trip Guidebook Santa Barbara Fold Belt and Beyond, April 15-18, 2004*. Leaders: L. D. Gurrola and E. A. Keller.
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67. Conlin, M. P.<sup>9</sup>, **P.N. Adams**, J. M. Jaeger and R. MacKenzie, **2019**, Storm-Driven Morphological Changes Along a Valuable Coastline: The Unique Impact of Hurricane Sandy (2012) at NASA-Kennedy Space Center, U12C-20, EOS, Trans., American Geophysical Union, 2019 Fall Mtg., San Francisco, CA (eLightning)

66. Paniagua-Arroyave, J.F.<sup>9</sup>, A. Valle-Levinson, S.M. Parra and **P.N. Adams**, 2020, Overtides at the Inner Shelf Offshore of a Cape During Extreme Atmospheric Forcing, CP41B-01, EOS, Trans., American Geophysical Union, 2020 Ocean Sciences Mtg., San Diego, CA.
69. Masteller, C., Hovius, N., Thompspon, C., Vann-Jones, E., Woo, H. B. <sup>9</sup>, **Adams, P.**, Dickson, M., Young, A., and Rosser, N., 2020, Exploring the interplay of wave climate, vertical land motion, and rocky coast evolution, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-12680, <https://doi.org/10.5194/egusphere-egu2020-12680>, 2020
70. Conlin, M.P.<sup>9</sup>, **P.N. Adams**, and M. Palmsten, 2020, Using Pre-Existing Cameras to Monitor Coastal Geophysical Processes with Open-Source Tools, EP061-0039, EOS, Trans., American Geophysical Union, 2020 Fall Mtg., Virtual Meeting.
71. Woo, H.B.<sup>9</sup>, S.L. Bilek, J.A. Gochenour, **P.N. Adams**, A.J. Luhmann, R. Grapenthin, and J.B. Martin, 2020, Monitoring Spatial and Temporal Changes in Seismic Velocity of the Florida Karst Aquifer System with Phase Cross-Correlation and Wavelet Cross-Spectral Analysis, S021-0003, EOS, Trans., American Geophysical Union, 2020 Fall Mtg., Virtual Meeting.
72. Conlin, M. P.<sup>9</sup>, N. Cohn, and **P. N. Adams**, 2021, Examining Environmental and Morphologic Controls on Storm-Driven Coastal Dune Retreat With High-Resolution Mobile Terrestrial Lidar Data, EP25G-1392, EOS, Trans., American Geophysical Union, 2021 Fall Mtg., New Orleans, LA (poster)
73. Johnson, H. A.<sup>9</sup>, and **P. N. Adams**, 2021, Quantifying the Influence of Wave Climate on Coastline Morphology at False Cape, Central Florida Atlantic Coast, EP25G-1399, EOS, Trans., American Geophysical Union, 2021 Fall Mtg., New Orleans, LA (poster)
74. Quadrado, G., K. Serafin, and **P. N. Adams**, 2021, The Relative Contribution to Total Water Levels Over Morphological Thresholds along the Atlantic and Gulf Coasts of Florida, EP25G-1403, EOS, Trans., American Geophysical Union, 2021 Fall Mtg., New Orleans, LA (poster)
75. Masteller, C. C., N. Hovius, C. Thompson, E. C. Vann Jones, H. B. Woo <sup>9</sup>, **P. N. Adams**, M. Dickson, N. J. Rosser, and A. Young, 2021, Exploring patterns in seismic attenuation on rocky coasts to assess the potential for active rock damage processes and erosion (Invited), S23B-01, EOS, Trans., American Geophysical Union, 2021 Fall Mtg., New Orleans, LA (oral)
74. Cromwell, C.<sup>9</sup>, and **P. N. Adams**, 2022, “*Exploring the Effects of Beach Nourishment on Shoreline Position and Orientation at St. Augustine Beach, FL Using Google Earth Engine Satellite Imagery*”, NH22B-0419, EOS, Trans., American Geophysical Union, 2022 Fall Mtg., Chicago, IL (poster)
77. de Assis Bose, M.<sup>9</sup>, **P. N. Adams**, C. Cromwell <sup>9</sup>, O. Cordero, and C. Angelini, 2023, “*Quantifying the Impact of Hurricane Ian on Dune Morphology at Matanzas Inlet, Florida*”, Florida Shore and Beach Preservation Association (FSBPA), 36th annual National Conference on Beach Preservation Technology, Feb. 2, 2023, Fort Myers, FL (oral)
78. Cromwell, C.<sup>9</sup>, **P. N. Adams**, M. de Assis Bose <sup>9</sup>, O. Cordero, A. Ortega, and C. Angelini, 2023, “*Analysis of Morphological Change at Ponte Vedra, FL caused by Hurricane Ian Using Drone Imagery and RTK GPS Surveys*”, Florida Shore and Beach Preservation Association (FSBPA), 36th annual National Conference on Beach Preservation Technology, Feb. 2, 2023, Fort Myers, FL (oral)
79. Fischman, H., C. Cromwell <sup>9</sup>, **P. Adams**, and C. Angelini, 2023, “*Leveraging natural succession of foundation species to improve coastal dune restoration along frequently disturbed coastlines*”, Coastal & Estuarine Research Federation (CERF) 27<sup>th</sup> Biennial Conference, Nov. 12-16, 2023, Portland, OR (oral)
80. Cromwell, C. <sup>9</sup>, **P.N. Adams**, and D. Anderson, 2023, “*Multidecadal Satellite-derived Shoreline Orientations from Northeast Florida Show Variability in Longshore Wave Energy Flux Driven by North Atlantic Oscillation Phases*”, EP41A-05, EOS, Trans., American Geophysical Union, 2023 Fall Mtg., San Francisco, CA (oral)
81. de Assis Bose, M. <sup>9</sup>, and **P.N. Adams**, 2023, “*Modeling the Morphological Interactions Among Tidal Currents, Longshore Currents, and Nearshore Waves at Inlets During Hurricanes Ian and Nicole: A Case Study of Anastasia Island, Florida*”, EP31C-2090 EOS, Trans., American Geophysical Union, 2023 Fall Mtg., San Francisco, CA (poster)

82. Cromwell, C., J. Shawler, **P. N. Adams**, and P. Tereszkievicz, **2024**, *“Decadal Variability of Beach-Dune Geomorphic Resilience and Cross-shore Aeolian Fetch in NE Florida”*, Florida Shore and Beach Preservation Association (FSBPA), 37th annual National Conference on Beach Preservation Technology, Feb. 8, 2024, St. Augustine Beach, FL (oral)
83. de Assis Bose, M., and **P. N. Adams**, **2024**, *“Evaluating the Impact of Ebb Tidal Delta Morphology on Longshore Sediment Transport for Different Wave Directions”*, Florida Shore and Beach Preservation Association (FSBPA), 37th annual National Conference on Beach Preservation Technology, Feb. 8, 2024, St. Augustine Beach, FL (poster)
84. de Assis Bose, M. <sup>9</sup>, and **P. N. Adams**, **2024**, *“Modeling the Influence of Ebb Tidal Delta Morphology on Longshore Sediment Transport Patterns During Hurricanes Along the North Florida Atlantic Coast”*, Network for Engineering With Nature (N-EWN) Partner Symposium, May 22, 2024, Vilano Beach, FL (poster) \*\*Awarded “Poster Session Best Technical Content”
85. Cromwell, C. <sup>9</sup>, **P.N. Adams**, J. Shawler, and P. Tereszkievicz, **2024**, *“Temporal and Spatial Variability of Cross-shore Fetch and the Potential for Aeolian Dune Recovery at Anastasia Island, FL”*, Network for Engineering With Nature (N-EWN) Partner Symposium, May 22, 2024, Vilano Beach, FL (oral)
86. Fischman, H., C. Cromwell <sup>9</sup>, **P. Adams**, and C. Angelini, **2024**, *“Leveraging Natural Succession to Improve Sand Dune Restoration”*, Network for Engineering With Nature (N-EWN) Partner Symposium, May 22, 2024, Vilano Beach, FL (oral)
87. Morton, H., **P. Adams**, and C. Angelini, **2024**, *“Strategic Planting and Nutrient Amendments to Accelerate the Revegetation of Rapidly Retreating Coastal Dunes”*, Network for Engineering With Nature (N-EWN) Partner Symposium, May 22, 2024, Vilano Beach, FL (oral)
88. Cromwell C. <sup>9</sup>, **P. N. Adams**, J. Shawler, P. Tereszkievicz, **2024**, *“Exploring couplings between post-storm resilience and aeolian recovery models at Anastasia Island, FL”*, 23rd JALBTCX Airborne Coastal Mapping and Charting Workshop, Oct. 23, 2024, Anchorage, AK (oral)
89. de Assis Bose, M. <sup>9</sup>, McPherran, K., Shawler, J., Sylvester, C., and **P. N. Adams**, **2024**, *“Spatial and Temporal Changes in the Ebb Tidal Delta at New Pass Inlet, Florida: Insights from Chronostratigraphic and Conformal Mapping Analyses”*, 23rd JALBTCX Airborne Coastal Mapping and Charting Workshop, Oct. 23, 2024, Anchorage, AK (oral)
90. Cromwell C. <sup>9</sup>, **P. N. Adams**, J. Shawler, P. Tereszkievicz, **2025**, *“Exploring couplings between post-storm resilience and aeolian recovery models at Anastasia Island, FL”*, Florida Shore and Beach Preservation Association (FSBPA), 38th annual National Conference on Beach Preservation Technology, Feb. 6, 2025, Panama City, FL (poster)
91. de Assis Bose, M. <sup>9</sup>, Shawler, J., Adams, P. N., McPherran, K., and Sylvester, C., **2025**, *“Investigating the Morphological Evolution and Shoal Migration of Ebb Tidal Deltas at New Pass Inlet, Florida”*, Florida Shore and Beach Preservation Association (FSBPA), 38th annual National Conference on Beach Preservation Technology, Feb. 6, 2025, Panama City, FL (poster)
92. Duenkel, T. <sup>9</sup>, and **P. N. Adams**, **2025**, *“Elevating Accuracy: Can UAVs Outperform Traditional RTK Methods in Coastal Surveys?”*, Florida Shore and Beach Preservation Association (FSBPA), 38th annual National Conference on Beach Preservation Technology, Feb. 6, 2025, Panama City, FL (poster)

## **AWARDS AND HONORS**

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- 2012 National Aeronautics and Space Administration (NASA), Group Achievement Award (presented 2-Aug-2012 to the Dune Vulnerability Team: *“For exceptional teamwork in formulating a storm surge risk model for Kennedy Space Center Launch Complex 39.”*  
([https://www.wikiwand.com/en/NASA\\_Group\\_Achievement\\_Award](https://www.wikiwand.com/en/NASA_Group_Achievement_Award))
- 2002 Outstanding TA as voted by Earth Sci. Undergrads, Earth Sciences Dept., UC-Santa Cruz
- 2001 Aaron C. Waters Award - Best Ph.D. Thesis Proposal, Earth Sciences, UC-Santa Cruz,  
(<http://eps.ucsc.edu/about/honors-awards/waters-award.html>)

- 2000 Outstanding Student Paper Award, Hydrology Section, American Geophysical Union Fall Mtg.  
1999 First Place, Penn State University-wide Graduate Research Exhibition, Phys. Sci. Division

### **INVITED TALKS/SEMINARS**

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- (upcoming) 2025 Jan. 31, Florida State University Department of Earth, Ocean, and Atmospheric Sciences, Tallahassee, FL, **Invited Talk**, *"Uplift of the Florida Peninsula, Reversal of the St. Johns River, and the Origin of Cape Canaveral"*
- 2024 Nov. 4, University of Miami Rosenstiel School of Marine and Atmospheric Sciences (RSMAS) Geotopics Seminar Series, Miami, FL, **Invited Talk**, *"Uplift of the Florida Peninsula, Reversal of the St. Johns River, and the Origin of Cape Canaveral"*
- 2023 May 2, EWN Dune Research Kickoff Workshop, Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR), Ponte Vedra Beach, FL, *"UF-EWN Dune Life Cycles Team: Progress and Planned Collaboration Plans with ERDC Partners"*
- 2022 May 25, US Army Corps of Engineers (ERDC) Engineering with Nature Workshop, **Invited Talk**, Vicksburg, MS, *"Causes and Consequences of Dune Retreat and Inhibited Beach Recovery Along the Florida Atlantic Coast"*
- 2022 Mar. 15, UF-CIMAS-NOAA Potential Collaboration Forum, **Invited Talk**, (Virtual), *"Investigating the Causes and Consequences of Inhibited Beach Recovery After Storms Along the Florida Atlantic Coast"*
- 2021 Nov. 30, Univ. of Florida Sustainable Ocean Alliance, **Invited Talk**, (Virtual), *"Hurricane-Driven Dune Retreat and Inhibited Beach Recovery at Matanzas Inlet, Florida Atlantic Coast"*
- 2021 Jul. 7, SEFS Hydrosphere Teacher Workshop **Invited Keynote Address**, (Virtual), *"Coastal Geomorphology: A Field of Study that Links the Ocean and the Terrestrial Landscape to the Earth's Changing Climate"*
- 2020 Feb. 19, University of Florida, Water, Wetlands, and Watersheds Seminar, **Invited Talk**, Gainesville, FL, *"Hurricane-Driven Dune Retreat and Inhibited Beach Recovery at Matanzas Inlet, Florida Atlantic Coast"*
- 2018 Oct. 26, University of South Florida, School of Geosciences Department Colloquium, **Invited Talk**, Tampa, FL, *"Uplift of the Florida Peninsula, Reversal of the St. Johns River, and the Origin of Cape Canaveral"*
- 2018 Sept. 13, University of Florida, Department of Geological Sciences Seminar, **Invited Talk**, Gainesville, FL, *"Uplift of the Florida Peninsula, Reversal of the St. Johns River, and the Origin of Cape Canaveral"*
- 2015 Dec. 2, University of Florida, Coasts, Oceans, Ports and Rivers Institute (COPRI) Seminar, **Invited Talk**, Gainesville, FL, *"Overview of Lab Group Research and Activities"*
- 2015 Oct. 24, Penn State, SlingFest: Sediment from Mountains to Seas Symposium on the occasion of the retirement of Professor Rudy L. Slingerland, **Invited Talk**, University Park, PA, *"Quantitative Geomorphology of Tidal Inlets: "Then and Now" Insights From Two Autonomous U.S. Atlantic Coastal Inlets"*
- 2015 Oct. 9, Meeting of the UF Geological Sciences Advisory Board, **Invited Talk**, Gainesville, FL, *"Overview of Lab Group Research and Activities"*
- 2013 Apr. 19, Southeastern Geological Society and FAPG Field Meeting, **Invited Talk**, Davenport, FL, *"Florida's Rising? Not so fast!"*
- 2013 Apr. 17, University of Florida, Water, Wetlands, and Watersheds Seminar, **Invited Talk**, Gainesville, FL, *"Quaternary, Decadal, Seasonal, and Event-Scale Morphodynamics at NASA-Kennedy Space Center, Cape Canaveral, Florida"*



- 2012 Nov. 1, University of South Florida, College of Marine Sciences Seminar, **Invited Talk**, St. Petersburg, FL, *"Decadal to Seasonal, Beach and Nearshore Morphodynamics at NASA-Kennedy Space Center, Cape Canaveral, Florida"*
- 2012 Jun. 20, Naval Research Laboratory, **Invited Talk**, John C. Stennis Space Center, MS, *"Seasonal, Beach and Nearshore Morphodynamics at NASA-Kennedy Space Center, Cape Canaveral, Florida"*
- 2010 Jun. 1, University of Connecticut, Center for Integrative Geosciences Seminar, **Invited Talk**, Storrs, CT, *"Rising Ridges and a Conspicuous Cape: Ancient and Modern Geomorphology of the Florida Atlantic Coast"*
- 2010 May 20, NASA Climate Change Workshop: Resilience and Adaptation to Climate Change Risks Workshop: Kennedy Space Center and the Space Coast, **Invited Talk**, Cocoa Beach, FL, *"Monitoring Monthly and Storm-Scale Variability of Cape Canaveral Shoreline Position and Beach Morphology or What's happening on the Beach?"*
- 2010 Jan. 18, Florida Institute of Climate Science Symposium, **Invited Talk**, Archbold Biological Station, Lake Placid, FL, *"Investigating the Effects of Climate Change on Hotspots of Coastal Erosion in Florida"*
- 2009 Nov. 9, University of Florida, Department of Civil/Coastal Engineering Seminar, **Invited Talk**, Gainesville, FL, *"Climate Change and Hotspots of Coastal Erosion in Southern California"*
- 2009 May 7, Florida Power and Light, UF-CLAS Alumni Event, **Invited Talk** (invitation from Dean D'Anieri), Juno Beach, FL, *"Florida Atlantic Coast: Modern Processes and Paleo Perspectives"*
- 2009 Feb. 3, University of Florida, Department of Geography Seminar, **Invited Talk**, Gainesville, FL, *"Listening to Coastal Erosion: Wave Generated Microseisms and the Strain of Sea Cliffs, Santa Cruz, California"*
- 2008 Nov. 21, University of Pennsylvania, Dept. of Earth & Env't. Sci. Seminar, **Invited Talk**, Philadelphia, PA, *"Listening to Coastal Erosion: Wave Generated Microseisms and the Strain of Sea Cliffs, Santa Cruz, California"*
- 2008 July 15, University of Auckland, SGGES Special Seminar, **Invited Talk**, Auckland, New Zealand, *"Listening to Coastal Erosion: Wave Generated Microseisms and the Strain of Sea Cliffs"*
- 2007 Nov. 7, University of Florida, Department of Civil/Coastal Engineering Seminar, **Invited Talk**, Gainesville, FL, *"Listening to Coastal Erosion: Microseisms and the Strain of Sea Cliffs"*
- 2007 Sept. 10, 4<sup>th</sup> Ann. Climate Change Research Conference, Calif. Energy Comm., **Invited Talk**, Sacramento, CA, *"Identifying Potential Hotspots of Coastal Erosion Along the Southern California Coast Through Numerical Modeling"*
- 2007 Aug. 1, Oral Presentation, 8<sup>th</sup> ARGUS Research Workshop, CIL, Oregon St. Univ., **Invited Talk**, Corvallis, OR, *"Using Argus to Infer Sediment Transport Rates and Geomorphic Evolution"*
- 2007 Apr. 9, University of Virginia, Dept. of Environmental Sciences Seminar, **Invited Talk**, Charlottesville, VA, *"Understanding Coastal Geomorphic Processes Through Measurements and Modeling"*
- 2007 Mar. 8, San Francisco State University, Dept. of Geosciences Seminar, **Invited Talk**, San Francisco, CA
- 2006 Sept. 14, 3<sup>rd</sup> Ann. Climate Change Research Conference, Calif. Energy Comm., **Invited Talk**, Sacramento, CA
- 2006 May 23, USGS Center for Coastal and Watershed Studies, **Invited Talk**, St. Petersburg, FL
- 2006 Apr. 13, University of Florida, Department of Geological Sciences Seminar, **Invited Talk**, Gainesville, FL
- 2005 Sept. 15, 2<sup>nd</sup> Ann. Climate Change Research Conference, Calif. Energy Comm., **Invited Talk**, Sacramento, CA

- 2005 Mar. 9, Scripps Institution of Oceanography, UCSD, Geosc. Research Div. Seminar, **Invited Talk**, La Jolla, CA
- 2005 Feb. 23, University of Delaware, Department of Geology Seminar, **Invited Talk**, Newark, DE
- 2005 Jan. 7, University of Florida, Department of Geological Sciences Seminar, **Invited Talk**, Gainesville, FL
- 2004 Sept. 17, Duke University, Division of Earth and Ocean Sciences Seminar, **Invited Talk**, Durham, NC
- 2004 Apr. 27, Washington and Lee University, Department of Geology Special Seminar, **Invited Talk**, Lexington, VA
- 2004 Mar. 17, Coastal Dynamics of the Western Kenai Peninsula Workshop, **Invited Talk**, Homer, AK
- 2004 Jun. 8, Doctoral Defense, University of California at Santa Cruz, Department of Earth Sciences, Santa Cruz, CA, *"Assessing Coastal Wave Energy and the Geomorphic Evolution of Rocky Coasts"*
- 2004 Feb. 25, Yale Univ. Dept. of Geosciences Departmental Colloquium, **Invited Talk**, New Haven, CT
- 2002 Apr. 3, UC-Santa Cruz, Topics in Coastal Processes Seminar, **Invited Talk**, Santa Cruz, CA
- 1999, Feb. 18, Penn State University, Geodynamics Seminar Series, **Invited Talk**, University Park, PA, *"Natural Levees: Their Origin and Role in Avulsion Channel Evolution"*

### **PROFESSIONAL WORKSHOPS**

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- 2024 May 22-24, "Network for Engineering With Nature (N-EWN) Partner Symposium", Vilano Beach, FL
- 2023 May 2-3, "EWN Dune Research Kickoff Workshop", Guana Tolomato Matanzas National Estuarine Research Reserve (GTM NERR), Ponte Vedra Beach, FL
- 2022 May 24-26, Participant in Workshop: "Exploring Shared Interests in Resilient Infrastructure and Natural Systems: Efforts-To-Date and Future Opportunities" (US Army Corps of Engineers) Engineer Research and Development Center (ERDC), Vicksburg, MS
- 2021 Jun. 9, Participant in Distributed Acoustic Sensing – Research Coordination Network (DAS-RCN) Geomorphology Working Group Meeting ([https://www.iris.edu/hq/initiatives/das\\_rcn](https://www.iris.edu/hq/initiatives/das_rcn))
- 2021 Apr. 26-27, Participant in "SHared Operational REsearch Logistics In the Nearshore Environment (SHORELINE21) Workshop, hosted by NSF NHERI: <https://www.eng.ufl.edu/shoreline/>
- 2021 Mar. 9-11, Participant in "Horseshoe Cove and Suwannee Sound Workshop", hosted FWC and FWRI: [https://ocean.floridamarine.org/OIMMP/Resources\\_2021/HorseshoeWorkshop\\_Report.pdf](https://ocean.floridamarine.org/OIMMP/Resources_2021/HorseshoeWorkshop_Report.pdf)
- 2019 Oct. 25, Invited presenter on morphologic effects of Hurricane Dorian (2019) at iCoast Quarterly Meeting, UF Whitney Marine Lab, St. Augustine, FL (<https://icoast.program.ufl.edu>)
- 2018 Sept. 26-28, Participant in National Science Foundation (NSF) Scoping Workshop on "Coasts and People (CoPe)", Atlanta, Georgia
- 2018 Apr. 16-18, Participant in U.S. Coastal Research Program (USCRP) "Storms Processes and Impacts" workshop, sponsored by ASBPA, USACE, ORN, USNRC, NOAA, BOEM, FEMA, USGS, NSF, and NPS, St. Petersburg, FL
- 2018 Jan. 9-11, Participant in Florida Coastal Mapping Program (FCMP) workshop, sponsored by the USGS and Florida Institute of Oceanography (FIO), St. Petersburg, FL
- 2015 Oct. 18-20, Panelist – Teaching MATLAB in the Geosciences, NAGT-SERC Workshop, Carleton College, Northfield, MN
- 2014 Apr. 9-11, Participant – Modelling of sediment transport and bed dynamics in Delft3D (Block 2), Deltares Academy, Delft, NL
- 2014 Apr. 7-8, Participant – Hydrodynamic modelling in Delft3D (Block 1), Deltares Academy, Delft, NL

- 2012 Mar. 30, Governors' South Atlantic Alliance Regional Coastal Hazard Vulnerability Assessment Implementation Meeting, Skidaway Institute of Oceanography, Savannah, GA
- 2012 Feb. 29, NASA-Kennedy Space Center Shoreline Protection Assessment Stakeholders Meeting, Kennedy Space Center, Cape Canaveral, FL
- 2012 Jan. 10, NASA, Dune Vulnerability Team (DVT) Group Meeting, Kennedy Space Center, Cape Canaveral, FL
- 2011 10<sup>th</sup> ARGUS Research Workshop participant, Coastal Imaging Laboratory, Oregon St. University, Corvallis, OR
- 2011 Host, International Workshop on Progress in Rocky Coast Geomorphology, Feb. 21, 2011 (University of Florida). Attendees from Durham University (UK) and University of Auckland (New Zealand)
- 2010 Dec. 6, Invited Panelist, California Energy Commission Advisory Panel Update Meeting, Sacramento, CA
- 2010 Jun. 4, Invited Panelist, Seawall Assessment Committee Meeting, City of Homer, Alaska, Kachemak Bay College, Homer, AK
- 2009 Dec. 7, NASA, DVT Group Meeting, Kennedy Space Center, Cape Canaveral, FL
- 2009 Oct. 26-28, Joint Workshop, Community Surface Dynamics Modeling System (CSDMS) Coastal and Terrestrial Working Groups, Boulder, CO
- 2009 9<sup>th</sup> ARGUS Research Workshop participant, Marine Inst., Univ. of Plymouth, Plymouth, UK
- 2009 Mar. 24, NASA, DVT Group Meeting, Kennedy Space Center, Cape Canaveral, FL
- 2009 Feb. 25-26, Joint Workshop, Community Surface Dynamics Modeling System (CSDMS) Coastal and Marine Working Groups, Charlottesville, VA
- 2009 Jan. 20-21, Community Surface Dynamics Modeling System (CSDMS) Hydrology Focus Research Group Meeting, INSTAAR, University of Colorado, Boulder, CO
- 2008 NAGT Workshop: Teaching Geomorphology in the 21<sup>st</sup> Century, Ft. Collins, CO
- 2007 8<sup>th</sup> ARGUS Research Workshop participant, CIL, Oregon St. Univ., Corvallis, OR
- 2006 SWAN wave modeling short course participant, WHOI-USGS, Woods Hole, MA
- 2003 ARGUS Runtime Environment short course participant, NWRRA, Bellvue, WA
- 2003 13-17 January, Participant, GSA Penrose Conference on "Tectonics, Climate, and Landscape Evolution", Taroko National Park, Taiwan

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### ***FIELD EXPERIENCE***

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- 2022-2023 Led/Supervised Beach Morphology Structure-From-Motion Drone UAV Surveys, South Ponte Vedra Beach, FL (Sponsored Research)
- 2022 Collaboration with Ifju lab group (UF Mechanical Engineering) on UAV-based Structure from Motion topographic mapping of dunes, Ponte Vedra, FL (Sponsored Research)
- 2019 Led/Supervised Beach Morphology RTK-GPS Surveys, Von D. Mizell-Eula Johnson State Park., Dania Beach, FL (Research)
- 2018 Trainee, Boater Safety Training Course, Univ. of Florida – IFAS, Nature Coast Biological Station, Cedar Key, FL, Sept. 11, 2018 (Research)
- 2018 Fieldwork, Ground Penetrating Radar Study of Smyrna Dunes Park, Volusia Co., FL, Univ. of Florida and GeoHazards, Inc., Jun. 11, 2018 (Sponsored Research)
- 2017-2018 Led/Supervised Beach Morphology RTK-GPS Surveys, Fort Matanzas National Monument (NPS), FL (Research)

- 2013-2014 Led/Supervised Beach Morphology RTK-GPS Surveys, Kennedy Space Cntr., FL (Sponsored Research)
- 2012 Coordinated deployment of 3 Acoustic Doppler Current Profiler (ADCP) instruments off coast of Cape Canaveral, Florida (Research)
- 2010 Supervised deployment of 3 Acoustic Doppler Current Profiler (ADCP) instruments off coast of Cape Canaveral, Florida (Research)
- 2009 Coordinated deployment of 2 Acoustic Doppler Current Profiler (ADCP) instruments off coast of Matanzas Inlet, Florida (Research)
- 2009-2012 Coordinated Beach Morphology GPS Surveys, Kennedy Space Center, Florida (Sponsored Research)
- 2005 Beach Profiling and LIDAR Mapping of Sea Cliffs, Kachemak Bay, Alaska (Sponsored Research)
- 2004 GPS Beach Profiling and Sediment Surveys of Kachemak Bay, Alaska (Sponsored Research)
- 2003 Coastal Geomorphology and ARGUS Monitoring of Kachemak Bay, Alaska (NERR Fellowship)
- 2003-2000 Microseismic Deployments Along the Central California Coast (PhD Thesis research)
- 2002-2001 Quaternary History of Mono Basin, Eastern California (Teaching Asst. – Field Geology)
- 2000 Evaluation of Glacial Sliding Speed and Sediment Output, Chugach Mountains, Alaska (Field Asst.)
- 1999 Tectonic Geomorphology of Owens Valley, Eastern California (Field Course)
- 1998 Modern Alluvial Depo-Environments, Southeastern British Columbia (MS Thesis Research)
- 1997 Stratigraphy of Permian Basin Carbonates, West Texas and New Mexico (Field Course)
- 1996 Structural Study of the Reedsville Shale, Central Pennsylvania (BS Thesis Research)
- 1995 Penn State Geosciences Field School, Montana, Wyoming, Utah. (Field Course)

### **PRESS AND MEDIA COVERAGE**

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- 01/2000, **Research Penn State**, “*On the Levee*”, by David Pacchioli:  
<http://www.rps.psu.edu/jan2000/levee.html>
- 08/20/2003, **Homer Tribune**, “*Student Scientists Get Taste of the Real Thing at Reserve*”, by McKibben Jackinsky
- 06/01/2010, **University of Florida News Bureau**, “*Geologist: Fla. ridges’ mystery marine fossils tied to rising land, not seas*”, by Aaron Hoover (article): <http://news.ufl.edu/2010/06/01/florida-rise/>
- 06/01/2010, **University of Florida News Bureau**, “*Florida Rising*” by George Solis (video):  
<http://news.ufl.edu/2010/06/01/florida-rising/>
- 06/01/2010, **Discovery News**, “*Florida’s Swiss Cheese-Like Surface Rising*” by Larry O’Hanlon:  
<http://news.discovery.com/earth/global-warming/florida-limestone-swiss-cheese.htm>
- 06/02/2010, **WCJB TV20** Spot: <http://www.youtube.com/user/gatman808#p/a/u/0/5c4VDy1vRbM>
- 06/03/2010, **Gainesville Sun**, “*UF prof: Florida land rising, but not as fast as sea*” by Nathan Crabbe,  
<http://chalkboard.blogs.gainesville.com/2010/06/uf-prof-florida-land-rising-but-not-as-fast-as-sea/>
- 06/08/2010, **Science Daily**, “*Florida Ridges’ Mystery Marine Fossils Tied to Rising Land, Not Seas, Geologist Says*”: <http://www.sciencedaily.com/releases/2010/06/100601072524.htm>
- 06/09/2010, **HomerNews.com**, “*Meeting of minds Participants say first meeting productive*”:  
[http://homernews.com/stories/060910/news\\_1\\_001.shtml](http://homernews.com/stories/060910/news_1_001.shtml)
- 09/01/2010, **Earth Magazine**, “*Unusual isostasy could explain Florida’s mystery fossil ridge*” by Mary C. Morton, September 2010 issue.

12/11/2010, **Washington Post**, “Scientists look at whether climate change is causing bigger ocean waves” by *Les Blumenthal*:

<http://www.washingtonpost.com/wp-dyn/content/article/2010/12/11/AR2010121102805.html>

04/15/2011, **American Geophysical Union**, Research on karst-driven isostatic uplift of carbonate platforms highlighted on *AGU Fact Sheet for the state of Florida*.

05/26/2011, **WUFT-FM 89.1**, Radio interview on the potential geomorphic effects of the Mississippi River Flood of 2011, broadcast on *North-central Florida portion of NPR’s Morning Edition*:

<http://www.wuftfm.org/news/index.php?id=950>

12/04/2014, **CBS News**, “Erosion Threatens Launch Pad Infrastructure”, by Vicente Arenas (correspondent) and Miles Doran (producer) (National News Broadcast):

<https://www.cbsnews.com/video/erosion-threatens-fla-launch-pad-infrastructure/>

12/05/2014, **University of Florida News Bureau**, “Climate change already showing effects at Kennedy Space Center”, by Steve Orlando (article): <http://news.ufl.edu/archive/2014/12/climate-change-already-showing-effects-at-kennedy-space-center.html>

12/05/2014, **Reuters**, “Sea level rise threatening Kennedy Space Center in Florida”, by Barbara Liston (article): <http://news.ufl.edu/archive/2014/12/climate-change-already-showing-effects-at-kennedy-space-center.html>

12/06/2014, **University of Florida College of Liberal Arts and Sciences**, “Erosion threatens Florida launchpad infrastructure”: <http://www.clas.ufl.edu/events/news/articles/in-the-news2014.html>

12/07/2014, **Independent Florida Alligator**, “UF geologists to study effects of climate change with NASA”, by Grace Hudgins (article): [http://www.alligator.org/news/campus/article\\_2caa9932-7e94-11e4-8d8d-a3ea7dc481c7.html](http://www.alligator.org/news/campus/article_2caa9932-7e94-11e4-8d8d-a3ea7dc481c7.html)

12/29/2014, **Tampa Bay Times**, “As rising sea level chomps at Cape Canaveral, NASA uses nature-friendly solution”, by Craig Pittman (front-page article):

<http://www.tampabay.com/news/environment/globalwarming/as-rising-sea-level-chomps-at-cape-canaveral-nasa-uses-nature-friendly/2211835>

02/12/2015, **WKMG-TV Orlando Channel 6 News**, “Researchers: Rising sea levels having effects at Kennedy Space Center”, by Paul Giorgio (Special Projects Producer):

<http://www.clickorlando.com/news/researchers-rising-sea-levels-having-effects-at-kennedy-space-center/31221582>

04/06/2015, **NPR - All Things Considered**, “NASA Battles Rising Sea Levels To Protect Kennedy Space Center”, by Amy Green (Reporter and Producer, 90.7 WMFE-Orlando) (National Broadcast):

<http://www.npr.org/2015/04/06/397891198/nasa-battles-rising-sea-levels-to-protect-kennedy-space-center>

08/26/2015, **NASA Earth Observatory**, “Sea Level Rise Hits Home at NASA; Watching Waters Rise Right Outside the Front Door”, by Michael Carlowicz (Chief Technical Writer, NASA Sciences and Exploration Directorate – Goddard Space Flight Center):

<http://earthobservatory.nasa.gov/Features/NASASeaLevel/>

04/19 2022, **Powering the New Engineer** (UF College of Engineering Research Magazine), “The New Big Dig: UF Researchers Deliver Sustainable Solutions by Helping Government Engineers Cooperate with Nature”, Adams research featured in article: <https://www.eng.ufl.edu/newengineer/news/the-new-big-dig-uf-researchers-deliver-sustainable-solutions-by-helping-government-engineers-cooperate-with-nature/>

12/12/2022, **Ytori** (UF College of Liberal Arts and Sciences Research Magazine), “Harnessing the Healing Power of Mother Nature”, Adams research featured in Research Roundup article:

<https://news.clas.ufl.edu/research-roundup-ytori-fall-22/>

06/08/2023, **PBS NewsHour**, “How did the ocean form? 4 things to know about its past and present”, by Bella Isaacs-Thomas (Digital Reporter on PBS NewsHour’s science desk):

<https://www.pbs.org/newshour/science/how-did-the-ocean-form-4-things-to-know-about-its-past-and-present>

## **OTHER SYNERGISTIC ACTIVITIES**

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- 2018 Invited Presenter: "What Does a Coastal Geologist Do?" - Mrs. Jan Merritt's 4<sup>th</sup> Grade Gifted Science Class, J.J. Finley Elementary School, Gainesville, FL, Nov. 8, 2018
- 2018 Invited Presenter on Topics of "Land and Water" - Mrs. Courtney Beatty's 1<sup>st</sup> Grade Class, J.J. Finley Elementary School, Gainesville, FL, Jan. 17, 2018
- 2017 Invited Presenter for "Down To Earth" – Youth Summer Camp, Florida Museum of Natural History, Gainesville, FL, Jun. 21, 2017
- 2016 Invited Presenter on Topics of "Land and Water" - Mrs. Tracie Blackford's 1<sup>st</sup> Grade Class, J.J. Finley Elementary School, Gainesville, FL, Jan. 29, 2016
- 2011 Faculty Host for sabbatical visit for International Colleague - Visiting Professor, Mark Dickson (University of Auckland, New Zealand), Feb. 12- Mar. 31, 2011
- 2010 Invited Panelist, Illustration in the Earth Sciences Discussion, Univ. of Florida School of Art and Art History Drawing Seminar, Feb. 18, 2010
- 2008 Contributed to the Florida Center for Instructional Technology (FCIT) web site, providing middle and high school teachers with resources for science instruction.

## **TEACHING**

### **POST DOC AND GRADUATE STUDENT SUPERVISION**

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#### **Post Doc Supervisor (1 Total):**

- 2012 - 2014: Patrick Limber, (Ph.D. 2012, Duke University), Post Doctoral Research Description: *"Numerical Modeling of Sandy Coast Geomorphic Behavior Resulting From Wave Climate Change"* Current Position: Mendenhall Post-doctoral Scholar with U.S. Geological Survey, Pacific Science Center, Santa Cruz, CA.

#### **Graduate Student Committee Chair (13 Total - 9 Ph.D., 4 M.S.):**

- 2008 - 2011: Katherine K. Malone (M.S. Student, Geological Sci., Univ. of Florida), Thesis defense Mar. 1, 2011, **M.S. conferred May 2011**, Thesis Title: *"Seasonal and Spatial Variability of Beach Morphodynamics at an Autonomous Tidal Inlet: Matanzas Inlet, Florida Atlantic Coast"*, Current Position: Geologist with ARCADIS Environmental Services, Washington, D.C.
- 2009 - 2013: Jessica L. Lovering (Ph.D. Student, Geological Sci., Univ. of Florida), Advanced to candidacy Jan. 14, 2011, Dissertation defense Mar. 15, 2013, **Ph.D. conferred Apr. 2013**, Dissertation Title: *"The Role of Marsh Platform Morphology in the Geomorphic Response of Tidal Inlet Systems to Sea Level Rise"*. Current Position: Physical Scientist, Oceanographic Department (NP3), Ocean Prediction Division (NP31), Coastal Forecasting Branch (NP313), Naval Oceanographic Office (NAVOCEANO), Stennis Space Center, Mississippi.
- 2009 - 2013: Shaun W. Kline (Ph.D. Student, Geological Sci., Univ. of Florida), Advanced to candidacy Mar. 25, 2011, Dissertation defense May 24, 2013, **Ph.D. conferred Aug. 2013**, Dissertation Title: *"Influence of Wave Energy Dissipation on the Geomorphic Behavior of Rocky and Sandy Coasts"*. Current Position: Coastal Engineer, Environmental Services Group (ESG), Enercon Services, Inc. (ENERCON), Murrysville, Pennsylvania.
- 2013 - 2014: Kathleen E. Wilson (M.S. Student, Geological Sci., Univ. of Florida), Thesis defense Jun. 20, 2014, **M.S. conferred Aug. 2014**, Thesis Title: *"Probabilistic Forecasting of Coastal Morphodynamic Storm Response at Fire Island, New York"*. Current Position: Research Geologist, U. S. Geological Survey, St. Petersburg, Florida
- 2013 - 2014: Matthew Willis (Ph.D. Student, Geological Sci., Univ. of Florida), **Withdrew May 2014**

- 2013 - 2018: Juan Felipe Paniagua (Ph.D. Student, Geological Sci., Univ. of Florida), Advanced to candidacy Apr. 25, 2016, Dissertation defense Feb. 9, 2018, **Ph.D. conferred May 2018**, Dissertation Title: *"Hydrodynamic Processes Associated With the Evolution of Cape Related Shoals"*, Current Position: Assistant Professor, EAFIT, Medellin, Colombia.
- 2014 - 2016: Christian J. Provancha (M.S. Student, Geological Sci., Univ. of Florida), Thesis defense Jun. 17, 2016, **M.S. conferred Aug. 2016**, Thesis Title: *"Linking Latitudinal Variability of Western Atlantic Wave Climate to The North Atlantic Oscillation"*. Current Position: Project Engineer, U.S. Army Corps of Engineers, New York, NY.
- 2016 - 2020: Hailey A. Johnson (Ph.D. Student, Geological Sci., Univ. of Florida), Advanced to candidacy Nov. 14, 2018, Dissertation defense Jul. 31, 2020, **Ph.D. conferred Dec. 2020**, Dissertation Title: *"Reusable Geoscientific Software Design and Applications in Coastal Morphology Research and Education"*, Current Position: Scientific Software Engineer II at Unidata (UCAR), Boulder, CO.
- 2017 - 2021: Han Byul (Aiden) Woo (Ph.D. Student, Geological Sci., Univ. of Florida), Advanced to candidacy Dec. 1, 2020, Dissertation defense Nov. 10, 2021, **Ph.D. conferred Dec. 2021**, Dissertation Title: *"The use of Seismic Interferometry to Identify Crustal Velocity Structure and Other Applications in Environmental Seismology"*, Current Position: Post-Doctoral Scholar, New Mexico Tech University, Socorro, NM.
- 2017 - 2022: Matthew P. Conlin (Ph.D. Student, Geological Sci., Univ. of Florida), Advanced to candidacy Jan. 26, 2021, Dissertation defense Feb. 28, 2022, **Ph.D. conferred Apr. 2022**, Dissertation Title: *"Assessing Storm-Driven Evolution of Coastal Morphology Through the use and Development of Numerous Observational Techniques"*, Current Position: Post-Doctoral Scholar, Oregon State University, Corvallis, OR.
- 2022 – present: Copeland Cromwell (Ph.D. Student, Geological Sci., Univ. of Florida), Advanced to candidacy May 2, 2024, degree in progress, Dissertation (Working) Title: ""
- 2022 – present: Matheus de Assis Bose (Ph.D. Student, Geological Sci., Univ. of Florida), degree in progress, Dissertation (Working) Title: ""
- 2024 – present: Teagan Duenkel (M.S. Student, Geological Sci., Univ. of Florida), degree in progress, Thesis (Working) Title: ""

#### **Graduate Student Committee Co-Chair (1 Total - 1 Ph.D.):**

- 2007 – 2012: Richard A. Mackenzie (Ph.D. Student, Geological Sci., Univ. of Florida, Co-advised by Dr. John Jaeger), Advanced to candidacy Sept. 29, 2009, Dissertation defense Jul. 18, 2012, **Ph.D. conferred Aug. 2012**, Dissertation Title: *"Establishing Uncertainties Associated With Visual Based And Datum Based Shoreline Proxies On A Wave Dominated Sandy Coast: Cape Canaveral, Florida"*, Current Position: Senior Petroleum Geologist with Operations Geology Core Group, Exxon Mobil Corporation, Houston, Texas.

#### **Graduate Student Committee Membership (50 Total)**

Summary: (21 Regular Member - 7 Ph.D., 14 M.S.), (23 External Member - 23 Ph.D., 0 M.S.), (1 Minor Member - 0 Ph.D., 1 M.S.), (1 Other University Member - 1 Ph.D., 0 M.S.), (2 International Examiner - 2 Ph.D., 0 M.S.)

#### **Regular Member – (21 - 7 Ph.D., 14 M.S.)**

- 2008 – 2010: Alison T. Fundis (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Michael Perfit), Thesis defense Jan. 20, 2010, **M.S. conferred May 2010**, Thesis Title: *"Paving the Seafloor: Volcanic Emplacement Processes During the 2005-06 Eruption at the Fast-Spreading East Pacific Rise, 9°50'N"*

- 2009 – 2013: Marie J. Kurz (Ph.D. Student, Geological Sci., Univ. of Florida, Advised by Dr. Jon Martin), Advanced to candidacy Apr. 9, 2010, Dissertation defense May 2, 2013, **Ph.D. conferred Aug. 2013**, Dissertation Title: *“Biogeochemical And Hydrologic Controls On Solute Sources And Cycling In A Biologically Productive Karst River”*
- 2010 – 2012: Patricia Spellman (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Elizabeth Screamon), Thesis defense Feb. 28, 2012, **M.S. conferred May 2012**, Thesis Title: *“River Losses At A Karst Escarpment During Normal Flow And Flood Conditions And Implications For Carbonate Weathering”*
- 2012 – 2013: James Sutton (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Elizabeth Screamon), Thesis defense May 20, 2013, **M.S. conferred Aug. 2013**, Thesis Title: *“Large-scale Surface Water-Groundwater Exchange Processes in a Karst Aquifer: Examples from the Suwannee River Basin”*
- 2012 – 2013: Timothy L. Kirchner (M.S. Student, Geomatics Program, SFRC, Univ. of Florida Advised by Dr. Bon Dewitt), Final Exam: Nov. 20, 2013, **M.S. conferred Dec. 2013**, (Non-Thesis)
- 2013 – 2014: Jin Li (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Andrea Dutton), Thesis defense Feb. 21, 2014, **M.S. conferred May 2014**, Thesis Title: *“Constraining the Last Interglacial relative sea level signal in the Bahamas”*
- 2013 – 2017: Karen L. Vyverberg (Ph.D. Student, Geological Sci., Univ. of Florida, Advised by Dr. Andrea Dutton), Advanced to candidacy Oct. 14, 2015, Dissertation defense Oct. 27, 2017, **Ph.D. conferred Dec. 2017**, Dissertation Title: *“Reconstructing the Temporal Evolution of Sea Level in the Seychelles during the Last Interglacial”*
- 2014 – 2018: Michelle L. Penkrot (Ph.D. Student, Geological Sci., Univ. of Florida, Advised by Dr. John Jaeger), Advanced to candidacy Apr. 21, 2016, Dissertation defense Nov. 1, 2018, **Ph.D. conferred Dec. 2018**, Dissertation Title: *“The Late Quaternary Continental Margin Sedimentary Record of Glacial Erosion Within the St. Elias Mountain Range, Southeastern Alaska”*
- 2015 – 2016: Han Byul Woo (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Mark Panning), Thesis defense Jun. 16, 2016, **M.S. conferred Aug. 2016**, Thesis Title: *“Isostasy, Elastic Flexure, and Uplift of mid to North Florida”*
- 2014 – 2020: Peter M. Chutcharavan (Ph.D. Student, Geological Sci., Univ. of Florida, Advised by Dr. Andrea Dutton), Advanced to candidacy Sept. 14, 2016, Dissertation defense Jul. 9, 2020, **Ph.D. conferred Aug. 2020**, Dissertation Title: *“Ice Sheet Histories and Sea-Level Change during the Last Interglacial and Termination I Inferred from Fossil Corals: An Interdisciplinary Approach”*
- 2014 – 2016: Matthew E. Farrell (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Mark Panning), Thesis defense Jun. 17, 2016, **M.S. conferred Aug. 2016**, Thesis Title: *“Atmosphere-Ground Coupling in the Eastern United States through the Transportable Array”*
- 2015 – 2016: Michael D. Kedenburg (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. David Foster), Thesis defense Jun. 22, 2016, **M.S. conferred Aug. 2016**, Thesis Title: *“Thermochronological Constraints on Cenozoic Uplift and Exhumation of the Azuero Peninsula, Panama: Implications for South Central American Stratigraphy and Tectonics”*
- 2015 – dropped: James J. Richardson (M.S. Student, Geography, Univ. of Florida, Advised by Dr. Joann Mossa), Thesis defense: TBD, Thesis Title: *“TBD”*
- 2015 – 2017: Emily E. Rodriguez (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Ray Russo), Thesis defense Feb. 24, 2017, **M.S. conferred May 2017**, Thesis Title: *“Southern Chile Crustal Structure: Responses to Ridge Subduction and Terrane Assembly of the Patagonian Microplate”*
- 2017 – 2018: Meng Jia (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. Mark Panning), Thesis defense: Jun. 19, 2018, **M.S. conferred Aug. 2018**, Thesis Title: *“Determining Crust and Upper Mantle Structure by Bayesian Joint Inversion of Receiver Function, Surface Wave Dispersion and Rayleigh Wave Ellipticity at a Single Station: Preparation for Data from the InSight Mission”*



- 2017 – present: Trey Crouch (Ph.D. Student, Environmental Engineering Sci., Univ. of Florida, Advised by Dr. David Kaplan), Advanced to candidacy Oct. 29, 2018, Dissertation Title: “*TBD*”
- 2017 – present: Marie Thomas (Ph.D. Student, Geological Sci, Univ. of Florida, Advised by Dr. Alessandro Forte), Advanced to candidacy TBD, Dissertation Title: “*TBD*”
- 2017 – 2019: Krista McGillivray (M.S. Student, Geological Sci., Univ. of Florida, Advised by Dr. John Jaeger), Thesis defense Mar. 1, 2019, **M.S. conferred May 2019**, Thesis Title: “*Establishing Spatial Patterns of Late Pleistocene to Modern Glacial Erosion in the Bering-Bagley Glacial System, Gulf of Alaska, from IODP Expedition 341 Site U1421*”
- 2018 – 2021: Scott R. Miller (Ph.D. Student, Geological Sci., Univ. of Florida, Advised by Dr. Joe Meert), Advanced to candidacy Apr. 16, 2021, Dissertation defense Nov. 3, 2021, **Ph.D. conferred Dec. 2021**, Dissertation Title: “*Precambrian India From the Hadean to the Proterozoic: Geochemical and Paleomagnetic Investigations of the Singhbhum and Dharwar Cratons*”
- 2018 – 2021: Melissa Moreno (M.S. Student, Interdisciplinary Ecology, Univ. of Florida, Advised by Dr. Bill Pine), Thesis defense May 20, 2021, **M.S. conferred Aug 2021**, Thesis Title: “*Big Changes in the Big Bend: A Data Management and Shoreline Analysis Study*”
- 2019 – 2024: Nicole Greco (Ph.D. Student, Geological Sci., Univ. of Florida, Advised by Dr. John Jaeger), Advanced to candidacy Apr. 11, 2022, Dissertation defense Mar. 22, 2024, **Ph.D. conferred May 2024**, Dissertation Title: “*Quantitative grain size analysis of water column and sub-seafloor sediments in ice-proximal environments as influenced by glacial meltwater and sediment discharge*”

**Minor Committee Member (1 Total - 1 M.S.T.):**

- 2013 – 2015: Brittany E. Eichler (M.S. T Student, Mathematics, Univ. of Florida, Advised by Dr. Jean Larson), Final Exam: Jul. 21, 2015, **M.S. conferred December 2015**, (Non-Thesis)

**External Committee Member (25 Total - 25 Ph.D., 0 M.S.):**

- 2007 – 2009: David J. Robillard (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Ashish Mehta), Advanced to candidacy Dec. 10, 2007, Thesis defense Jun. 29, 2009, **Ph.D. conferred Aug. 2009**, Dissertation Title: “*A Laboratory Investigation Of Mud Seabed Thickness Contributing To Wave Attenuation*”, Current Position: Assistant Professor, Ocean Engineering Department, United States Naval Academy, Annapolis, MD.
- 2007 – 2010: Ilgar Safak (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Alex Sheremet), Advanced to candidacy Jan. 23, 2008, Thesis defense Jun. 21, 2010, **Ph.D. conferred Aug. 2010**, Dissertation Title: “*Interaction of waves, bottom turbulence and cohesive sediment on the muddy Atchafalaya Shelf, Louisiana, USA*”, Positions: 2010-2012: Post-Doctoral Researcher, Environmental Sciences, University of Virginia, Charlottesville, VA; 2012- present: Research Oceanographer, U.S. Geological Survey, Woods Hole, MA.
- 2007 – 2010: Jungwoo Lee (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy Feb. 6, 2008, Thesis defense Jun. 18, 2010, **Ph.D. conferred Aug. 2010**, Dissertation Title: “*Modeling of Wind-Driven Interaction at the Estuary/Ocean Transition*”
- 2008 – 2010: Ty Hesser (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Donald Slinn), Advanced to candidacy Jan. 23, 2008, Thesis defense Dec. 3, 2010, **Ph.D. conferred Dec. 2010**, Dissertation Title: “*Advancement and Validation of Numerical Storm Surge Modeling on Coral Reefs Using Laboratory Comparisons*”, Current Position: Research Hydraulic Engineer with the USACE Engineer Research and Development Center in the Coastal and Hydraulics Laboratory, Coastal Processes Branch, (USACE ERDC CHL CPG), Vicksburg, MS.
- 2009 – 2011: Carlos Lopez (Ph.D. Student, Civil Engineering, Univ. of Florida, Advised by Dr. Forrest Masters), Advanced to candidacy Jul. 15, 2010, Thesis defense Nov. 14, 2011, **Ph.D. conferred Dec. 2011**, Dissertation Title: “*Measurement, Analysis, and Simulation of Wind Driven Rain*”.

Current Position: Associate Engineer, Haag Engineering, Irving, TX.

- 2009 – 2018: Bidhya Yadav (Ph.D. Student, Civil Engr., Univ. of Florida, Advised by Dr. Kirk Hatfield), Advanced to candidacy Oct. 7, 2011, Thesis defense Jul. 24, 2018, **Ph.D. conferred Aug. 2018**, Title of Research Project: *“Modeling of Surface Runoff Processes in Ungauged Basins - A Geocomputational Approach”*
- 2011 – 2013: Tianyi Liu (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Peter Sheng), Advanced to candidacy Nov. 19, 2012, Thesis defense Oct. 18, 2013, **Ph.D. conferred Dec. 2013**, Dissertation Title: *“Three Dimensional Simulation Of Wave Induced Circulation”*
- 2011 – 2012: Luciano Absalonsen (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Robert Dean), Advanced to candidacy Jul. 26, 2011, Dissertation defense Jul. 23, 2012, **Ph.D. conferred Aug. 2012**, Dissertation Title: *“Sand Bars Behavior: Observation and Modeling”*
- 2011 – 2019: Uriah Gravois (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Don Slinn), Advanced to candidacy Jun. 24, 2014, Dissertation defense May 1, 2019, **Ph.D. conferred Aug. 2019**, Dissertation Title: *“New Modeling Tests for Shallow Water Waves”*
- 2012 – 2013: Sangdon So (Ph.D. Student, Water Resources, Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy May 31, 2012, Dissertation defense Jul. 12, 2013, **Ph.D. conferred Aug. 2013**, Dissertation Title: *“Cross-Shelf Exchange Flow Over The West Florida Inner Shelf”*
- 2012 – 2016: Stephanie Zick (Ph.D. Student, Geography, Univ. of Florida, Advised by Dr. Corene Matyas), Advanced to candidacy Oct. 3, 2014, Thesis defense Feb. 19, 2016, **Ph.D. conferred May 2016**, Dissertation Title: *“An Assessment of Tropical Cyclone Representation in a Regional Reanalysis and a Shape Metric Methodology for Studying the Evolving Precipitation Structure Prior to and during Landfall”*. Current Position (as of Spring 2017): Assistant Professor, Dept. of Geography, Virginia Tech University.
- 2012 – 2016: Christopher D De Vilbiss (Ph.D. Student, Environmental Engineering Sciences, Univ. of Florida, Advised by Dr. Mark Brown), Advanced to candidacy Jun. 18, 2015, Thesis defense Oct. 19, 2016, **Ph.D. conferred Dec. 2016**, Dissertation Title: *“Evaluation of Earth's Geobiosphere Energy Baseline and the Emergy of Crustal Cycling”*
- 2014 – 2016: Jorge A Laurel-Castillo (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy Mar. 25, 2015, Thesis defense Jul. 19, 2016, **Ph.D. conferred Aug. 2016**, Dissertation Title: *“Water Level Variability and Salinity Distribution Response to Ocean and River Forcing Interactions in a Subtropical Estuary”*
- 2015 – 2018: Mohammad S Alkhalidi (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy May 16, 2017, Dissertation defense Jun. 25, 2018, **Ph.D. conferred August 2018**, Dissertation Title: *“Turbulence over an Inner-Shelf Influenced by Waves, Tides, and Thermal Stratification”*
- 2015 – 2017: Fernanda Nascimento De Paula E Silva (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy Dec. 6, 2016, Dissertation defense Jul. 5, 2017, **Ph.D. conferred Aug. 2017**, Dissertation Title: *“Tidal and Subtidal Wave-Current Interactions in a Mixed Energy Tidal Inlet”*
- 2015 – 2017: Ahmad Yousif (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy Mar. 28, 2017, Dissertation defense Sept. 15, 2017, **Ph.D. conferred Dec. 2017**, Dissertation Title: *“The Development of a Scrap Tire Barrier as a Coastal Structure for Wave Damping Applications”*
- 2015 – 2018: Zhendong Cao (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Maitane Olabarrieta), Advanced to candidacy Jan. 25, 2017, Dissertation defense May 2, 2018, **Ph.D. conferred Aug. 2018**, Dissertation Title: *“Effects of Salinity Gradients on the Long-Term Morphodynamic Evolution of Tide-Dominated Estuaries”*
- 2016 – 2019: Gisselle Guerra (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy Apr. 6, 2018, Dissertation defense Dec. 17, 2018, **Ph.D.**

**conferred May 2019**, Dissertation Title: *“Saltwater Intrusion in Estuaries of Different Climatic Regions”*

- 2016 – present: Christian A. Rojas Vasquez (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Maitane Olabarrieta), Advanced to candidacy Sept. 19, 2018, Dissertation Title: *“TBD”*
- 2017 – 2019: Braulio Juarez (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Arnoldo Valle-Levinson), Advanced to candidacy Sept. 18, 2018, Dissertation defense Jul. 23, 2019, **Ph.D. conferred Dec. 2019**, Dissertation Title: *“Estuarine Flows Driven by the Interaction of Winds and Density Gradients”*
- 2017 – 2020: Legna M. Torres Garcia (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Maitane Olabarrieta), Advanced to candidacy Aug. 24, 2018, Dissertation defense Jul. 17, 2020, **Ph.D. conferred Aug. 2020**, Dissertation Title: *“Hydrodynamics and Sediment Mobility in Degraded Barrier Coral Reefs”*
- 2018 – 2020: Viyaktha Hithaishi Hewageegana (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Alberto Canestrelli), Advanced to candidacy Mar. 9, 2020, Dissertation defense Nov. 4, 2020, **Ph.D. conferred Dec. 2020**, Dissertation Title: *“Improving the Modeling of Onshore Sandbar Migration and Beach Recovery”*
- 2020 – present: Nikole Ward (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Don Slinn), Advanced to candidacy Apr. 15, 2021, Dissertation defense Nov. 3, 2022, **Ph.D. conferred Dec. 2022**, Dissertation Title: *“An Investigation of Long-Term Sediment Transport Mechanisms”*
- 2021 – present: Gabrielle Quadrado (Ph.D. Student, Geography, Univ. of Florida, Advised by Dr. Katy Serafin), Advanced to candidacy Nov. 6, 2023, Dissertation Title: *“TBD”*
- 2023 – present: Saurav Shrestha (Ph.D. Student, Coastal Engr., Univ. of Florida, Advised by Dr. Nina Stark), Advanced to candidacy Mar. 5, 2024, Dissertation Title: *“TBD”*

**Member – Other Universities (1 Total - 1 Ph.D., 0 M.S.):**

- 2009 – 2012: Patrick Limber (Ph.D. Student, Nicholas School of the Environment, Duke University, Advised by Dr. A. Brad Murray), Advanced to candidacy Dec. 9, 2009, Thesis defense Aug. 28, 2012, Dissertation Title: *“Beach and Sea Cliff Dynamics as a Driver of Rocky Coastline Evolution”*

**International External Examiner - Doctoral Dissertations - Other Universities (2 Ph.D.):**

- 2017: Hironori Matsumoto (Ph.D. Student, University of Auckland, New Zealand, advised by Dr. Mark Dickson), Examination Report submitted Oct. 24, 2017, Dissertation Title: *“Shore profile development on rock coasts: an exploratory modelling study”*
- 2022: Raphael Louis Krier (Ph.D. Student, University of Otago, New Zealand, advised by Dr. Wayne Stephenson), Examination Report submitted Mar. 9, 2022, Dissertation Title: *“The Control of Planform Morphology on Two- Dimensional Wave Transformation Over Near- Horizontal Shore Platforms”*

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**UNDERGRADUATE STUDENT RESEARCH SUPERVISION**

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**As primary supervisor (13 Total):**

- 2004 – 2005: Brittany Smith, Supervisor of Undergraduate Independent Study Project, Department of Geology, Washington and Lee University, Project Title: *“Tracking Alongshore Sand Wave Migration on Munson Point Beach, Homer, Alaska”*
- 2004 – 2005: Ryan Coppersmith, Supervisor of Undergraduate Independent Study Project, Department of Geology, Washington and Lee University, Project Title: *“Examinations of Sea Cliffs near Homer, Alaska”*

2006 – 2007: Luke Gommermann, Supervisor of **Undergraduate Student Honors Thesis** and **University Scholars Program\***, Department of Geological Sciences, University of Florida, Thesis Title: *“Interannual Climatic Oscillations and Wave Climate: Correlations Along the Florida Atlantic Coast”*

2006 – 2007: George Juaristic, Undergraduate Independent Study Project, Department of Geological Sciences, University of Florida, Project Title: *“Influence of Tides on the Beaches of Homer, Alaska”*

2010 – 2011: Susan E. West, Independent Study and **Undergraduate Student Thesis**, Department of Geological Sciences, University of Florida, Thesis Title: *“Principal Component Analysis of Beach Profiles at Matanzas Inlet, Florida”*

2013 – 2014: Michael Waechter, Independent Study, Department of Geological Sciences, University of Florida, Project Title: *“Comparison of Channel Sinuosity in Coastal Marshes”*

2015, Jan. – May: Conner Cash, Independent Study, Department of Geological Sciences, University of Florida, Project Title: *“Physical Modeling of Ebb Tidal Delta Development”*

2015 – 2016: Schuyler Smith, Independent Study and **Undergraduate Student Honors Thesis**, Department of Geological Sciences, University of Florida, Project Title: *“Documenting Decadal Scale Shoreline Change Through Vegetation Line Proxies”*

2016 – 2017: Collin Brandt, Independent Study and **Undergraduate Student Honors Thesis**, Department of Geological Sciences, University of Florida, Project Title: *“Presence and Recurrence of Beach Cusps at NASA-Kennedy Space Center, Cape Canaveral, FL”*

2017 – 2018: Brian Kelly, Independent Study and **Undergraduate Student Honors Thesis**, Department of Geological Sciences, University of Florida, Project Title: *“Channel Sinuosity of Tidal Creeks of the Suwannee River Delta, Florida Gulf Coast”*

2019 – 2020: Austin Scheinkman, Independent Study, Department of Geological Sciences, University of Florida, Project Title: *“Beach Morphologic Response to Hurricane Dorian at Dania Beach, Florida”*

2023 – 2024: Mary Schneider, Independent Study, Department of Geological Sciences, University of Florida, Project Title: *“Historical Landform Change Near St. Augustine Inlet, Florida”*

2023 – present: Hailee Belcher, Supervisor of **Undergraduate Student Honors Thesis** and **University Scholars Program\***, Department of Geological Sciences, University of Florida, Project Title: *“Investigating the impact of sediment grain size on dune recovery along the Matanzas Inlet”*

2024 – present: Alessandra Zanardi, Independent Study, College of Design, Construction, and Planning, University of Florida, Project Title: *“GIS Analysis of Decadal Coastal Morphologic Change at NASA-Kennedy Space Center, Cape Canaveral, Florida”*

**As co-supervisor (1 Total):**

2010 – 2011: Bianca J. Maibauer, co-advised with Dr. John Jaeger, Independent Study and Undergraduate Student Thesis, Department of Geological Sciences, University of Florida, Thesis Title: *“Field Investigation of the Relationship between Berm Morphology, Beach Grain Size, and Wave Climate at Cape Canaveral, Florida”*

**As committee member (2 Total):**

2011 – 2012: Samantha Maticka, Committee Member of Undergraduate Honors Thesis and University Scholars Program\* (Supervisor: Dr. Arnoldo Valle-Levinson), Thesis title: *“The response of density gradient to river discharge in the James River estuary”*, Final Presentation: Apr. 18, 2012

2018 – 2019: Jacy Craig, Committee Member of Undergraduate Honors Thesis and University Scholars Program\* (Supervisor: Dr. Arnoldo Valle-Levinson), Thesis title: *“Generating Energy from Boat Wake Using Ocean Buoy Technology”*, Final Presentation: Apr. 17, 2019

## **HISTORY OF STUDENTS' HONORS, AWARDS, INTERNSHIPS**

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### **Graduate Students**

Matheus de Assis Bose, **2024**, Award for Best Technical Content, Poster Session, Network for Engineering With Nature (N-EWN) Partner Symposium, May 22, 2024, Vilano Beach, FL

Copeland Cromwell, **2024**, Awarded the U.S. Department of Defense (DoD), Science, Mathematics, and Research for Transformation (SMART) Scholarship, hosted by the Joint Airborne Lidar Bathymetry Technical Center of Expertise, U.S. Army Corps of Engineers – ERDC, at Kiln, MS

Matheus de Assis Bose, **2023**, Awarded the Oak Ridge Institute for Science and Education (ORISE) Internship to work with the U.S. Army Engineer Research and Development Center (ERDC) Coastal and Hydraulics Laboratory (CHL), focusing on using geospatial tools to improve inlet sediment management.

Juan Felipe Paniagua Arroyave, **2015**, Woods Hole Oceanographic Institution/ASBPA Nearshore Methods Field Internship, Martha's Vineyard, MA

Jessica Lovering, **2010**, Awarded the U.S. Department of Defense (DoD), Science, Mathematics, and Research for Transformation (SMART) Scholarship, hosted by the Naval Oceanographic Offices (NAVOCEANO) at the Stennis Space Center in Mississippi

## **TEACHING HISTORY**

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### **Lead Instructor**

#### 2003 - University of California at Santa Cruz

**Geomorphology (EART 140, Fall 2003)** – Quantitative undergraduate course in geomorphology covering large-scale Earth features, neotectonics, fault mechanics, constructional landforms, radiometric dating, geochronology, weathering, glacial/periglacial processes, hillslope geomorphology, fluid mechanics, erosional/depositional fluvial processes, coastal systems, and Quaternary climate.

#### 2004-2005 - Washington and Lee University

**Geomorphology (Geology 247, Fall 2004)** – Topics same as described above plus weekly field trips.

**Earthquakes and Volcanoes (Geology 195, Fall 2004)** – Undergraduate seminar/lecture course team-taught with Dr. Linda Lee Davis. Students introduced to principles of seismology and volcanism in context of plate tectonic theory. Students presented case studies of specific tectonic settings.

**General Geology with Field Emphasis (Geology 100, Winter 2005)** – Field-based undergraduate course in basic principles of geology. Students apply concepts / field techniques to local/regional lithology, stratigraphy, and structure.

**Oceanography (Geology 201, Winter 2005)** – General education course investigating ocean basin formation, ocean-atmosphere interactions, deep-water and nearshore currents, waves, tides, sedimentary processes, coastal geomorphology, and paleoceanography.

**Hydrology (Geology 340, Spring 2005)** – Field-based undergraduate course in practical hydrology. Students collected field data (precipitation, infiltration, streamflow, ect.), perform analyses, and interpret observations in the context of a local hydrologic budget.

#### 2007-present, University of Florida

**Data Analysis and Modeling in the Geosciences (GLY 6932, Spring 2007)** – Graduate level, team-taught with Dr. John Jaeger. MATLAB computing language used to solve geologic/ hydrologic/ oceanographic problems. Topics include basic statistics, time series analysis, geospatial analysis, dynamic systems modeling, and numerical solutions to differential equations.

**Physical Geology (GLY 2010, Fall 2007)** – Undergraduate course. Materials, structures, surface features of the earth and the processes that have produced them. Related laboratory demonstrations and experiences.

**Coastal Morphology and Processes (GLY 4734, Spring 2008, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2022, 2023, 2024, 2025)** - Examines the behavior of coastal processes and their influence on the origin/evolution of coastal landscapes. Undergraduate level course open to graduate students, with permission of instructor. Course includes exams, problem sets, an independent case study project with presentation, and field trips to Florida Atlantic and Florida Gulf coasts.

**Advanced Geomorphology (GLY 5705, Fall 2008, Fall 2010, Fall 2012, Fall 2014, Fall 2024)** – Quantitative graduate level course in surface processes and landscape evolution with an emphasis on the derivation of mathematical relationships that describe geomorphologic phenomena and the preparation of computer programs (scripts) to explore those relationships.

**Quantitative Methods in Earth Sciences (GLY 6862, Spring 2009, Fall 2013, 2016)** – Graduate level course. MATLAB computing language used to solve geologic/ hydrologic/ oceanographic problems. Topics include basic statistics, time series analysis, geospatial analysis, dynamic systems modeling, and numerical solutions to differential equations.

**Environmental and Engineering Geology (GLY 2030c, Fall 2009)** – Undergraduate course. Earth surface processes and the features they produce, soils, mass wasting, groundwater hydrology, environmental pollution, energy in the environment. Hands on practicum during laboratory section and field trips. Taught with an emphasis on quantitative problems encountered in geological engineering and environmental consulting.

**Geostatistics (GLY 6862, Fall 2011)** – Statistical methods applied to geological and environmental scientific problems, including univariate, bivariate, and time series analytical methods.

**Introduction to Marine Sciences (GLY 3083c, Spring 2013, Spring 2025)** – Undergraduate, interdisciplinary course, offered by a team of seven (7) tenured (or tenure-track) faculty at UF. My role is to cover “Physical Oceanography” in this course, wherein I present lectures on seasonal to interannual water level fluctuations, as well as tides, and ocean waves. I developed a laboratory exercise which gives the students practice in working with freely available oceanographic data to explore modern rates of sea level rise and storm surge effects on coastal communities.

**Geomorphology (GLY 4700, Fall 2015, 2017, 2018, 2019, 2021, 2022, 2023, 2024)** – Online undergraduate course in surface processes and landform generation/evolution, covering large-scale Earth features, neotectonics, fault mechanics, constructional landforms, radiometric dating, geochronology, weathering, glacial/periglacial processes, hillslope geomorphology, fluid mechanics, erosional/depositional fluvial processes, coastal systems, and Quaternary climate.

**Geological Sciences Seminar (GLY 6930, Fall 2022, Spring 2023, Fall 2023, Spring 2024, Fall 2024, Spring 2025)** – Graduate course consisting of weekly departmental seminars, delivered by scientists visiting the Department of Geological Sciences. Includes a significant writing component in the form of weekly summaries of seminar presentations. Required course for graduate students.

### **As Teaching Assistant**

Fall 2002: Geomorphology (UCSC)

Summer 2002, 2001: Geology Field Camp (UCSC)

Fall 2001: Hydrology (UCSC)

Fall 2000: Mathematics in Earth Sci. (UCSC)

Fall 1999: California Geology (UCSC)

Fall 1998: Earth History (Penn State)

Fall 1997: Earth History (Penn State)

Spring 1998: Physical Processes (Penn State)

Spring 1997: Planet Earth (Penn State)

Fall 1996: Physical Geology (Penn State)

## **Guest Lectures**

- 11/07/2019: GLY 2038-Sustainability and the Changing Earth, Topic: "Geomorphic Processes Along Barrier Islands and Inlets". Course Instructor: Dr. William Kenney (UF Geological Sciences).
- 10/30/2018: GLY 2038-Sustainability and the Changing Earth, Topic: "Geomorphic Processes Along Barrier Islands and Inlets". Course Instructor: Dr. William Kenney (UF Geological Sciences).
- 04/13/2018: GLY 4155c- Geology of Florida, Topic: "Uplift of the Florida Peninsula, Reversal of the St. Johns River and the Origin of Cape Canaveral". Course Instructor: Dr. Matthew Smith (UF Geological Sciences).
- 09/26/2017: GLY 2038-Sustainability and the Changing Earth, Topic: "Geomorphic Processes Along Barrier Islands and Inlets". Course Instructor: Dr. William Kenney (UF Geological Sciences).
- 03/27/2017: GLY 4155c-Geology of Florida, Topic: "Karst-Driven Isostatic Uplift of the Florida Carbonate Platform". Course Instructor: Dr. Liz Sreaton (UF Geological Sciences).
- 04/01/2015: GLY 4155c-Geology of Florida, Topic: "Understanding Coastal Evolution at Kennedy Space Center, Cape Canaveral, FL". Course Instructor: Dr. Matthew Smith (UF Geological Sciences)
- 04/14/2014: GLY 4155c-Geology of Florida, Topic: "Understanding Coastal Evolution at Kennedy Space Center, Cape Canaveral, FL". Course Instructor: Dr. Matthew Smith (UF Geological Sciences)
- 01/27/2014: FRC 6934-Natural Resources in a Changing Climate, Topic: "Mechanisms/Components of Sea Level Change". Course Instructor: Dr. Daniel McLaughlin (UF Forest Resources and Conservation)
- 04/13/2013: GLY 4155c-Geology of Florida, Topic: "Beaches of Florida and Longshore Sediment Transport". Course Instructor: Dr. Matthew Smith (UF Geological Sciences).
- 06/13/2012: GLY 4155c-Geology of Florida, Topic: "Coastal Geology of Florida". Course Instructor: Dr. Matthew Smith (UF Geological Sciences).
- 09/15/2009: GLY 4155c-Geology of Florida, Topic: "Using Geomorphology to Understand Florida's Uplift History". Course Instructor: Dr. Joseph Meert (UF Geological Sciences).
- 09/05/2006: GLY 4155c-Geology of Florida, Topic: "Geomorphology of Florida". Course Instructor: Dr. Guerry McClellan (UF Geological Sciences).

## **SERVICE**

### ***SERVICE TO THE PROFESSION***

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Journal reviewer of 44 manuscripts for 19 different scientific journals:

- (1) *Journal of Geophysical Research – Earth Surface* (Aug. 2005, Mar. 2015, Aug. 2017, Jun. 2019, Nov. 2023)
- (2) *Earth Surface Processes and Landforms* (May 2007, Mar. 2023)
- (3) *Marine Geology* (Nov. 2007, Jul. 2009, Jun. 2010)
- (4) *Continental Shelf Research* (Nov. 2007, Apr. 2011, Aug. 2022, Nov. 2024)
- (5) *International Journal of Climatology* (Sept. 2008, Jun. 2017)
- (6) *Shore & Beach* (Nov. 2008, Apr. 2009)
- (7) *Coastal Engineering* (Aug. 2009, Feb. 2010, Dec. 2011)
- (8) *Geology* (Aug. 2010, Dec. 2019)
- (9) *Computers and Geosciences* (Apr. 2011)
- (10) *Geosphere* (May 2011, Aug. 2015)
- (11) *Quaternary Research* (Feb. 2012)
- (12) *Geophysical Research Letters* (Apr. 2012, Jul. 2012, Dec. 2012, Nov. 2013, Jul. 2016, Dec. 2016)

- (13) *Journal of Coastal Research* (Jun. 2013, Oct. 2014)
- (14) *Geomorphology* (Mar. 2014, Feb. 2017, Apr. 2017, Aug. 2018)
- (15) *Geological Society of America Bulletin* (Aug. 2015)
- (16) *Oceanography* (May 2017)
- (17) *eSurf* (Jan. 2019)
- (18) *Nature Communications* (May 2019)
- (19) *Estuaries and Coasts* (Jun 2023)

Session Co-Convener for American Geophysical Union Fall Meeting, Dec. 2007, San Francisco, CA,  
Session Numbers: H33L, H34B, and H41B (Coastal Geomorphology and Morphodynamics)

Session Co-Convener for American Geophysical Union Ocean Sciences Mtg., Feb. 2010, Portland, OR,  
Session Numbers: GO45A, GO51A: (Geological Oceanography General Contributions)

Session Co-Convener for American Geophysical Union Fall Meeting, Dec. 2012, San Francisco, CA,  
Session Numbers: EP53F, EP54A (Coastal Geomorphology and Morphodynamics)

Proposal Reviewer and Panelist for National Science Foundation (Nov. 2008, Oct. 2012, Dec. 2015, Nov. 2020, Sept. 2021)

Reviewer for Cambridge University Press (Oct. 2005, Nov. 2007)

Reviewer of Textbook Accuracy for Pearson/Prentice Hall (Oct. 2009)

Core Member, Coastal Working Group, Community Surface Dynamics Modeling System since 2008

Member of Coastal Education and Research Foundation since 2008

Member of American Shore and Beach Preservation Association since 2006

Member Intl. Assoc. of Geomorphologists' Working Group on Rock Coast Geomorphology since 2004

Member of the American Geophysical Union since 1998

Member of the Geological Society of America since 1996

### **SERVICE TO THE UNIVERSITY**

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2022 – present: **Team Lead**, Center for Coastal Solutions Geospatial Group (manage all CCS PI's and researchers in terms of geospatial instrumentation collaborative needs).

2021 – 2022: **Proposal Reviewer** for UF Research Opportunity Seed Fund (ROSF) 2022: At the direct request of Associate Dean Brian Harfe, I reviewed 21 seed-fund proposals, on behalf of the College (CLAS), submitted for the 2022 RFP from the University of Florida Office of Research. My reviews were summarized in evaluations of the proposals into 4 “fundability” categories, that determined which 4 proposals would be submitted to the University-wide competition.

2014, Feb. 11, **Moderator**, 2014 University of Florida Water Institute Symposium Session: “Impact of Changing Drivers 2”, Reitz Union Ballroom D, University of Florida, Gainesville, FL

2013 – 2014: **Member of Planning Committee**, 2014 University of Florida Water Institute Symposium: “Sustainable Water Resources - Complex Challenges, Integrated Solutions” (05/23/2013–02/12/2014)

2011 – present: **Faculty Advisor** for University of Florida Chapter of the Surfrider Foundation

2010 – present: **Affiliate Faculty**, FCI (Florida Climate Institute), Univ. of Florida and Florida State Univ.

2009 – 2011: **Faculty Senator**, University of Florida Faculty Senate, Representative from Natural, Physical & Mathematical Sciences, Seat G: Term 2009-2011

2008 – 2017: **Marshal**, Commencement Ceremonies, Univ. of Florida (Spr. 2008, Spr. 2010, Spr. 2013, Spr. 2014, Spr. 2017)

2008 – present: **Affiliate Faculty**, SNRE (School of Natural Resources and Environment), Univ. of Florida



2007 – present: **Affiliate Faculty**, Water Institute, Univ. of Florida

2007 – present: **Affiliate Faculty**, LUECI (Land Use and Environmental Change Institute), Univ. of Florida

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### **SERVICE TO THE DEPARTMENT**

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#### **Committee Service**

2023 – present: **Member of Department Space Committee**, Department Geological Sciences, University of Florida – in charge of assigning offices to graduate students, post-docs, and visitors in our department

2023 – present: **Member of Merit Review Committee**, Department Geological Sciences, University of Florida

2022 – 2023: **Member of Search Committee**, Faculty Hydrogeology Hire, Department of Geological Sciences, University of Florida, Candidate Hired: Dr. Seonkyoo Yoon

2022 – present: **Seminar Coordinator**, Department of Geological Sciences, University of Florida

2021 – 2022: **Member of Search Committee**, New Department Chair, Department of Geological Sciences, University of Florida, Candidate Hired: Dr. Ellen Martin

2020 – 2022: **Chair of Merit Review Committee**, Department Geological Sciences, University of Florida

2019 – 2020: **Chair of Search Committee**, Visiting Assistant Professor in Computational Geodynamics Hire, Department of Geological Sciences, University of Florida, Candidate Hired: Dr. Rene Gassmoeller

2018 – 2019: **Chair of Search Committee**, Visiting Assistant Professor Hire, Department of Geological Sciences, University of Florida, Candidate Hired: Dr. Anthony Pivarunas

2017 - 2023: **Faculty Advisor for Student Geology Clubs**, Department of Geological Sciences, University of Florida

2017 – 2019: **Member of Merit Review Committee**, Department Geological Sciences, University of Florida

2017 – 2018: **Member of Search Committee**, Faculty Geophysics Hire, Department of Geological Sciences, University of Florida, Search converted to alternate hire not in geophysics

2014 – 2015: **Member of Search Committee**, Faculty Informatics Institute Hire, Department of Geological Sciences, University of Florida, Candidate Hired: Dr. Alessandro Forte

2011 – 2012: **Display Contributor**, Department Geological Sciences Outreach Program: “*Geosciences Day*” (11/16/2011)

2009 – present: **Co-Chair Awards Committee**, Department of Geological Sciences, University of Florida

2008 – present: **Display Coordinator**, Department Geological Sciences Outreach Program: “*Can You Dig It?*” Geology Day/Night at the Florida Natural History Museum (14 events: 3/27/2008, 3/19/2009, 3/20/2010, 4/16/2011, 3/17/2012, 3/16/2013, 3/15/2014, 3/14/2015, 3/12/2016, 3/18/2017, 3/17/2018, 3/16/2019, 4/19/2022, 4/1/2023, 4/6/2024), “The Work of Water” Display

2008 – 2009: **Member of Web Page Committee**, Department of Geological Sciences, University of Florida

2007 – 2008: **Member of Search Committee**, Faculty Geodynamics Hire, Department of Geological Sciences, University of Florida, Candidate Hired: Dr. Mark Panning

2007 – present: **Faculty Liaison to the Science Library**, Department of Geological Sciences, University of Florida

2007 – 2008, **Faculty Advisor for Student Geology Clubs**, Department of Geological Sciences, University of Florida

### ***Colleague and Junior Faculty Mentorship Service***

**Member, Mentoring Committee for Early Career Faculty:** for Dr. Amy Williams (2021-23 academic year): In this role, I meet regularly with the pre-tenure candidate, as a committee and individually, if requested, to offer advice on navigating ECF responsibilities.

**Member, Mentoring Committee for Early Career Faculty:** for Dr. Rene Gassmoeller (2021-23 academic year): In this role, I meet regularly with the pre-tenure candidate, as a committee and individually, if requested, to offer advice on navigating ECF responsibilities.

**Peer Teaching Reviewer:** for GLY 2010 *Physical Geology*, taught by Dr. Matt Smith during the Spring 2010 semester.

**Peer Teaching Reviewer:** for GLY 1000 *Exploring the Earth Sciences*, taught by Dr. Jim Vogl during the Spring 2011 semester.

**Peer Teaching Reviewer:** for GLY 2010C *Physical Geology*, taught by Dr. Matt Smith during the Spring 2015 semester.

**Peer Teaching Reviewer:** for GLY 6932 *Stable Isotope Geochemistry*, taught by Dr. Andrea Dutton during the Spring 2016 semester.

**Peer Teaching Reviewer:** for GLY 2038 *Sustainability and the Changing Earth*, taught by Dr. William Kenney during the Fall 2018 semester.

**Peer Teaching Reviewer:** for GLY 3105C *Evolution of Earth and Life in North America*, taught by Dr. Amy Williams during the Fall 2021 semester.

**Peer Teaching Reviewer:** for GLY 4930/6932 *Scientific Data and Software Skills*, taught by Dr. Rene Gassmoeller during the Spring 2022 semester.

**Peer Teaching Reviewer:** for GLY 4930/6932 *Introduction to Simulation and Computational Techniques for Earth Sciences*, taught by Dr. Juliane Dannberg during the Fall 2022 semester.

**Peer Teaching Reviewer:** for GLY 6932 *Demystifying the Proposal Writing Process*, taught by Dr. Robert Hatfield during the Fall 2023 semester.

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### ***SERVICE TO THE COMMUNITY***

**Green Team Coordinator of the Parent Teacher Association (PTA), 2018 – 2019**, JJ Finley Elementary School (now named Carolyn Beatrice Parker Elementary School), Gainesville, FL. Responsibilities included: organizing school clean ups, spearheading a plan to expand bicycle-commuting infrastructure for students, and leading the recycling and trash pick-up for the football gameday parking fundraiser.

**Vice President of the Parent Teacher Association (PTA), 2018 – 2019**, JJ Finley Elementary School (now named Carolyn Beatrice Parker Elementary School), Gainesville, FL. Responsibilities included: leading and organizing all family evening functions at the school that connected families to school staff, including movie night, international food night, Finley spring fair, and the family cookout.

**President of the Parent Teacher Association (PTA), 2019 – 2020**, JJ Finley Elementary School (now named Carolyn Beatrice Parker Elementary School), Gainesville, FL. Responsibilities included: managing a \$72k annual fundraiser (football gameday parking), maintaining communication between parents, teachers, and school administrators, leading monthly meetings, and overseeing school functions that connected families to school staff.

**Past President of the Parent Teacher Association (PTA), 2020 – 2022**, JJ Finley Elementary School (now named Carolyn Beatrice Parker Elementary School), Gainesville, FL. Responsibilities included: serving in an advisory role to the current president and vice president, sharing advice where relevant from my time in office.