

Dr. Katherine (Katy) Serafin

University of Florida
Department of Geography
College of Liberal Arts and Sciences
3141 Turlington Hall
Gainesville, FL 32611 USA

<https://geog.ufl.edu/directory/dr-katy-serafin/>

ORCID: 0000-0002-4127-9787

Phone: 352-294-9052 | Email: kserafin@ufl.edu

Research Interests

coastal hazards; compound events; hazard adaptation and resilience; extreme value analysis; probabilistic modeling; sea level change; risk analysis

Education

- 2018 Ph.D. Oregon State University
Ocean, Earth, and Atmospheric Sciences
Dissertation Title: Hydrodynamic and Morphologic Controls on Extreme Coastal Total Water Levels Across Regional and Local Scales
Advisor: Peter Ruggiero
- 2016 Graduate Certificate in College and University Teaching, Oregon State University
- 2014 M.S. Oregon State University
Ocean, Earth, and Atmospheric Sciences
Thesis Title: Simulating extreme total water levels using a time-dependent, extreme value approach
Advisor: Peter Ruggiero
- 2008 B.A. Connecticut College
Environmental Studies (cum laude, with honors)
Honors Thesis: Seasons, Storms and Seawalls: A Comparison of Constrained and Unconstrained Beaches in Groton, CT; A study considering the impacts of seawalls on beach geomorphology
Advisor: Douglas Thompson

Professional Appointments

Position	Institution / Organization	Dates
Associate Professor	Department of Geography, University of Florida	Aug 2026 – present
Assistant Professor	Department of Geography, University of Florida	Aug 2019 – Aug 2026
Postdoctoral Researcher	Department of Geophysics, Stanford University	Feb 2018 – Aug 2019
Data Analyst, Jacobs Technology, Inc.	Contracted to the U.S. Geological Survey, St. Petersburg Coastal and Marine Science Center	July 2008 – July 2010

Honors and Awards

Goodwin-Niering Center's Alumni Environmental Achievement Award	Connecticut College	2026
UF Water Institute Early Career Faculty Fellow	University of Florida	2024 – 2027
Florida Climate Institute Early Career Faculty Fellow	University of Florida	2021 – 2024
Vice Provost Award of Excellence; Envision Tillamook Coastal Futures Project	Oregon State University	2017
Outstanding Student Paper Award; Natural Hazards	American Geophysical Union	2016
Best Oral Presentation	Pacific Northwest Climate Conference	2013
Richard D. Mathews Memorial Scholarship	Oregon State University	2013
Graduate Travel Award	Oregon State University	2013
Oregon Lottery Scholarship	Oregon State University	2010
Phi Beta Kappa Alumni Graduate Scholarship	Delta of Connecticut Chapter	2010

Grants and Contracts

Serafin, K.A. (PI), CAREER: Characterizing drivers, patterns, and probability of prolonged coastal flood hazards across space and time. National Science Foundation, 2541297; 07/2026 - 06/2031, \$600,203

Serafin, K.A. (PI), and Braswell, A. (Co-PI), A salty future: Understanding ecosystem change and land management along Florida's Big Bend Region. UF Gulf Scholars Program Place-Based Learning Grant (internal), \$14,000

Serafin, K.A. (PI), Dusek, G. (Co-PI), and Palmsten, M.L. (Co-PI), The impact of local-scale variability on regional patterns of total water levels. National Oceanic and Atmospheric Administration, Earth System Science and Modeling Research for Coastal Inundation, NA24OARX431C0023; 09/2024 - 08/2027, \$544,667

Serafin, K.A. (PI), Wahl, T. (Co-PI), and Jane, R.A. (Co-PI), How colliding forces change: The influence of geography on flood transition zones. U.S. Coastal Research Program/U.S. Engineer Research & Development Center, W912HZ-24-2-0058; 09/2024-07/2027, \$391,572

Goodison, C. (PI) and Serafin, K.A. (Co-PI), Hernando Vulnerability Assessments. Tampa Bay Regional Planning Council, Florida Department of Environmental Protection; 01/2024 - 02/2025, \$12,500 (\$6,647 to Serafin)

Goodison, C. (PI) and Serafin, K.A. (Co-PI), Citrus Vulnerability Assessments. Tampa Bay Regional Planning Council, Florida Department of Environmental Protection; 01/2024 - 02/2025, \$12,500 (\$6,647 to Serafin)

Goodison, C. (PI) and Serafin, K.A. (Key Person), Tampa Bay Regional Inundation Coordination (TBRIC): Creating a Unified Approach and Inundation Models to Support Local Assessments. Tampa Bay Regional Planning Council, Florida Department of Environmental Protection; 01/2023 - 06/2023, \$25,000

Wahl, T. (PI), and Serafin, K.A. (Co-PI), When forces collide: Developing a scalable framework for compound flood risk assessment. U.S. Coastal Research Program/U.S. Army Corps of Engineers, W912HZ-20-2-0052; 09/2020 - 12/2022, \$376,477 (UCF) (\$163,838 to Serafin/UF)

Refereed Publications

* indicates student author with direct mentoring relationship; † indicates equal contribution

- [1] Stockdon, H.F., Straub, J.A., Brown, J.A. Elko, N., Dusek, G., Brodie, K.L., Hannides, A.K., Mandel, T.L., Palmsten, M.L., Puleo, J.A., Ruggiero, P., **Serafin, K.A.**, Siders, A.R., Tritinger, A.S., and Wengrove, M.E., 2026. The future of coastal processes research, Part 1: A community-driven vision for the next decade of coastal science, *Shore and Beach*, 94(2), pg 7 - 34.
- [2] Dusek, G., Straub, J.A., Brown, J.A. Elko, N., Stockdon, H.F., Brodie, K.L., Hannides, A.K., Mandel, T.L., Palmsten, M.L., Puleo, J.A., Ruggiero, P., **Serafin, K.A.**, Siders, A.R., Tritinger, A.S., and Wengrove, M.E., 2026. The future of coastal processes research, Part 2: State of the science, *Shore and Beach*, 94(2), pg 35 - 57.
- [3] Quadrado, G.P.* and **Serafin, K.A.**, 2026. Rising impact hours on sandy beaches linked to total water level variability along US coastlines, *Coastal Engineering*, 206, 104963, doi:10.1016/j.coastaleng.2026.104963.
- [4] Quadrado, G.P.* and **Serafin, K.A.**, 2025. Total water level driving processes influence the potential for coastal change along United States Coastlines, *Cambridge Prisms: Coastal Futures*, 3, e28, doi:10.1017/cft.2025.10018.
- [5] MacKie, E.J.†, Millstein, J.†, and **Serafin, K.A.**, 2024. 47 Years of Large Antarctic Calving Events: Insights From Extreme Value Theory, *Geophysical Research Letters*, 51(23), doi:10.1029/2024GL112235
- [6] Amanambu, A. C., Mossa, J., **Serafin, K.A.**, and Binford, M. 2024. Hydrological drought and floodplain disconnectivity: quantifying flow thresholds in a large coastal plain river, *Hydrological Sciences Journal*, 69(16), doi:10.1080/02626667.2024.2410908
- [7] Quadrado, G.P.* and **Serafin, K.A.**, 2024. The Timing, Magnitude, and Relative Composition of Extreme Total Water Levels Vary Seasonally along the U.S. Atlantic Coast, *Journal of Geophysical Research: Oceans*, 129(9), doi:10.1029/2023JC020557
- [8] **Serafin, K.A.**, Koseff, J.R., Ouyang, D., and Suckale, J., 2024. Moving from total risk to community-based risk trajectories increases transparency and equity in flood risk mitigation planning along urban rivers, *Environmental Research Letters*, 19(6), doi:10.1088/1748-9326/ad3c58
- [9] Bowers, C.*, **Serafin, K.A.**, and Baker, J.W., 2024. Uncovering Drivers of Atmospheric River Flood Damage using Interpretable Machine Learning, *Natural Hazards Review*, 25(3), 04024022, doi:10.1061/NHREFO.NHENG-1995
- [10] Bowers, C.*, **Serafin, K.A.**, and Baker, J.W., 2024. Temporal Compounding increases economic impacts of atmospheric rivers in California, *Science Advances*, doi:10.1126/sciadv.adi7905
- [11] Bowers, C.*, **Serafin, K.A.**, Tseng, K.C., and Baker, J.W., 2023. Atmospheric river sequences as indicators of hydrologic hazard in historical reanalysis and GFDL SPEAR future climate projections, *Earth's Future*, 11(2), doi:10.1029/2023EF003536
- [12] Huguenin, C.N.*, **Serafin, K.A.**, and Waylen, P.R., 2023. A spatio-temporal analysis of the role of climatic drivers influencing extreme precipitation events in a Costa Rican basin, *Weather and Climate Extremes*, 42, doi:10.1016/j.wace.2023.100602
- [13] Hsu, C.E., **Serafin, K.A.**, Yu, X., Hegermiller, C., Warner, J.C., and Olabarrieta, M., 2023. Total water levels along the U.S. East Coast during three along-shelf propagating tropical cyclones: relative contribution of storm surge and wave runup, *Natural Hazards and Earth System Sciences*, doi:10.5194/nhess-23-3895-2023
- [14] Jane, R. A., Malagón-Santos, V., Rashid, M.M., Doebele, L., Wahl, T., Timmers, S.R.*, **Serafin, K.A.**, Schmied, L. and Lindemer, C., 2022. A hybrid framework for rapidly locating transition zones: a

comparison of event- and response-based return water levels in the Suwannee River FL, *Water Resources Research*, doi:10.1029/2022WR032481

- [15] Juárez, B., Stockdon, S., **Serafin, K.A.**, and Valle-Levinson, A., 2022. Compound flooding in a subtropical estuary caused by Hurricane Irma 2017, *Geophysical Research Letters*, doi:10.1029/2022GL099360
- [16] Bowers, C.*, **Serafin, K.A.**, Baker, J.W., 2022. A Performance-Based Approach to Quantify Atmospheric River Flood Risk, *Natural Hazards and Earth System Sciences*, 22(4), 1371-1393, doi:10.5194/nhess-22-1371-2022
- [17] Shope, J.B., Erikson, L.H., Barnard, P.L., Storlazzi, C.D., **Serafin, K.A.**, Doran, K., Stockdon, H.F., Reguero, B., Mendez, F., Castandeno, S., Cid, A., Cagigal, L., Ruggiero, P., 2022. Characterizing storm-induced coastal change hazards along the United States West Coast, *Scientific Data*, 9(1), 1-20, doi:10.1038/s41597-022 01313-6
- [18] Kasmalkar, I.G*., **Serafin, K.A.**, and Suckale, J., 2021. Integrating urban traffic models with coastal flood maps to quantify the resilience of traffic systems to episodic coastal flooding, *MethodsX*, 8, 101483, doi:10.1016/j.mex.2021.101483
- [19] Bick, I.A.*, Santiago Tate*, A.F., **Serafin, K.A.**, Miltenberger, A., Evans, M., Ortolano, L., Ouyang, D., and Suckale, J., 2021. Rising Seas, rising inequity? Communities at risk in the San Francisco Bay Area and implications for adaptation policy, *Earth's Futures*, doi:10.1029/2020EF001963
- [20] Mills, A.K., Ruggiero, P., Bolte, J.P., **Serafin, K.A.**, and Lipiec, E., 2021. Quantifying uncertainty in exposure to coastal hazards associated with both climate change and adaptation strategies: A US Pacific Northwest alternative coastal futures analysis, *Water*, 3(4), 545. doi:10.3390/w13040545
- [21] Conlin, M.*, **Serafin, K.A.**, and Ruggiero, P., 2020. Do something! A daring ocean rescue by coastal fieldworkers on the Oregon coast, *Journal of Coastal Research: Stories from the Field* (special issue), 101(sp1), pp. 377-382. doi:10.2112/JCR SI101-067.1
- [22] Kasmalkar, I.G.*†, **Serafin, K.A.**†, Miao, Y., Bick, I.A., Ortolano, L., Ouyang, D., and Suckale, J., 2020. When floods hit the road: Resilience to flood-induced community disruption in the San Francisco Bay area and beyond, *Science Advances*, 6(32). doi:10.1126/sciadv.aba2423
- [23] **Serafin, K.A.**, Ruggiero, P., Parker, K.A., and Hill, D.F., 2019b. What's streamflow got to do with it? Understanding contributions to extreme total water levels along an ocean-to-river gradient, *Natural Hazards and Earth System Science*, 19(7), pp. 1415-1431. doi:10.5194/nhess-19-1415-2019
- [24] **Serafin, K.A.**, Ruggiero, P., Barnard, P.L. and Stockdon, H.F., 2019a. The influence of shelf bathymetry and beach topography on extreme total water levels: Linking large-scale changes of the wave climate to local coastal hazards, *Coastal Engineering*, 150, pp. 1-17. doi:10.1016/j.coastaleng.2019.03.012
- [25] Parker, K., Ruggiero, P., **Serafin, K.A.**, and Hill, D.F., 2019. Emulation as an approach for rapid estuarine modeling, *Coastal Engineering*, 150, pp. 79-93. doi:10.1016/j.coastaleng.2019.03.004
- [26] Cohn, N., Ruggiero, P., García-Medina, G., Anderson, D., **Serafin, K.A.**, and Biel, R., 2019. Environmental and morphologic controls on wave-induced dune response, *Geomorphology*, 329, pp. 108 - 128. doi:10.1016/j.geomorph.2018.12.023
- [27] Erikson, L.H., Espejo, A., Barnard, P.L., **Serafin, K.A.**, Hegermiller, C.A., O'Neill, A., Ruggiero, P., and Limber, P.W., 2018, Identification of storm events and contiguous coastal sections for deterministic modeling of extreme coastal flood events in response to climate change, *Coastal Engineering*, 140, pp. 316-330. doi:10.1016/j.coastaleng.2018.08.003
- [28] Mills, A.K., Bolte, J.P., Ruggiero, P., **Serafin, K.A.**, Lipiec, E., Corcoran, P., Stevenson, J., Zanocco, C. and Lach, D., 2018. Exploring the impacts of climate and policy changes on coastal community resilience: Simulating alternative future scenarios, *Environmental Modelling & Software*, 109, pp. 80-92. doi:10.1016/j.envsoft.2018.07.022
- [29] Lipiec, E., Ruggiero, P., Mills, A., **Serafin, K.A.**, Bolte, J., Corcoran, P., Stevenson, J., Zanocco, C. and Lach, D., 2018. Mapping out climate change: Assessing how coastal communities adapt using

alternative future scenarios, *Journal of Coastal Research*, 34(5), pp. 1196–1208.
doi:10.2112/JCOASTRES-D-17-00115.1

- [30] **Serafin, K.A.**, Ruggiero, P. and Stockdon, H.F., 2017. The relative contribution of waves, tides, and nontidal residuals to extreme total water levels on US West Coast sandy beaches, *Geophysical Research Letters*, 44(4), pp. 1839–1847. doi:10.1002/2016GL071020
- [31] Barnard, P.L., Hoover, D., Hubbard, D.M., Snyder, A., Ludka, B.C., Allan, J., Kaminsky, G.M., Ruggiero, P., Gallien, T.W., Gabel, L. and McCandless, D., Weiner, H.M., Cohn, N., Anderson, D.L., Serafin, K.A., 2017. Extreme oceanographic forcing and coastal response due to the 2015–2016 El Niño, *Nature Communications*, 8, pp. 14365. doi:10.1038/ncomms14365
- [32] **Serafin, K.A.** and Ruggiero, P., 2014. Simulating extreme total water levels using a time-dependent, extreme value approach, *Journal of Geophysical Research: Oceans*, 121(5), 925–938. doi:10.1002/2014JC010093
- [33] Chavas, D., Yonekura, E., Karamperidou, C., Cavanaugh, N. and **Serafin, K.A.**, 2012. US hurricanes and economic damage: Extreme value perspective, *Natural Hazards Review*, 14(4), pp. 237–246. doi:10.1061/(ASCE)NH.1527-6996.0000102
- [34] **Serafin, K.A.**, Campbell C., and Thompson, D.M., 2011. A Comparison of Constrained and Unconstrained Beaches in Groton, CT, *The Northeastern Geographer*. Vol. 3,

Conference Proceedings

- [1] Wahl, T., **Serafin, K.A.**, Jane, R.A., Malagón-Santos, V., Rashid, M.M., Doebele, L., Timmers, S.R., Schmied, L. and Lindemer, C., 2023. When forces collide: Developing a scalable framework for compound flood risk assessment, *Coastal Sediments 2023: The Proceedings of the Coastal Sediments 2023*, doi:10.1142/9789811275135_0263
- [2] Quadrado, G.P. *, and **Serafin, K.A.**, 2022. What drives extreme events? Evaluating the major contributors to total water levels along the US Atlantic Coast. In *Coastal Engineering Proceedings*, (37), 50-50.
- [3] Ruggiero, P., Bolte, J., Evans-Wilent, J., Parker, K., Schwartz, C., **Serafin, K.A.**, and Stevenson, J., 2018. Envisioning coastal futures: exploring alternative scenarios for the US Pacific Northwest coastline. In *Coastal Engineering Proceedings*, (36), 11-11.

Book Chapters

- [1] Wernette, P.A and **Serafin, K. A.**, 2026. Remote Sensing and Big Data Applications in Coastal Environments. In E. Bunting, J. Southworth, C. Gibbes, & H. Herrero (Eds.), *Remote Sensing, Big Data, and GeoAI: Exploring Applications with Geospatial Insights*, pp. 279-300. Elsevier.
- [2] Jane, R., Santiago-Collazo, F.L., **Serafin, K.A.**, Gori, A., Peña, F., and Wahl, T., 2025. Compound hazards during tropical cyclones. In G. Villarini, G. A. Vecchi, & E. Scoccimarro (Eds.), *Tropical Cyclones and Associated Impacts*, pp. 95-119. Elsevier.

Other Publications

- [1] Ruggiero, P., **Serafin, K.A.**, Parker, K., and Hill, D.F, 2019. Assessing the Impacts of Coastal Flooding on Treaty of Olympia Infrastructure. A report to the Quinault Indian Nation, Hoh Tribe, and Quileute Tribe. Oregon Climate Change Research Institute, Corvallis, OR.
- [2] Talebi, B., Kaminsky, G.M., Ruggiero, P., Levkowitz, M., McGrath, J., **Serafin, K.A.**, and McCandless, D., 2017, Assessment of coastal erosion and future projections for North Cove, Pacific County, Washington State Department of Ecology, Publication no. 17-06-010.
- [3] **Serafin, K.A.**, Ruggiero, P., Stockdon, H.F., Barnard, P., and Long, J.W., 2016, A Framework for Characterizing Storm-Induced Coastal Change Hazards Along the US West Coast, White Paper co-authored by Oregon State University and the USGS.

- [4] Allan, J.C., Ruggiero, P., Cohn, N., O'Brien, F.E., **Serafin, K.A.**, Roberts, J.T., and Stimely, L., 2015, Coastal Flood Hazard Study, Curry County, Oregon, Oregon Department of Geology and Mineral Industries Open-File Report O-15-07.
- [5] Allan, J.C., Ruggiero, P., Cohn, N., Garcia, G., O'Brien, F.E., **Serafin, K.A.**, and Stimely, L.L., and Roberts, J.T., 2015, Coastal Flood Hazard Study, Lincoln County, Oregon, Oregon Department of Geology and Mineral Industries Open-File Report O-15-06.
- [6] Stockdon, H.F., Doran, K.S., and **Serafin, K.A.**, 2010, Coastal Change on Gulf Island National Seashore during Hurricane Gustav: West Ship, East Ship, Horn, and Petit Bois Islands, U.S. Geological Survey Open-File Report 2010-1090, 18p., online only.
- [7] Doran, K.S., Stockdon, H.F., Plant, N.G., Sallenger, A.H., Guy, K., and **Serafin, K.A.**, 2009, Hurricane Gustav: Observations of Coastal Change: U.S. Geological Survey Open-File Report. 2009-1279
- [8] Doran, K.S., Plant, N.G., Stockdon, H.F., Sallenger, A.H., and **Serafin, K.A.**, 2009, Hurricane Ike: Observations of Coastal Change: U.S. Geological Survey Open-File Report 2009-1061.

Invited Talks

Serafin, K.A., Wahl, T., and Jane, R.A., When forces change: The influence of geography on flood transition zones. Virtual Webinar to U.S. Coastal Research Program Monthly Meeting, May 2026

Serafin, K.A., Jean Thomas Lambert '45 Keynote Opening Lecture: How Waves, Tides, and Rivers Combine to Shape Coastal Hazards – and Why It Matters. 2026 Lear-Conant Environmental Symposium, Sea Level Rise: Measurement, Understanding, Adaptation, April 2026

Serafin, K.A., Toward improved flood-risk planning: Hybrid modeling of compound flood hazards in coastal river systems. 10th Biennial UF Water Institute Symposium, February 2026

Serafin, K.A., Koseff, J.R., Ouyang, D., and Suckale, J, Advancing Transparency in Urban Flood Risk Mitigation Planning Through Community-Based Risk Trajectories. American Geophysical Union Meeting, December 2025

Serafin, K.A., Wahl, T., and Jane, R.A., When forces change: The influence of geography on flood transition zones. Virtual Webinar to U.S. Coastal Research Program Monthly Meeting, October 2025

Serafin, K.A., When forces collide: Building resilience to compound flooding hazards. Distinguished Scholar Seminar, UF Water Institute, April 2025

Serafin, K.A., Total water level relative composition and its influence on the potential for coastal change across the continental United States. Virtual Webinar to Cascadia CoPe Hub Seminar, January 2025

Serafin, K.A., Coastal community resilience in the face of increased flooding and sea level change. U.S. Coastal Research Program Decadal Visioning Workshop, June 2024

Serafin, K.A., Extreme sea levels and coastal hazards. Virtual webinar to Managing Stormwater in a Changing Florida Panhandle 2024, May 2024

Serafin, K.A., When forces collide: Integrating statistical and physical models to improve understanding of compound flooding hazards. UF Geological Sciences Seminar Series, April 2024

Serafin, K.A., Sea level rise and coastal hazards. 9th Annual UF Climate Communications Summit, January 2024

Serafin, K.A., How the timing and relative contribution of extreme coastal water levels vary seasonally across the US Atlantic coast. Coastal Carolina CMWS Seminar Series, September 2023

Serafin, K.A., Evaluating the relative contribution of individual processes to extreme total water levels. U.S. Geological Survey Internal Seminar, June 2023

Serafin, K.A. and Wahl, T., When forces collide: Developing a scalable framework for compound flood risk assessment. Virtual Webinar to U.S. Coastal Research Program Monthly Meeting, April 2023

Serafin, K.A., Timmers, S.R., Jane, R.A., Rashid, M.M., Tomko, B., Schmied, L., and Lindemer, C. Identifying compounding flood drivers along the Savannah River using data-driven and hybrid modeling approaches. Georgia Water Resources Conference. March 2023

Serafin, K.A., Keynote Presentation: Building resilience to coastal extreme events in a changing climate, Young Coastal Scientists and Engineers Conference - Americas, November 2022

Serafin, K.A., Flooding and erosion hazards in a changing climate, Florida Sea Grant Climate Change Work Action Group Quarterly Meeting, Virtual Presentation, October 2022

Serafin, K.A. and Wahl, T., When forces collide: Developing a scalable framework for compound flood risk assessment. Virtual Webinar to U.S. Coastal Research Program Monthly Meeting, June 2022

Serafin, K.A., Coastal Extreme Events and Climate. Climate and Ocean: Variability, Predictability and Change (CLIVAR) Phenomena, Observations, and Synthesis (POS) Panelist, Virtual Presentation, July 2020

Serafin, K.A., Compound flood risk in a changing climate. The Water, Wetlands, and Watersheds Seminar, University of Florida, September 2019

Serafin, K.A., Enabling science-based resilience planning in a changing climate. University of Florida, February 2019

Serafin, K.A., Enabling science-based resilience planning in a changing climate. Rice University, February 2019

Serafin, K.A., Coastal flooding processes in Washington state. Webinar to the Washington Coastal Hazards Resilience Network, February 2018

Serafin, K.A. and Mills, A.K. Envisioning coastal futures. Oregon King Tide End of Year Party, Lincoln City, OR, February 2015

Serafin, K.A. and Ruggiero, P. Simulating extreme total water level events using a time-dependent, extreme value approach. IH Cantabria, Santander, Spain, April 2013

Serafin, K.A. and Ruggiero, P. The role of sea level rise and increased storminess in Pacific Northwest coastal change and flood hazards. Oregon Coast Aquatic and Marine Science Partnership (OCAMP), Newport, OR, May 2012

Conference Abstracts

** indicates student author; + indicates presenting author if not first-author*

Serafin, K.A., Adhau, A., Razavi-Arab, A., Dusek, G., and Palmsten, M.L. How Local Variability Shapes Regional Total Water Levels. American Shore and Beach Preservation Association (ASBPA) National Coastal Conference, Atlantic City, NJ, October 2026

Adhau, A.*, Serafin, K.A., Dusek, G., and Palmsten, M.L. Spatial Variability of Wave Runup Along the U.S. Atlantic and Gulf Coasts. Young Coastal Scientists and Engineers Conference – Americas, Vancouver, British Columbia, Canada, August 2026

Razavi-Arab, A., Serafin, K.A., Dusek, G., and Palmsten, M.L. Assessing the Performance of NOAA's Coastal Ocean Reanalysis (CORA) Waves against National Data Buoy Center Observations Along U.S. Gulf and East Coasts. Young Coastal Scientists and Engineers Conference – Americas, Vancouver, British Columbia, Canada, August 2026

Straub, J., Dusek, G., Brodie, K.L., Brown, J., Elko, N., Hannides, A., Kotowicz, D., Mandel, T., Palmsten, M.L., Puleo, J.A., Ruggiero, P., Serafin, K.A., Siders, A.R., Stockdon, H., Tritinger, A.S., and Wengrove, M. The Future of Coastal Processes Research: A report from the US Coastal Research Program. Ocean Sciences Annual Meeting, Glasgow, Scotland, February 2026

Serafin, K.A., Toward Improved Flood-Risk Planning: Hybrid Modeling of Compound Flood Hazards in River Systems. 10th Biennial UF Water Institute Symposium, Gainesville, FL, February 2026

Straub, J., Dusek, G., Brodie, K. L., Brown, J., Elko, N., Hannides, A., Kotowicz, D., Mandel, T., Palmsten, M.L., Puleo, J.A., Ruggiero, P., Serafin, K.A., Siders, A.R., Stockdon, H., Tritinger, A.S., and Wengrove, M. The Future of Coastal Processes Research: A report from the US Coastal Research Program. 106th American Meteorological Society Annual Meeting, Houston, TX, January 2026

Serafin, K.A., Koseff, J.R., Ouyang, D., and Suckale, J, Advancing Transparency in Urban Flood Risk Mitigation Planning Through Community-Based Risk Trajectories, American Geophysical Union Meeting, New Orleans, LA, December 2025

Sabrina, S.*, and Serafin, K.A., Tropical Cyclone Impacts on Compound Flooding in the Lower St. Johns River, Florida, American Geophysical Union Meeting, New Orleans, LA, December 2025

Serafin, K.A., Recalde, A.*, Jane, R.A., Carasella, T., and Wahl, T. (2025). Evaluating Shifts in Riverine-Coastal Flood Transition Zones Under Changing Environmental Conditions, American Geophysical Union Meeting, New Orleans, LA, December 2025

Sami, M.S.*, Serafin, K.A., and Talke, S.A. (2025). The Role of Tide and Storm Surge Properties on the Timing, Magnitude, and Duration of Coastal Flooding Events, American Geophysical Union Meeting, New Orleans, LA, December 2025

Carasella, T., Jane, R.A., Wahl, T., and Serafin, K.A., Rapid Assessment of Compound Flood Transition Zones using a Quasi-Static Flood Model, American Geophysical Union Meeting, New Orleans, LA, December 2025

Suckale, J., and Serafin, K.A., The role of models in community-engaged approaches to flood-risk mitigation, American Geophysical Union Meeting, New Orleans, LA, December 2025

Serafin, K.A., Tomko, B.A.*, Jane, R.A., Carasella, T., and Wahl, T., Evaluating Shifts in Riverine-Coastal Flood Transition Zones Under Changing Environmental Conditions, American Shore and Beach Preservation Association (ASBPA) Annual Meeting, Long Beach, CA, October 2025

MacKie, E., Millstein, J., and Serafin, K.A., Extreme value theory reveals massive Antarctic iceberg calving events may not be primarily climate-driven, poster presentation to European Geosciences Union, Vienna, Austria, April 2025

Sami, M.S.*, Serafin, K.A., and Quadrado, G.P.*, Evaluating the Spatio-Temporal Impact of Storm Surge Duration and Magnitude on Extreme Coastal Water Levels Across U.S. Coastlines, poster presentation to Florida Society of Geographers Annual Meeting, Gainesville, FL, February 2025

Huguenin, C.N.* and Serafin, K.A., Assessing extreme dry spells across the Tempisque-Bebadero River Basin, Costa Rica, poster presentation to Florida Society of Geographers Annual Meeting, Gainesville, FL, February 2025

Capps Herron, H.* and Serafin, K.A., Spatiotemporal Variability in Baseflow Relative Contribution to Extreme Annual Streamflow, Florida: Exploration in Climate Division 1, poster presentation to Florida Society of Geographers Annual Meeting, Gainesville, FL, February 2025

Quadrado, G.P.* and Serafin, K.A. Total Water Level Driving Processes Influence the Potential for Coastal Change along United States Coastlines, oral presentation to American Geophysical Union Meeting, Washington, D.C., December 2024

MacKie, E.J., Millstein, J., and Serafin, K.A. Extreme value theory shows no increase in Antarctic calving size over the last half century, poster presentation to American Geophysical Union Meeting, Washington, D.C., December 2024

Mackie, E.J., Millstein, J., and Serafin, K.A. Extreme value theory shows no increase in Antarctic calving size over the last half century, oral presentation to 2024 Scientific Committee on Antarctic Research Open Science Conference, Pucón, Chile, August 2024

Sami, M.S.*, Serafin, K.A., and Quadrado, G.P.*, Assessing the Influence of Storm Surge Characteristics on the Intensity of Extreme Coastal Water Levels, oral presentation to 6th International Conference on Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Venice, Italy, July 2024

Tomko, B.*, Serafin, K.A., Jane, R.A., Wahl, T., Schmied, L., Lindemer, C., Nasr, A., Comparing Joint Design Events from Event-Based and Response-Based Approaches for Approximating Return Levels Along Atlantic and Gulf Coast River Flood Transition Zones, oral presentation to 6th International Conference on Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Venice, Italy, July 2024

Millstein, J., Mackie, E.J., and Serafin, K.A. An extreme value theory perspective on large iceberg calving events, oral presentation to Community Earth System Model (CESM) Workshop 2024, Boulder, CO, June 2024

Millstein, J., Mackie, E.J., and Serafin, K.A. An extreme value theory perspective on large iceberg calving events, oral presentation to Colorado Glaciology Workshop 2024, Boulder, CO, April 2024

Amanambu, A., Mossa, J., Serafin, K.A., and Binford, M. Hydrological Drought and Disconnectivity: Quantifying Low Flow Conditions in a Large Coastal plain River, oral presentation to 2024 Association of American Geographers (AAG) Annual Meeting, Honolulu, HI, April 2024

Quadrado, G.P.* and Serafin, K.A., Annual maximum total water levels vary across storm seasons along the U.S. Atlantic Coast, poster presentation to 9th Biennial UF Water Institute Symposium, Gainesville, FL, February 2024

Tomko, B.A.*, Serafin, K.A., Jane, R.A., Rashid, M.M., Nasr, A., Wahl, T., Schmied, L., Lindemer, C., Identifying flood transition zone variation across multiple Gulf and Atlantic Coast Rivers, poster presentation to 9th Biennial UF Water Institute Symposium, Gainesville, FL, February 2024

Sami, M.S.* and Serafin, K.A., Durational pattern analysis of extreme water level events: A step toward understanding compounding coastal risks, poster presentation to 9th Biennial UF Water Institute Symposium, Gainesville, FL, February 2024

Huguenin, C.N.*, Serafin, K.A., Waylen, P.R., Climatic drivers of extreme precipitation in a Costa Rican basin: A spatiotemporal analysis, poster presentation to 9th Biennial UF Water Institute Symposium, Gainesville, FL, February 2024

Quadrado, G.P.*, Serafin, K.A., and Adams, P.N. What drives coastal change? Assessing the relative composition of total water levels over morphological thresholds along the U.S. Atlantic Coast, poster presentation to Florida Society of Geographers Annual Meeting, St. Augustine, Florida, February 2024.

Bowers, C.*, Serafin, K.A., Tseng, K.C., Baker, J.W., Temporal Compounding Amplifies Hydrologic and Economic Impacts of Atmospheric Rivers in California, Oral presentation to American Geophysical Union Meeting, San Francisco, CA, December 2023

Quadrado, G.P.*, Serafin, K.A., Adams, P.N., What drives coastal change? Assessing the relative composition of total water levels over morphological thresholds along the U.S. Atlantic Coast, Poster presentation to Center for Coastal Solutions 2023 Optimizing Solutions for Resilient Coasts Summit, Gainesville, FL, December 2023

Tomko, B.A.*, Serafin, K.A., Jane, R.A., Rashid, M.M., Wahl, T., Schmied, L., Lindemer, C., Identifying Flood Transition Zone Variation Across Multiple Atlantic and Gulf Coast Rivers, Poster presentation to Center for Coastal Solutions 2023 Optimizing Solutions for Resilient Coasts Summit, Gainesville, FL, December 2023

Bowers, C.*, Serafin, K.A., and Baker, J.W. Interpretable Machine Learning for Flood Damage Estimation: Challenges and Opportunities, 13th International Workshop on Statistical Hydrology, Boston, MA, November 2023

Wahl, T., Serafin, K.A., Jane, R.A., Rashid, M.M., Schmied, L., Lindemer, C., Where land meets the ocean: compound flood risk and transition zones along U.S. coastal rivers, Oral presentation to World Environmental and Water Resources Congress, Henderson, NV May 2023

Wahl, T., Serafin, K.A., Jane, R.A., Malagon-Santos, V., Rashid, M.M., Doeble, L., Timmers, S.R., Schmied, L., Lindemer, C., When forces collide: Developing a scalable framework for compound flood risk assessment, Oral presentation to Coastal Sediments 2023, New Orleans, LA, April 2023

Tomko, B.A.*, Serafin, K.A., Jane, R.A., Rashid, M.M., Wahl, T., Schmied, L., Lindemer, C., Identifying the Flood Transition Zone Along the Potomac River, Poster presentation to Florida Society of Geographers, St. Augustine, FL, February 2023

Quadrado, G.P.* and Serafin, K.A., Assessing The Drivers of Extreme Total Water Level Events Along The U.S. Atlantic Coast, Poster presentation to Florida Society of Geographers, St. Augustine, FL, February 2023

Huguenin, C.N.*, Serafin, K.A., Waylen, P.R., Characterizing precipitation drivers of intra and inter annual variability in hydroclimatic extremes with time dependent variables. The case of the Tempisque-Bebadero river basin in northwestern Costa Rica, Oral presentation to Florida Society of Geographers, St. Augustine, FL, February 2023.

Serafin, K.A., Timmers, S.R.*, Wahl, T., Jane, R.A., Rashid, M.M., Malagon-Santos, V., Doebele, L., Schmied, L., Lindemer, C., Identifying spatially variable compounding flood drivers along coastal rivers using observed and simulated data, Poster presentation to the American Geophysical Union Meeting, Chicago, IL, December 2022

Bowers, C.*, Serafin, K.A., Baker, J.W., Filipek, E., Occurrence and impacts of AR Sequences, Oral presentation to International Atmospheric Rivers Conference (IARC) Community, October 2022

Jane, R.A., Malagon-Santos, V., Rashid, M.M., Doebele, L., Wahl, T., Timmers, S.R.*, Serafin, K.A., Schmied, L., Lindemer, C. Can an event-based approach provide robust estimates of extreme water levels along the transition zone of the Suwannee River, Florida?. Oral presentation to 5th International Conference on Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Orlando, FL, May 2022

Timmers, S.R.*, Serafin, K.A., Rashid, M.M., Jane, R.A., Malagon-Santos, V., Doebele, L., Wahl, T., Schmied, L., Lindemer, C. Identifying spatially variable compounding flood drivers along coastal rivers using observed and simulated data. Poster presentation to 5th International Conference on Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Orlando, FL, May 2022

Quadrado, G.P.* and Serafin, K.A. Spatial and temporal distribution of extreme total water levels drivers along the Atlantic margin of the Southeastern United States. Poster presentation to 5th International Conference on Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Orlando, FL, May 2022

Serafin, K.A., Koseff, J., Baker, J.W., Suckale, J. Flood risk transfer as a consequence of climate change and infrastructure modifications along the San Francisquito Creek, California. Oral presentation to 5th International Conference on Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Orlando, FL, May 2022

Huguenin, C.N.*, Serafin, K.A., Waylen, P. Assessing the drivers of extreme dry spells across the Tempisque-Bebadero River Basin, Costa Rica. Oral presentation to 5th International Conference Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Orlando, FL, May 2022

Huguenin, C.N.*, Serafin, K.A., Waylen, P. Characterizing inter and intra annual variability in hydroclimatic extremes: The case of the Tempisque river basin in Northwestern Costa Rica. Poster presentation American Geophysical Union Meeting, New Orleans, LA, December 2021

Timmers, S.R.*, Serafin, K.A., Wahl, T., Understanding Compound Flood Drivers through a Hybrid Modeling Approach along Southeastern U.S. Coastal River Systems. Poster presentation at American Geophysical Union Meeting, New Orleans, LA, December 2021

Quadrado, G.P.*, Serafin, K.A., Adams, P.N. The Relative Contribution to Total Water Levels Over Morphological Thresholds along the Atlantic and Gulf Coasts of Florida. Poster presentation at American Geophysical Union Meeting, New Orleans, LA, December 2021

Bowers, C.*, Serafin, K.A., Baker, J.W. A Performance-Based Approach to Quantifying Atmospheric River Flood Risk in Northern California, Poster presentation at American Geophysical Union Meeting, New Orleans, LA, December 2021

Quadrado, G.P.* and Serafin, K.A., Spatio-temporal variability of extreme water level drivers on the East and Gulf coasts of Florida. Oral presentation at Young Coastal Scientists and Engineers Conference-Americas, Myrtle Beach, SC, October 2021

Timmers, S.R.*, Serafin, K.A., Wahl, T., Identifying compound flood drivers along the Savannah River, South Carolina. Oral presentation at American Beach and Shore Preservation Association (ASBPA) Annual Meeting, New Orleans, LA, September 2021

Jane, R.A., Malagon-Santos, V., Rashid, M.M., Wahl, T., Serafin, K.A., Timmers, S.R.*, Application of a hybrid statistical-hydrodynamic methodology to assess compound flooding along the Suwannee River, FL. Oral presentation at American Beach and Shore Preservation Association (ASBPA) Annual Meeting, New Orleans, LA, September 2021

Caplen, D.*, Serafin, K.A., Analyzing the impact of coastal water levels on beach morphology near Matanzas Inlet, Florida. Poster presentation at Florida Society of Geographers, February 2021

Timmers, S.R.*, Serafin, K.A., A data-driven analysis of compound flood occurrence along coastal rivers in the southeastern United States. Poster presentation at Florida Society of Geographers, February 2021

Serafin, K.A., Suckale, J., Koseff, J., Baker, J.W. Climate change and management decisions could transfer flood risk to socioeconomically disadvantaged communities along the San Francisco Creek, California. Oral presentation at American Geophysical Union Meeting, December 2020

Bowers, C.*, Serafin, K.A., Baker, J.W. Identifying key damage drivers of atmospheric river-induced flooding in northern California. Oral presentation at American Geophysical Union Meeting, December 2020

Kasmalkar, I.*, Serafin, K.A., Miao, Y., Bick, I.A., Ouyang, D., Suckale, J., Ortolano, L. When Floods Hit the Road: Resilience to Flood-Related Traffic Disruption in the San Francisco Bay Area and Beyond. Oral presentation at American Geophysical Union Meeting, December 2020

Bowers, C.*, Serafin, K.A., Baker, J.W. A Performance-Based Framework to Quantify Atmospheric River-Induced Losses in Northern California, Oral presentation to International Atmospheric Rivers Conference (IARC) Community, October 2020

Serafin, K.A., Nuisance flooding duration across the United States. Poster presentation to Ocean Sciences Meeting, San Diego, CA, February 2020

Serafin, K.A., Suckale, J., Koseff, J.R., Baker, J.W. Disentangling flood drivers: Coastal river flood risk in a changing climate. Poster presentation to 7th Biennial UF Water Institute Symposium, Gainesville, FL, February 2020

Kasmalkar, I.*, Serafin, K.A., Miao, Y., Bick, I.A., Suckale, J., Ouyang, D., Ortolano, L., Baker, J. W. When the Flood Hits the Road: Commute Disruption in the San Francisco Bay Area due to Coastal

Flooding and Sea Level Rise. Oral presentation at American Geophysical Union Meeting, San Francisco, CA, December 2019

Serafin, K.A., Kasmalkar, I., Miao, Y., Bick, I.A., Ortolano, L., Ouyang, D., Mariwala, A., Bhattacharjee, G., Baker, J.W., Suckale, J., The cascading consequences of sea level rise: Evaluating flood-induced commute disruption in the San Francisco Bay Area. Oral presentation to Natural Hazards Researchers Meeting, Boulder, CO, July 2019

Serafin, K.A., Baker, J.W., Suckale, J., Compound flood risk in the south San Francisco Bay: A city manager's worst nightmare. Poster presentation to Workshop on Correlated Extremes, Columbia University, New York, NY, May 2019

Serafin, K.A., Suckale, J., Koseff, J.R., and Baker, J.W., Rethinking return levels: Towards a meaningful assessment of flood risk in a changing climate. Oral presentation to American Geophysical Union Fall Meeting, Washington, D.C., December 2018

Kasmalkar, I., Serafin, K.A., Bick, I.A., Suckale, J., Ortolano, L., Ouyang, D., Miao, Y., Mariwala, A., Bhattacharjee, G., Baker, J.W., When floods hit the road: Commute disruption due to coastal flooding and sea level rise in the San Francisco Bay Area. Oral presentation to American Geophysical Union Fall Meeting, Washington, D.C., December 2018

Serafin, K.A., Ruggiero, P., Parker, K.A., Hill, D.F. What drives flooding? An exploration of the physical processes dominating extreme total water Levels along an ocean-to-river gradient. Poster presentation to Ocean Sciences Meeting, Portland OR, February 2018

Serafin, K.A., Ruggiero, P., Parker, K.A., Hill, D.F. Interpreting contributions to extreme total water levels along an ocean-to-river water level gradient. Oral presentation to Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Southampton, UK, September 2017

Serafin, K.A., Ruggiero, P., Stockdon, H.F., Barnard, P., Long, J.W. Location, Location, Location! Morphologic controls on US West Coast total water levels. Poster presentation to American Geophysical Union Fall Meeting, San Francisco, CA, December 2016

Barnard, P.L., Hoover, D., Hubbard, D.M., Synder, A., Ludka, B. C., Allan, J., Kaminsky, G.M., Ruggiero, P., Gallien, T. W., Gabel, L., Mccandless, D., Weiner, H.M., Cohn, N., Anderson, D.L., Serafin, K.A. Coastal hazards along the US West Coast during the 2015-2016 El Nino. Oral presentation to American Geophysical Union Fall Meeting, San Francisco, CA, December 2016

Evans-Wilent, J.K., Ruggiero, P., Bolte, J.P., Serafin, K.A., Stevenson, J., Schwartz, C. Co-producing coastal adaptation plans with Pacific Northwest stakeholders: Applying alternative futures analysis to quantitatively envision policy and climate scenarios. Poster presentation to American Geophysical Union Fall Meeting, San Francisco, CA, December 2016

Serafin, K.A., Ruggiero, P., Stockdon, H.F. Total Water Level Fun Facts: The relative contribution of extreme total water levels along the US West Coast. Poster presentation to Ocean Sciences Meeting, New Orleans, LA, February 2016

Evans-Wilent, J.K., Serafin, K.A., Bolte, J.P., Ruggiero, P., Schwartz, C., Stevenson, J. Engaging stakeholders in coastal adaptation planning in light of climate change in the Pacific Northwest: Comparing knowledge to action networks for two coastal communities. Poster presentation to Ocean Sciences Meeting, New Orleans, LA, February 2016

Reuda, A., Alvarez, J.A., Hegermiller, C., Serafin, K.A., Anderson, D.L., Ruggiero, P., Barnard, P.L., Erikson, L.H., Vitousek, S., Camus, P., Tomas, A., Gonzalez, M., Mendez, F.J. Toward a multiscale montecarlo climate emulator for coastal flooding and long-term coastal change modeling: The beautiful problem. Poster presentation to Ocean Sciences Meeting, New Orleans, LA, February 2016

Serafin, K.A., Ruggiero, P., Stockdon, H.F. Simulating the relative contributions of extreme total water levels along the US West Coast. Oral presentation to Advances in Extreme Value Analysis and Application to Natural Hazards (EVAN), Santander, Spain, September 2015

Serafin, K.A., Ruggiero, P., Stockdon, H.F., Barnard, P.L., Long J. Quantifying the role of climate variability on extreme total water level impacts: An application of a full simulation model to Ocean Beach, California. Oral presentation to American Geophysical Union Fall Meeting, San Francisco, CA, December 2014

Lipiec, E., Ruggiero, P., Serafin, K.A., Bolte, J.P., Mills, A.K., Corcoran, P.E., Stevenson, J., Lach, D.L. Integrating climate change scenarios and co-developed policy scenarios to inform coastal adaptation: Results from a Tillamook County, Oregon knowledge to action network. Poster presentation to American Geophysical Union Fall Meeting, San Francisco, CA, December 2014

Mills, A.K., Serafin, K.A., Bolte, J.P., Ruggiero, P., Lipiec, E., Corcoran, P.E., Stevenson, J. Exploring the impacts of both climate change and decision making uncertainty on coastal community vulnerability assessments in a policy-centric framework. Poster presentation to American Geophysical Union Fall Meeting, San Francisco, CA, December 2014

Serafin, K.A., Mills, A.K., Lipiec, E., Ruggiero, P., Bolte, J.P., Zanolco, C.M., Stevenson, J., Lach, D.H. New thoughts on envisioning climate change impacts to coastal communities: Providing usable metrics for adaptation planning. Poster presentation to 4th annual Pacific Northwest Climate Science Conference, Seattle, WA, September 2014

Lipiec, E., Ruggiero, P., Serafin, K.A., Mills, A.K., Bolte, J.P., Corcoran, P.E., Stevenson, J., Lach, D.H., Zanolco, C.M. Co-Developing Adaptive Capacity in the Face of Evolving Coastal Vulnerability due to Climate Change Uncertainty. Poster presentation to 5th annual Pacific Northwest Climate Science Conference, Seattle, WA, September 2014

Serafin, K.A., Méndez, F.J., Espejo, A., Camus, P., Ruggiero, P. Improving estimates of extreme total water levels: Incorporating local climate indices into a full simulation model. Oral presentation to Ocean Sciences Meeting, Honolulu, HI, February 2014.

Serafin, K.A., Ruggiero, P., Erikson, L. Impact of projected changes in wave climate on extreme total water levels in the US Pacific Northwest. Oral presentation to the 4th annual Pacific Northwest Climate Conference, Portland, OR, September 2013

Serafin, K.A. and Ruggiero, P. Simulating Extreme Total Water Level Events using a time-dependent extreme value Approach. Oral presentation to the International Coastal Symposium, Plymouth, UK, April 2013

Serafin, K.A. and Ruggiero, P. Evaluating extreme total water levels in the NE Pacific using a full simulation, time-dependent, extreme value approach. Poster presentation to American Geophysical Union Fall Meeting, San Francisco, CA, December 2012

Serafin, K.A. and Ruggiero, P. Extreme waves and high water levels in the NE Pacific. Oral presentation to Ocean Sciences Meeting, Salt Lake City, UT, February 2012

Teaching Experience

University of Florida, Gainesville, FL

Role	Course	Term / Year
Instructor of Record	IDS4940 Internship	Fall 2026
Instructor of Record	GEO3222 Sea Level Science	Spring 2023
Instructor of Record	IDS2935 Living with Rising Seas	Spring 2021–2024; Fall 2023
Instructor of Record	GEO2230 Living with Rising Seas	Spring 2025–2026; Fall 2025–2026
Instructor of Record	GEO6936/4285 Water, Risk, and Extreme Events	Fall 2020; Spring 2022; Fall 2022; Fall 2025
Guest Lecturer	IDS4930: Introduction to Gulf Studies	Spring 2025

Stanford University, Stanford, CA

Role	Course	Term / Year
Guest Lecturer	CEE 308 Topics in Disaster Resilience Research	Spring 2018
Teaching Mentor	GEOPHYS 218Y Resilient SF Bay	Spring 2018–2019; Winter 2019

Oregon State University, Corvallis, OR

Role	Course	Term / Year
Guest Lecturer	ATS 210 Introduction to Atmospheric Science	Winter 2015
Guest Lecturer	GEO 553 Coastal Geomorphology	Winter 2015
Guest Lecturer	GEO 599 Special Topics: Coastal Hazards	Winter 2014
Guest Lecturer	MRM 507 Marine Resource Management Seminar	Fall 2013
Field Lecturer	OEAS 500 Cascadia Field Trip	Fall 2015, 2017
Teaching Internship	GEO 599 Coastal Hazards	Spring 2016
Teaching Assistant	OEAS 520 The Solid Earth	Fall 2015

Course Development

2026	Developed IDS4940 Internship - a Place-Based Learning Experience for 5 undergraduate students
2024	Course enhancement grant: University of Florida Gulf Scholars Program, for Living with Rising Seas undergraduate course (\$2,000)
2022	Developed Sea Level Science undergraduate course
2020	Developed Water, Risk, and Extreme Events graduate course
2020	Course development grant: University of Florida Quest General Education Program for Living with Rising Seas undergraduate course (\$2,000)

Graduate Students Supervised

Student

Aryan Adhau
Holli Capps Herron
Sabiha Sabrina
Md. Shamsudduha Sami
Ally Recalde

Caroline Huguenin

Gabrielle Quadrado

Brianna Tomko

Samantha Timmers

Program / Current Position

PhD, UF Geography, current
PhD, UF Geography, current
PhD, UF Geography, current
PhD, UF Geography, current
MS, UF Geography, 2025
Current: PhD Student UF Civil Engineering
PhD, UF Geography, 2025
Current: Postdoctoral Researcher UGA
PhD, UF Geography, 2025
Current: Postdoctoral Researcher UCF
MS, UF Geography, 2024
Current: GIS Specialist for Cummins Cederberg
MS, UF Geography, 2022
Current: Support Meteorologist for NOAA Hurricane Hunters

Graduate Student Committee Member

Student

Ehsan Ahmadi Afzadi
Airin Akter
Maile Corso
Copeland Cromwell
Matheus de Assis Bose
Eric Dammann
Nicholas Haley
Md. Nurul Kadir
Jesse Kisembe
Michelle Ruiz
Juan Torres
Jawata Saba
Zainab Ali
Taznin Naher
Jenna Reimer
Casey Harris
Corinne Bowers

Anais Couasnon
Amobi Amanambu
Chu-En Hsu
Holli Capps Herron

Program

PhD, UF Civil Engineering
PhD, UF Geography
MS, UF Geological Sciences
PhD, UF Geological Sciences
PhD, UF Geological Sciences
PhD, UF Geological Sciences
PhD, UF Food and Resource Economics
PhD, UF Geological Sciences
PhD, UF Geography
PhD, UF Geography
PhD, UF Coastal and Oceanographic Engineering
PhD, UF Geography, 2026
PhD, UF Geography, 2026
MS, UF Geological Sciences, 2026
PhD, UF Interdisciplinary Ecology, 2025
PhD, UF Soil, Water, and Ecosystem Sciences, 2025
PhD, Stanford Univ., Civil & Environmental Engineering, 2023
PhD, VU Amsterdam, Netherlands, 2023
PhD, UF Geography, 2023
PhD, UF Coastal and Oceanographic Engineering, 2022
MS, UF Geography, 2021

Undergraduate Students

Student	Role	Program / Year
Jessica Dippolito	Research Hours	Geography, 2025
Candace Jones	Research Hours	Geography, 2022, 2023
David Caplan	Honors Thesis Advisor	Geography, 2022
Savanna Stockton	Honors Thesis Committee Member	Civil Engineering, 2021

Service

Session Convener/Organizer

Session Moderator: Extreme Events and Coastal Hazards, 10th Biennial UF Water Institute Symposium, Gainesville, FL, February 2026

Session Co-Chair and Moderator: NH018 - Extreme Sea Levels: Modeling, Impacts, and Risk Management, American Geophysical Union Fall Meeting, New Orleans, LA, December 2025

Organizing and Scientific Committee Member: 6th International Advances in Extreme Value Analysis and Applications to Natural Hazards (EVAN) Meeting, Venice, Italy, July 2024

Session Moderator: Forecasting Impacts of Climate Change, Extreme Events and Sea Level Rise, 9th Biennial UF Water Institute Symposium, Gainesville, FL, February 2024

Planning Committee Member: 9th Biennial UF Water Institute Symposium, Gainesville, FL, February 2024

Session Co-organizer: Storm Surges, Waves, and Coastal Hazards, 28th General Assembly of the International Union of Geodesy and Geophysics (IUGG), Berlin, Germany, July 2023

Session Co-Chair and Moderator: Linking Nearshore and Onshore Sediment Transport Processes and Geomorphic Responses: Insights From Observational and Modeling Studies, American Geophysical Union Fall Meeting, Chicago, IL, December 2022

Scientific Committee Member: 5th International Advances in Extreme Value Analysis and Applications to Natural Hazards (EVAN) Meeting, Orlando, FL, May 2022

Session Co-Chair and Moderator: Linking Nearshore and Onshore Sediment Transport Processes and Geomorphic Responses: Insights From Observational and Modeling Studies, American Geophysical Union Fall Meeting, New Orleans, LA, December 2021

Session Co-Chair and Moderator: Extreme Sea Levels: Statistics, Impacts, and Adaptation, American Geophysical Union Fall Meeting, Virtual, December 2020

Session Chair Co-Chair and Moderator: Extreme sea levels and coastal flood risk, Ocean Sciences Meeting, San Diego, CA, February 2020

Session Co-organizer: Storm Surges, Waves, and Coastal Hazards, 27th General Assembly of the International Union of Geodesy and Geophysics (IUGG), Montreal, Canada, July 2019

Journal Referee

Earth Systems: Nature Sustainability, Nature Communications, Geophysical Research Letters, Environmental Research Letters, Physical Geography, Communications Earth & Environment, Earth's Future, Surveys in Geophysics, Earth Surface Dynamics, Environmental Modelling & Software

Hazards: Natural Hazards and Earth Systems Sciences, Natural Hazards, Environmental Research: Infrastructure and Sustainability

Coastal/Ocean: Journal of Geophysical Research: Oceans, Ocean Engineering, Coastal Engineering, Continental Shelf Research, Journal of Waterway, Port, Coastal, and Ocean Engineering, Journal of Atmospheric and Oceanic Technology, Estuaries and Coasts, Cambridge Prisms: Coastal Futures, Shore & Beach

Water: Water Resources Research, Journal of the American Water Resources Association, Journal of Great Lakes Research, Advances in Water Research

Climate: Nature Climate Change, Climatic Change, Environmental Research: Climate, International Journal of Climatology, Climate Risk Management

Editorial and Advisory Boards

UF Gulf Scholars Program, Steering Committee Member, (2025 - present)

Editor, Cambridge Prisms: Coastal Futures, (2025 - present)

Florida Society of Geographers, Executive Committee Board Member, (2021 - present)

Proposal/Panel Reviewer:

Role / Organization / Program	Year
Proposal reviewer, European Science Foundation Région Bretagne BIENVENUE+ Programme	2026
Panel reviewer, Connecticut Sea Grant	2025
Proposal reviewer, Florida Sea Grant	2025
Panel reviewer, National Science Foundation, Civil Infrastructure research for climate change Mitigation and Adaptation (CLIMA)	2023
Proposal reviewer, National Science Foundation, Physical Oceanography Program	2023
Proposal reviewer, National Science Foundation, Physical Oceanography Program	2022
Proposal reviewer, National Science Foundation, Physical Oceanography Program	2021
Proposal reviewer, UK National Environmental Research Council (NERC) Standard Grants programme	2021
Proposal reviewer, National Science Foundation, Arctic Social Sciences Program	2020
Proposal reviewer, North Carolina Water Resources Research Institute	2020
Proposal reviewer, North Carolina Sea Grant	2019

University Service

UF Gulf Scholars Program, Steering Committee, (2025 - present)

UF Water Institute, Hydrologic Sciences Academic Concentration Coordinating Committee (elected), (2025 - present)

Florida Climate Institute, Faculty Advisory Committee Member, (2021 - present)

UF Water Institute, Faculty Advisory Committee Member (elected), (2022 - 2025)

Departmental Service

Communications Committee, co-chair 2023 - present

Alumni Development Committee, member 2021 - 2023
 Remote Sensing Faculty Search Committee, member 2023
 Graduate Admissions Committee, member 2020 - 2022
 Awards Committee, member 2020 - 2022
 AI + Atmospheric/Climate Science Faculty Search Committee, member 2021

Workshop Participation

Workshop	Organization	Location	Year
NCAR Earth System science and Technology hubs (NESTs) (<i>invited with full support</i>)	NSF NCAR	Charleston, SC	2026
Correlated Extreme Events	Columbia University	New York, NY	2019
NSF Coastlines and People (CoPe) (<i>invited with full support</i>)	NSF	San Diego, CA	2018
Statistical Assessment of Extreme Weather Phenomena Under Climate Change (<i>invited with full support</i>)	NCAR Advanced Study Program (ASP) Summer Colloquium	Boulder, CO	2011

Outreach

Invited panel, Bold Solutions, Better Planet, 2025 CEOAS Earth Day Lecture, virtual, hosted by Oregon State University (2025)

Invited panel, Impacts to the Gulf Environment, 2025 Future of Florida Summit, Gainesville, FL (2025)

Invited seminar, Sea level change and coastal hazards, UF Florida Chapter of Sustainable Ocean Alliance, Gainesville, FL (2024)

Invited lecture, Sea level rise and Florida's changing coastline, Oak Hammock Institute of Learning in Retirement Spring course "Climate Change – What does it mean for Floridians?", Gainesville, FL (2021)

Exhibit organizer for the Corvallis Farmer's Market, Corvallis, OR (2017)

Science Judge, National Competition, National Ocean Sciences Bowl, Corvallis, OR (2017)

Science Judge, Regional Competition, National Ocean Sciences Bowl, Corvallis, OR (2017)

Workshop presenter for Tillamook Bay Community College Tech Trek Camp (2014)

Rules Judge, Regional Competition, National Ocean Sciences Bowl, Corvallis, OR (2015)

Rules Judge, Regional Competition, National Ocean Sciences Bowl, Corvallis, OR (2012)

Media Appearances

Interviewed and quoted in Time article "How to tell if your home is in a flood zone", S. Shah, July 18, 2025

Interviewed and quoted in WUFT article "Storm surge frequency is rising, but Big Bend is still a black box" R. Schnabel, June 9, 2025

Interviewed and quoted in Tampa Bay Times article "What to know about river flooding in Tampa Bay this hurricane season", J. Prator, May 29, 2025

Interviewed and quoted in Miami Herald article "Helene, now Milton delivering devastating storm surge. Will Florida ever build for it?" D. Hruby, October 9, 2024

Interviewed and feature/quoted in Connecticut College Magazine feature article, "Shelter from the Storm", E. Weinman, Winter 2025 issue

Interviewed and quoted in WUSF article " Living on the edge: Paradise in peril," by A. Halaly and M. Vilchez, March 31, 2023

Interviewed and quoted in Insider (formally Business Insider) article " 60,000 miles of US roads could be under water in a few decades. Here's how experts say we can save our critical infrastructure.," by B. Giacobone, Feb 16, 2023.

Interviewed and quoted in EOS article " Atmospheric Rivers Spur High-Tide Floods on U.S. West Coast," by G. G. Cortright, Dec 17, 2021.

Interviewed and quoted for Knee Deep Times article " Whiplash from Atmospheric Storm Hits San Rafael.," by J. Charles, Nov 18, 2021.

Media Coverage of Research

UF CLAS News, Antarctic ice sheet faces "death by a thousand cuts", 2025

AGU EOS Research Spotlight, Massive Antarctic Icebergs May Calve at Random, 2024

Stanford Report, Preparing for urban floods with an eye toward equity, 2024

UF CLAS News, Scientists lead the charge for equity in flood risk mitigation, 2024

Stanford Report, Clusters of atmospheric rivers amp up California storm damages, 2024

UF CLAS News, Study reveals compounding risks of atmospheric river storms, 2024

San Francisco Chronicle, California could face more atmospheric river 'super-sequences,' study finds, 2024

Washington Post, Why record rain hasn't washed away California's water woes, 2024

Stanford Report, Stanford researchers project regionwide commute disruption with Bay Area coastal flooding, 2020

UF CLAS News, Geography Professor Analyzes Impact of San Francisco Bay Area Coastal Flooding on Commutes, 2020

Field Experience

2017: Bathymetric surveying, Sandbar-aEolian-Dune Exchange EXperiment (SEDEX2)

2010 – 2017: Topographic and bathymetric surveying, Oregon State University Coastal Monitoring Program

Professional Memberships & Affiliations

American Shore and Beach Preservation Association, Member 2025 - present

American Geophysical Union, Member 2010–present

American Association for the Advancement of Science, Member 2019–2021

Florida Society of Geographers, Member 2020–present

Florida Sea Grant, Affiliate 2025–present

UF Water Institute, Affiliate 2019–present

UF Climate Institute, Affiliate 2019–present

UF Center for Coastal Solutions, Affiliate 2021–present