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Professional Experience

Assistant Professor, Rutgers University	2018 – present
Assistant Research Professor, Rutgers University	2015 – 2018
Fulbright Scholar, University of Göthenburg Sweden	2017
Postdoctoral Research Associate, Rutgers University	2014 – 2015
Graduate Research Assistant, Rutgers University	2009 – 2014
Graduate Research Assistant, North Carolina State University	2007 – 2009

Education

Ph.D., Rutgers University - Physical Oceanography	2009 – 2014
M.S., North Carolina State University (NCSU) - Physical Oceanography	2007 – 2009
B.S., North Carolina State University – Marine Sciences and Meteorology	2003 – 2007

Honors

Marine Technology Society Young Professional Award	2018
Fulbright Scholar - University of Göthenburg Sweden	2017

Peer-Reviewed Publications

Kevin Friedland

Miles, T. et al. (2021), Uncrewed Ocean Gliders and Saildrones Support Hurricane Forecasting and Research, *Oceanography*, 34(4), 78–81, doi:10.5670/oceanog.2021.supplement.02-28.

Miles, T., S. Murphy, J. Kohut, S. Borsetti, and D. Munroe (2021), Offshore wind energy and the mid-atlantic cold pool: A review of potential interactions, *Mar. Technol. Soc. J.*, 55(4), 72–87, doi:10.4031/MTSJ.55.4.8.

Miles, T., W. Slade, and S. Glenn (2021), Sediment resuspension and transport from a glider integrated Laser In Situ Scattering and Transmissometry (LISSIT) particle analyzer, *J. Atmos. Ocean. Technol.*, 38(8), 1325–1341, doi:10.1175/JTECH-D-20-0207.1.

Wilson, W. D., S. Glenn, **T. Miles**, A. Knap, and C. Toro (2021), Transformative ocean observing for hurricane forecasting, readiness, and response in the caribbean tropical storm corridor, *Mar. Technol. Soc. J.*, 55(3), 90–91, doi:10.4031/MTSJ.55.3.43.

Le Hénaff, M., R. Domingues, G. Halliwell, J. A. Zhang, H. S. Kim, M. Aristizabal, **T. Miles**, S. Glenn, and G. Goni (2021), The Role of the Gulf of Mexico Ocean Conditions in the Intensification of Hurricane Michael (2018), *J. Geophys. Res. Ocean.*, 126(5), 1–28, doi:10.1029/2020JC016969.

Murphy, S. C., L. J. Nazzaro, J. Simkins, M. J. Oliver, J. Kohut, M. Crowley, and **T. N. Miles** (2021), Persistent upwelling in the Mid-Atlantic Bight detected using gap-filled, high-resolution satellite SST, *Remote Sens. Environ.*, 262, 112487, doi:10.1016/j.rse.2021.112487.

Optis, M., A. Kumler, J. Brodie, and **T. Miles**, (2021): Quantifying sensitivity in numerical weather prediction-modeled offshore wind speeds through an ensemble modeling approach. *Wind Energy*, <https://doi.org/10.1002/we.2611>.

Friedland, K. D., R. E. Morse, J. P. Manning, D. C. Melrose, **T. Miles**, A. G. Goode, D. C. Brady, J. T. Kohut, and E. N. Powell (2020), Trends and change points in surface and bottom thermal environments of the US Northeast Continental Shelf Ecosystem, *Fish. Oceanogr.*, 29(5), 396–414, doi:10.1111/fog.12485.

Xu, Y., **T. Miles**, and O. Schofield (2020), Physical processes controlling chlorophyll-a variability on the Mid-Atlantic Bight along northeast United States, *J. Mar. Syst.*, 103433, doi:10.1016/j.jmarsys.2020.103433.

Lim, H. S., **T. N. Miles**, S. Glenn, D. Kim, M. Kim, J. S. Shim, I. Chun, and K. N. Hwang (2020), Rapid Ocean Destratification by Typhoon Soulik over the Highly Stratified Waters of West Jeju Island, Korea, *J. Coast. Res.*, 95(sp1), 1480–1484, doi:10.2112/SI95-285.1.

Domingues, R. et al. (2019), Ocean Observations in Support of Studies and Forecasts of Tropical and Extratropical Cyclones , *Front. Mar. Sci.* , 6, 446.

Testor, P. et al. (2019), OceanGliders: A Component of the Integrated GOOS , *Front. Mar. Sci.* , 6, 422.

Saba, G. K., E. Wright-Fairbanks, B. Chen, W.-J. Cai, A. H. Barnard, C. P. Jones, C. W. Branham, K. Wang, and **T. Miles** (2019), The Development and Validation of a Profiling Glider Deep ISFET-Based pH Sensor for High Resolution Observations of Coastal and Ocean Acidification , *Front. Mar. Sci.* , 6, 664.

Kobelt, J. N., W. C. Sharp, **T. N. Miles**, and C. J. Feehan (2019), Localized Impacts of Hurricane Irma on *Diadema antillarum* and Coral Reef Community Structure, *Estuaries and Coasts*, doi:10.1007/s12237-019-00665-4.

Parra, S. M., A. T. Greer, J. W. Book, A. L. Deary, I. M. Soto, C. Culpepper, F. J. Hernandez, and **T. N. Miles** (2019), Acoustic detection of zooplankton diel vertical migration behaviors on the northern Gulf of Mexico shelf, *Limnol. Oceanogr.*, (Lampert 1989), lno.11171, doi:10.1002/lno.11171.

Bushnell, M., S. Glenn, J. Kohut, J. McDonnell, **T. Miles**, G. Saba, and O. Schofield (2018), Workforce development supporting the blue economy: Using recent community-developed material in operational oceanography curricula: A tribute to Vembu Subramanian, *Mar. Technol. Soc. J.*, 52(3), 51–54, doi:10.4031/MTSJ.52.3.10.

Feehan, C. J., W. C. Sharp, **T. N. Miles**, M. S. Brown, and D. K. Adams (2019), Larval influx of *Diadema antillarum* to the Florida Keys linked to passage of a Tortugas Eddy, *Coral Reefs*, 38(2), 387–393, doi:10.1007/s00338-019-01786-9.

Greer, A.T., A.M. Shiller, E.E. Hofmann, J.D. Wiggert, S.J. Warner, S.M. Parra, C. Pan, J.W. Book, D. Joung, S. Dykstra, J.W. Krause, B. Dzwonkowski, I.M. Soto, M.K. Cambazoglu, A.L. Deary, C. Briseño-Avena, A.D. Boyette, J.A. Kastler, V. Sanial, L. Hode, U. Nwankwo, L.M. Chiaverano, S.J. O'Brien, P.J. Fitzpatrick, Y.H. Lau, M.S. Dinniman, K.M. Martin, P. Ho, A.K. Mojzis, S.D. Howden, F.J. Hernandez, I. Church, **T.N. Miles**, S. Sponaugle, J.N. Moum, R.A. Arnone, R.K. Cowen, G.A. Jacobs, O. Schofield, and W.M. Graham. (2018). Functioning of coastal river-dominated ecosystems and implications for oil spill response: From observations to mechanisms and models. *Oceanography* 31(3), <https://doi.org/10.5670/oceanog.2018.302>

Zhang, F., M. Li, and **T. Miles** (2018), Generation of Near-Inertial Currents on the Mid-Atlantic Bight by Hurricane Arthur (2014), *J. Geophys. Res. Ocean.*, 123(4), 3100–3116, doi:10.1029/2017JC013584.

Ramos, A. G., Garcia-Garrido, V. J., Mancho, A. M., Wiggins, S., Coca, J., Glenn, S., Schofield, O., Kohut, J., Aragon, D., Kerfoot, J., Haskins, T., **Miles T. N.**, Haldeman, C., Strandkov, N., Allsup, B., Jones, C, Shapiro, J., (2018) Lagrangian coherent structure assisted path planning for transoceanic autonomous underwater vehicle missions. *Sci. Rep.*, 8(1), doi:10.1038/s41598-018-23028-8.

Schofield, O., Glenn, S., Kohut, J., **Miles, T.**, Roarty, H., Saba, G., McDonnell, J. (2017) Developing practical data skills in undergraduate students using ocean observatories. *Marine Technology Society* 52(1): 1-7.

Miles, T., G. Seroka, and S. Glenn (2017), Coastal ocean circulation during Hurricane Sandy, *J. Geophys. Res. Ocean.*, 122(9), 7095–7114, doi:10.1002/2017JC013031.

Goni, G.J., R.E. Todd, S.R. Jayne, G.R. Halliwell, S. Glenn, J. Dong, R. Curry, R. Domingues, F. Bringas, L. Centurioni, S.F. DiMarco, **T. Miles**, J. Morell, L. Pomales, H.-S. Kim, P.E. Robbins, G.G. Gawarkiewicz, J. Wilkin, J. Heiderich, B. Baltes, J.J. Cione, G. Seroka, K. Knee, and E.R. Sanabia. (2017) Autonomous and Lagrangian ocean observations for Atlantic tropical cyclone studies and forecasts. *Oceanography*, 30(2):85-95, doi:10.5670/oceanog.2017.227

Seroka, G., **T. Miles**, Y. Xu, J. Kohut, O. Schofield, and S. Glenn (2017), Rapid shelf-wide cooling response of a stratified coastal ocean to hurricanes, *JGR-Oceans: Special Section "Oceanic Responses and Feedbacks to Tropical Cyclones"*, doi:10.1002/2017JC012756

Schofield, O. et al. (2017), Decadal variability in coastal phytoplankton community composition in a changing West Antarctic Peninsula, *Deep Sea Res. Part I Oceanogr. Res. Pap.*, doi:10.1016/j.dsr.2017.04.014.

Miles, T., Lee, S.H., Wahlin, A., Schofield, O., Ha, H.K., Assman, K., (2016) Observations of the Dotson Ice Shelf outflow, *Deep Sea Research II* doi:10.1016/j.dsr2.2015.08.008.

Seroka G., **Miles T.**, Xu, Y., Kohut, J., Schofield, O., Glenn, S., (2016) Hurricane Irene Sensitivity to Stratified Coastal Ocean Cooling *Mon. Wea. Rev.*, 0, doi: 10.1175/MWR-D-15-0452.1.

Glenn, S., **Miles, T.**, Seroka, G.N., Xu, Y., Forney, R., Yu, F., Roarty, H., Schofield, O., Kohut, J., (2016) Stratified Coastal Ocean Interactions with Tropical Cyclones, *Nature Communications* 7.

Schofield, O., **Miles, T.**, Alderkamp, A.C., Lee, S.H., Haskins, C., Rogalsky, E., Sipler, R., Sherrell, R., Yager, P., (2015) *In situ* phytoplankton distributions in the Amundsen Sea polynya measured by autonomous gliders, *Elementa*, 3:000073, doi:10.12952/journal.elementa.000073.

Miles, T., G. Seroka, J. Kohut, O. Schofield, and S. Glenn (2015), Glider observations and modeling of sediment transport in Hurricane Sandy, *J. Geophys. Res. Ocean.*, doi:10.1002/2014JC010474.

Schofield, O., Jones, C., Kohut, J., Kremer, U., **Miles, T.**, Saba, G., Webb, D., Glenn, S., (2015) Developing Coordinated Communities of Autonomous Gliders for Sampling Coastal Ecosystems, *Marine Technology Society Journal*, 49, 3, doi: <http://dx.doi.org/10.4031/MTSJ.49.3.16>

Kohut, J., Bernard, K., Fraser, W., Oliver, M., Statscewich, H., Winsor, P., and **Miles, T.** (2014). Studying the impacts of local oceanographic processes on Adelie penguin foraging ecology. *Marine Technology Society Journal*, 48, 5 doi:10.4031/MTSJ.48.5.10.

Saba, G. K., Fraser, W. R., Saba, V. S., Iannuzzi, R. A., Coleman, K. E., Doney, S. C., Ducklow, H. W., Martinson, D. G., **Miles, T. N.**, Patterson-Fraser, D. L., Stammerjohn, S. E., Steinberg, D. K., and Schofield, O. (2014) Winter and spring controls on the summer food web of the coastal West Antarctic Peninsula. *Nature Communications*. 5:4318 doi: 10.1038/ncomms5318.

Miles, T., Glenn, S., Schofield, O. (2013), Temporal and spatial variability in fall storm induced sediment resuspension on the Mid-Atlantic Bight. *Continental Shelf Research*, <http://dx.doi.org/10.1016/j.csr.2012.08.006>

Miles, T., and He, R. (2010). Seasonal Surface Ocean Temporal and Spatial Variability of the South Atlantic Bight: Revisiting with MODIS SST and Chl-a imagery, *Continental Shelf Research*, V30, 1951-1962.

Miles, T., He, R., M. Li (2009). Characterizing the South Atlantic Bight Seasonal Variability and Cold Water Event in 2003 Using a Daily Cloud-free SST and Chlorophyll Analysis. *Geophysical Research Letters*, 36, L02604, doi:10.1029/2008GL036393.

Book Chapters

N., Beaird, S. Glenn, **T. Miles**, G. Saba, J. Kohut, O. Schofield (2021), Case study: RUCOOL Operational Oceanography Masters – Workforce development case study, in *Preparing a Workforce for the New Blue Economy*, by Richard Spinrad, pp 417, Elsevier.

Yi, X., S. Glenn, F. Carvalho, C. Jones, J. Kohut, J. McDonnell, **T. Miles**, G. Seroka, and O. Schofield (2019), Glider Technology Enabling a Diversity of Opportunities With Autonomous Ocean Sampling, in *Challenges and Innovations in Ocean In Situ Sensors*, pp. 367–374, Elsevier.

Professional Meetings and Abstracts

TN Miles, Sediment Resuspension Observations from a Glider Integrated Sequoia Scientific LISST Particle Analyzer, The Oceanography Society Webinar Series on Exploring Ocean Instrumentation, 2021 (*Invited oral presentation*).

TN Miles, Hurricane Gliders, The Underwater Glider User Group, quarterly meeting, 2021 (*Invited oral presentation*).

TN Miles, H Arango, and J Wilkin, A Coupled Atmosphere-Ocean Modeling Framework for the Regional Ocean Modeling System, UFS Users Workshop, 2020.

*A. Prosowski, **TN Miles**, RQ Wang, JF Brodie, Assessing the Impact of Spatial Variability and Wake Effects on Power Prediction for NJ Offshore Wind Energy Area, AGU Fall Meeting 2020

*H Smith, MJ Oliver, R Curry, WS Brown, **TN Miles**, JT Kohut, SM Glenn, O. Schofield, Robotic Ocean Gliders as Vicarious Ocean Color Calibration and Validation data for MODIS-Aqua, Suomi-NPP VIIRS, JPSS-1, and PACE, AGU Fall Meeting, 2020.

TN Miles, AR Valle, JF Brodie, GN Seroka, S Coakley, Sensitivity of storm surge to stratified coastal ocean cooling in Hurricane Irene, AGU Ocean Sciences Meeting, San Diego California, 2020.

SM Glenn, **TN Miles**, MF Aristizabal, C Watkins, HS Lim, Scientific Results from the 2018 & 2019 North Atlantic Hurricane Glider Picket Lines, AGU Ocean Sciences Meeting, San Diego California, 2020.

MF Aristizabal, **TN Miles**, SM Glenn, WD Wilson, R Watlington, Mixed Layer Temperature Variability During the 2018 Hurricane Season in the Caribbean Ocean, AGU Ocean Sciences Meeting, San Diego California, 2020.

*H Wang, D Gong, HC Yu, YJ Zhang, CK Harris, MAM Friedrichs, **TN Miles**, J Hudson, Quantifying Shelf-Basin Exchange at Submarine Canyons in the southern Middle Atlantic Bight using data from Underwater Glider Surveys and Numerical Modeling Experiments, AGU Ocean Sciences Meeting, San Diego California, 2020.

*E Wright-Fairbanks, G Saba, B Chen, WJ Cai, **TN Miles**, Glider-Based Observations Reveal Seasonal pH and Aragonite Saturation State Variability in Coastal US Mid-Atlantic Shellfishery Management Zones, AGU Ocean Sciences Meeting, San Diego California, 2020.

*S Murphy, **TN Miles**, JF Brodie, MF Crowley, MJ Oliver, LJ Nazarro, Impact of Rapidly Evolving SST fields during Coastal Upwelling Events on Offshore Wind Power Production, AGU Ocean Sciences Meeting, San Diego California, 2020.

JF Brodie, BP Frei, **TN Miles**, DE Veron, E Allen, Investigating the Role of Coastal Upwelling and Synoptic Conditions in the Prediction of Wind Ramp Events, AGU Ocean Sciences Meeting, San Diego California, 2020.

RQ Wang, **TN Miles**, JF Brodie, Multi-scale Interaction between Wind Turbines and Coastal Processes: coupling OpenFAST with a regional coupled air-sea modeling system, AGU Ocean Sciences Meeting, San Diego California, 2020.

MF Aristizabal, HS Kim, **TN Miles**, SM Glenn, A Mehra, Evaluation of the Ocean Initial Conditions and Evolution of the Ocean Mixed Layer Temperature on the HWRF-POM Forecasting Model during Hurricane Dorian, AGU Ocean Sciences Meeting, San Diego California, 2020.

Miles, T., and Glenn, S., Autonomous Underwater Gliders: Sensing capabilities and applications, Korea Institute of Ocean Science and Technology (KIOST), NOAA-KIOST Joint Program Agreement Meeting, Busan, South Korea, 2019 (*Invited Oral Presentation*).

Miles, T., Slade, W., Kohut, J., and Gong, D., Suspended particle characteristics from a glider integrated LISST sensor, Underwater Gliders User Group/EGO Meeting, Rutgers University, 2019.

Miles T., Stratified coastal ocean interactions with tropical cyclones. Stevens Institute of Technology. (*Invited Oral Presentation*)

Miles et al. Initial impacts of the Hurricane Sentinel glider fleet deployed during the 2018 hurricane season, American Geophysical Union Fall Meeting, Washington, DC, 2018

Gouldman, C., **Miles, T.**, Edwards, C., Under Florence's Wake: Gliders, Hurricanes, and Ocean Observing, Oceans 2018 Marine Technology Society, Charleston, SC, 2018.

Miles, T., Slade, W., Kohut, J., and Gong, D., Suspended particle characteristics from a glider integrated LISST sensor, Oceans 2018 Marine Technology Society, Charleston, SC, 2018.

Miles, T., Glenn, S., Seroka, G., Coastal Ocean Circulation During Hurricane Sandy, AGU Ocean Sciences Meeting, Portland, OR, 2018. (*Poster Presentation*)

Miles T. and Glenn, S., Gliders, Observing Systems, and Numerical Modeling: Stratified Coastal Ocean Interactions with Tropical Cyclones WMO/IOC Data Buoy Cooperation Panel (DBCP) Third Pacific Islands Training Workshop on Ocean Observations and Data Applications of the 2018 (*invited Oral Presentation*).

Miles T., Stratified coastal ocean interactions with tropical cyclones. Rutgers University Department of Marine and Coastal Sciences 2018. (*Invited Oral Presentation*)

Miles, T., Glider applications for ocean observation networks and process-oriented numerical modeling. Workshop on application of glider technology for sustained oceanographic observations under climate variability and climate change in Lima Peru 2017. (*Invited Oral Presentation*)

Miles, T., Glenn, S., Schofield, O., Kohut, J., and Seroka, G., Stratified coastal ocean interactions with tropical cyclones: Coastal ocean circulation during Hurricane Sandy. Fifth Capacity Building Workshop of the WMO/IOC Data Buoy Cooperation Panel (DBCP) for the North Pacific Ocean and Its Marginal Seas (NPOMS-5) 2017 (*Invited Oral Presentation*).

Miles, T., Glenn, S., Seroka, G., Xu, Y., Schofield, O., Kohut, J., Stratified coastal ocean interactions with tropical cyclones. University of Maryland Center for Environmental Studies Horn Point Laboratory Seminar 2017. (*Invited Oral Presentation*).

Miles, T., Glenn, S., Schofield, O., Kohut, J., Seroka, G., Sediment transport in Hurricane Sandy: Glider Observations and Regional Ocean Modeling. 7th EGO Conference 2016 (*Oral Presentation*).

Miles, T., Arnone, B., Howden, S., Jones, C., Martin, K., Vandermeulen, R., Decollibus, C., Schofield, O., Enabling Slocum Glider Flight on a River-Dominated Continental Shelf. Gulf of Mexico Research Initiative Oil Spill Conference 2016 (*Poster Presentation*).

Miles, T., Glenn, S., Schofield, O., Kohut, J., Seroka, G., Sediment transport in Hurricane Sandy, Korea Institute of Ocean Sciences and Technology, Ansan, South Korea 2016. (*Oral Presentation*)

Miles, T., Glenn, S., Seroka, G., Xu, Y., Schofield, O., Kohut, J., Stratified coastal ocean interactions with tropical cyclones. Lamont-Doherty Earth Observatory Columbia University Physical Oceanography Seminar 2016. (*Invited Oral Presentation*).

Miles, T., Glenn, S., Seroka, G., Xu, Y., Schofield, O., Kohut, J., Stratified coastal ocean interactions with tropical cyclones. Mid-Atlantic Bight Physical Oceanography Meeting (MABPOM) 2016. (*Oral Presentation*).

Miles, T., Glenn, S., Schofield, O., Kohut, J., and Seroka, G., Observations of Hurricane Sandy from a Glider Mounted Current Profiler. Fourth Capacity Building Workshop of the WMO/IOC Data Buoy Cooperation Panel (DBCP) for the North Pacific Ocean and Its Marginal Seas (NPOMS-4) 2015 (*Invited Oral Presentation*).

Miles, T., Glenn, S., Schofield, O., Kohut, J., Seroka, G., Sediment transport in Hurricane Sandy, Oceans 2014 Marine Technology Society, St. Johns, Newfoundland, Canada, 2014. (*Oral Presentation*)

Miles, T., Schofield, O., Glider Observations along the Dotson Ice Shelf, 20th International Symposium on Polar Sciences, Incheon, Korea, 2014. (*Invited Oral Presentation*)

Miles, T., Glenn, S., Kohut, J., Schofield, O., Seroka, G., Sediment resuspension and transport in Hurricane Sandy: Comparisons of glider observations with model results., AGU Ocean Sciences Meeting, Honolulu, HI, 2014 (*Oral Presentation*)

Glenn, S., Seroka, G., **Miles, T. (presenter)**, Xu, Y., Roarty H., Kohut J., Schofield, O., U.S. IOOS Responds to Hurricanes Irene and Sandy, Teledyne-Webb Research, Falmouth, MA, 2013. (*Oral Presentation*).

Miles, T., Glenn, S., Schofield, O., Kohut, J., Seroka, G., Xu, Y., Observations of Hurricane Sandy from a Glider Mounted Aquadopp Profiler. Nortek Technical Symposium, San Diego, CA, 2013 (*Invited*) and Oceans 2013 Marine Technology Society, San Diego, CA, 2013. (*Oral Presentations*)

Miles, T., Schofield, O., Martinson D., Coastal ocean mixing near Palmer Station Antarctica: Observations from a glider mounted ADCP. ASLO Ocean Sciences Meeting, New Orleans, LA, 2013 (*Oral Presentation*)

Glenn, S., Schofield, O., Kohut, J., Bowers, L., Crowley, M., Dunk, R., Kerfoot, J., **Miles, T.**, Palamara, L., Roarty, H., Seroka, G., Yi Xu, Titlow, J., Brown, W., Boicourt, W., Atkinson, L., Seim, H., (2012) Impact of ocean observations on hurricane forecasts in the Mid-Atlantic: Forecasting lessons learned from Hurricane Irene, Marine Technology Society Oceans, 2012. (*Oral Presentation*)

Miles, T., Schofield, O., Martinson, D., Physical forcing of a Western Antarctic Peninsula ecosystem: observations from a coastal ocean observing network at Palmer Station. LTER All Sciences Meeting, Estes Park, Colorado, 2012 (*Poster*)

Miles, T., and O. Schofield, 20 Years of Oceanographic and Atmospheric Data at Palmer Station Antarctica, LTER Site Review, Palmer Station, Antarctica, 2011 (*Poster*).

Miles, T., and R. He, Surface Ocean Temporal and Spatial Variability of the South Atlantic Bight: Revisiting with Cloud-free Reconstructions of MODIS Concurrent SST and Chl-a Imagery, AGU Ocean Sciences Meeting, Portland, OR, 2010. (*Poster*)

Miles, T. and R. He, Covariations of satellite sea surface temperature and ocean color in the South Atlantic Bight, Ocean Sciences Meeting, Orlando, FL, 2008. (*Poster*)

Glenn, S., Roarty, H., Kohut, J., **Miles, T.**, Kerfoot, J., Schofield, O., Brown, W., Atkinson, L., Boicourt, B., Observations of Storm Response and Sediment Transport on the Middle Atlantic Bight Continental Shelf, AGU Ocean Sciences Meeting, Portland, OR, 2010.

Conference Proceedings

LISST? Others?

Vargas, M. A., **T. Miles**, S. Glenn, P. Hogan, W. Douglas Wilson, R. Watlington, and B. Lacour (2019), Impact of glider data assimilation on the global ocean forecasting system during the 2018 hurricane season, in *OCEANS 2019 MTS/IEEE Seattle, OCEANS 2019*, Institute of Electrical and Electronics Engineers Inc.

Kumler, A., M. Optic, P. J. Moriarty, J. Brodie, T. Miles, G. N. Scott, C. Draxl, and W. D. Musial (2019), Comparison of Mesoscale Model Setups for Offshore Wind Resource Assessment: A New Jersey Case Study, National Renewable Energy Lab. (NREL), Golden, CO (United States), OSTI ID: 1545007, NREL/PR-5000-73156

Undergraduate Student Papers

Gonzalez-Morabito, C., D. Aragon, T. Miles, J. Kohut, and S. Glenn (2017), Flight dynamics of Slocum gliders in intermediate-water hurricane: Rutgers University Center for Ocean Observing Leadership (RU COOL), in *OCEANS 2017 - Anchorage*, vol. 2017-January.

Coakley, S. J., T. Miles, J. Kohut, and H. Roarty (2016), Interannual variability and trends in the Middle Atlantic Bight cold pool, in *OCEANS 2016 MTS/IEEE Monterey, OCE 2016*.

Ramsay, L., A. Morrison, J. Kohut, O. Schofield, T. Miles, S. Glenn, and C. Lintz (2016), Glider advancements in efficiency: Enhancing factors necessary for ocean-wide flights, in *OCEANS 2015 - MTS/IEEE Washington*.

Current Research Support

- 2021 MARACOOS
- 2021 PASSENGERS
- 2020 Onboard processing of Slocum Glider Velocity Profiles. ONR NOPP. Project location: Rutgers University. Amount awarded (07/01/2020-06/30/2022) \$957,259 (Lead-PI). Person-months per year committed to project: 1 month (summer)
- 2020 Rutgers University Marine Field Station Atlantic Shores Lidar Deployment. Atlantic Shores Offshore Wind. Project Location: Rutgers University. Amount Awarded (2/21/2020 – 06/30/2022) \$72,827 (Co-PI). Person-months per year committed to project: 0.1 months.
- 2019 ARPA-E: Computationally Efficient Atmospheric-Data-Driven Control Co-Design Optimization. Department of Energy. Project location: Rutgers University. Amount awarded (11/3/2019-1/31/2022): \$1,526,872. (Collaborator). Person-months per year committed to project: 0.5 (summer).
- 2019 Sustained Ocean Observations with Underwater Gliders in Support of Hurricane Intensity Forecasts. NOAA OAR. Project location: Rutgers University. Amount awarded (1/1/2020-06/30/2022): \$833,537 (Lead-PI) Person-months per year committed to project: 1 (summer).

Past Research Support

- 2020 Incorporating ROMS coupling and data assimilation into the NOAA Unified Forecast System and Marine JEDI to improve hurricane forecasting. NOAA OAR. Project location: Rutgers University. Amount awarded (07/01/2020 – 06/30/2020) \$799,437 (Co-PI). Person-months per year committed to project: 1 month (summer).
- 2020 Supplement to: Developing a profiling glider pH sensor for high resolution coastal ocean acidification monitoring. NSF OCE OTIC. Project location: Rutgers University. Amount awarded (10/01/2020-09/30/2021): \$164,347. (Co-PI). Person-months per year committed to project: 0.5
- 2020 NOAA Joint Program Agreement with Korean Institute of Ocean Science and Technology (\$20,000) *Co-PI KUSCO*.
- 2019 Objective Driven Experimental Design under Uncertainty for Earth Science Observational Systems Vice Chancellor for Research and Innovation Seed Funding. Project location: Rutgers University. Amount awarded (10/01/2020-09/30/2021): \$60,000 (Co-PI) Person-months per year committed to project: 0.25.

- 2019 Atmospheric/Oceanic Analyses and Predictions to Support the Wind Energy Development Application Process (\$398,341) *Co-PI New Jersey Board of Public Utilities.*
- 2019 Coupled Atmosphere-Ocean Modeling Framework for the Mid-Atlantic Bight: WRF and ROMS *Lead PI NOAA IOOS.* Project location: Rutgers University. Amount awarded (5/01/2019-04/30/2021): \$351,218 (Lead-PI) Person-months per year committed to project: 1 (summer).
- 2019 NOAA Joint Program Agreement with Korean Institute of Ocean Science and Technology (\$20,000) *Co-PI KUSCO.*
- 2018 Atmospheric/Oceanic Analyses and Predictions to Support the Wind Energy Development Application Process (\$398,341) *Co-PI New Jersey Board of Public Utilities.*
- 2018 NOAA Joint Program Agreement with Korean Institute of Ocean Science and Technology (\$40,000) *Co-PI KUSCO.*
- 2017 Atmospheric/Oceanic Analyses and Predictions to Support the Wind Energy Development Application Process (\$339,000) *Co-PI New Jersey Board of Public Utilities.*
- 2016 Developing a profiling glider pH sensor for high resolution coastal ocean acidification monitoring. NSF OCE OTIC. Project location: Rutgers University. Amount awarded \$865,419 (*Co-PI*). Person-months per year committed to project: 1 month (summer).
- 2016 Slocum Glider Integrated Laser In-Situ Scattering and Transmissometry Sensors for Suspended Particle Characterization Beneath Tropical Cyclones (\$500,000) *Lead-PI Office of Naval Research: DURIP.*
- 2015 The CONsortium for oil spill exposure pathways in COastal River-Dominated Ecosystems (CONCORDE). Gulf of Mexico Research Initiative. Project location: Rutgers University. Award Amount (DATES) \$582,002 Co-I

Awards

RBR 2020 Cohort Fellow	2020
Marine Technology Society Young Professional Award	2018
Fulbright Scholar - University of Göthenburg Sweden	2017
Teledyne-Webb Graduate Research Fellowship – Rutgers	2012 - 2014
NortekUSA Student Equipment Loan and Travel Grant – Rutgers	2012
Graduate School of New Brunswick Travel Award – Rutgers	2010
North Carolina NASA Space Grant Graduate Fellowship – NCSU	2008
Undergraduate Research Award – NCSU	2007
Marine Earth & Atmospheric Sciences Outstanding Senior – NCSU	2007
NSF Undergraduate Research Fellowship – Mote Marine Lab	2006
Park Scholarship (Full 4-year Merit Scholarship) – NCSU	2003 - 2007

Teaching Experience

Professor Operational Ocean Modeling and Visualization – Rutgers	2021
Professor Operational Oceanography Software Bootcamp – Rutgers	2021
Professor Operational Ocean Modeling and Visualization – Rutgers	2020
Professor Ocean Methods and Data Analysis – Rutgers	2020
Professor Operational Ocean Modeling and Visualization – Rutgers	2019
Professor Ocean Methods and Data Analysis – Rutgers	2019
Professor Physical Oceanography	2016
Professor: Ocean Methods and Data Analysis – Rutgers	2015
Teaching Assistant: Ocean Methods and Data Analysis – Rutgers	2013
Teaching Aid: Introduction to Oceanography – Rutgers	2010
Teaching Assistant: Introduction to Oceanography Lab – NCSU	2008
Teaching Assistant: Earth System Sciences –NCSU	2007

Workshops and Short Courses

IOOS-OAR Workshop	
Task Force Ocean workshops	
NPOMS-6 Capacity Building Workshop of the WMO/IOC DBCP Haikou, China (invited)	2017
NPOMS-5 Capacity Building Workshop of the WMO/IOC DBCP Tianjin, China (invited)	2017
NPOMS-4 Capacity Building Workshop of the WMO/IOC DBCP Busan, Korea (invited)	2015
Pan-American Advanced Studies Institute (PASI): Amazon River-to-Shelf (selected)	2013

Alpine Summer School: Buoyancy Driven Flows (selected)	2010
Teledyne-Webb Slocum AUV training course	2007

Outreach Experience

Panelist on Marine Technology and Offshore wind – MTS Oceans 2021	2021
New Jersey Environmental Lobby talk on Offshore wind and the Cold Pool	2021
GliderPalooza co-lead	2015 - 2016
NCSU Park Scholarship Alumni Mentor	2013 - present
NCSU Park Scholarship Interviewer	2011 - present
Volunteer Science Q&A at Palmer Station, Antarctica	2010 - 2012
Presenter Science Saturdays: Climate & Environmental Change Teen Summit	2012
Presented to Abercrombie & Kent Expeditions: Ocean Acidification	2012
Presented at Mote Marine Lab REU weekly seminar on Graduate School	2010 - 2011
Volunteer at Rutgers Day: Physical Oceanography	2010 – 2013

Scientific Service

1. Underwater Glider User Group (UG2) Steering Committee
2. Extreme Events Ocean Observations Task Team
3. New Observations and CONOPS for TCs
4. Hurricane Forecast Improvement Project (HFIP) Ocean Model Improvement Task Team (OMITT)
5. Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology: Storms Task Team and Observations Program Area
6. NOAA Joint Program Agreement on Typhoons with KIOST
7. Marine Technology Society – Poster Judging
8. Navy Task Force Ocean: Observations, Modeling, and Human Capital Working Groups
9. Reviewer: <https://publons.com/a/1361009> Journal of Physical Oceanography, Journal of Geophysical Research: Oceans, Continental Shelf Research, Estuarine, Coastal, and Shelf Science, Progress in Oceanography, Marine Geology, ICES Journal of Marine Sciences, Journal of Atmospheric and Oceanic Technology, Dynamics of Atmospheres and Oceans, and Ocean Engineering.

Rutgers University Service

1. GH Cook Scholars Committee – 2020 - Present
2. DMCS Graduate Selections Committee 2019 - Present
3. URGE: Unlearning Racism in Geoscience – Pod Member - 2020

Professional Societies

American Geophysical Union, American Society of Limnology and Oceanography, Marine Technology Society, and North Carolina State University Park Scholar Alumni Society, Coastal & Estuarine Research Foundation.

Graduate Students

Joseph Gradone – Rutgers
 Samuel Coakley – Rutgers
 Sarah Murphy – Rutgers
 Elizabeth Wright-Fairbanks – Rutgers
 Clifford Watkins – Rutgers
 Haixing Wang – Virginia Institute of Marine Sciences

Undergraduate Students

Becca Horwitz (RIOS)
 Allison Porozowski (REI UROP)
 Elisha Brumnant (RIOS)
 Ingrid Carlson
 Brian Frei
 Samuel Coakley*
 Cassidy Gonzalez-Morabito
 Liam Ramsay

Andrenette Morrison
 Benjamin Gurary
 Harrison Smith
 Crystal Blauer
 Brian Slater
 Robert Forney

*GH Cook Honors Thesis Advisee

Field Work and Research Cruises

Teledyne-Webb Slocum Glider deployments, Internationally (monthly)	2009 – present
CRATE (3 Weeks), Gulf of Lyons	2020
Jeju Island, South Korea – Typhoon Glider Deployment field campaign	2018
Amundsen Sea Polynya Cruise (ANA04B261) – R/V Araon (1 month) <i>with the Korea Polar Research Institute (KOPRI)</i>	2014
Long Term Ecosystem Research (LTER) Phytoplankton Component <i>Field Team Leader, Palmer Station, Antarctica (6 months)</i>	2011 – 2012
LTER – R/V Laurence M. Gould, Western Antarctic Peninsula (40 days)	2010 – 2011
LTER – Palmer Station, Antarctica (3 Months)	2010 – 2011
Benthic Dinoflagellate Migration – R/V Pelican, Gulf of Mexico, Florida (7 days)	2008
Student Cruise – R/V Cape Hatteras, Morehead City, NC (2 days)	2008
Upwelling and Connectivity Dynamics of EUC – M/V Sierra Negra, Galapagos, Ecuador (28 Days)	2007
Student Cruise – R/V Cape Hatteras, Morehead City, NC (2 days)	2007

Media

10/8/21 The Allegheny Front “[Jersey Shore’s Fishing Industry Wonders If It Can Coexist With Industrial-Size Wind Farms](#)”
 08/15/20 NBC Connecticut
 01/30/19 – undark.org “[In Underwater Drones, A New Weapon for Hurricane Hunters](#)”
 9/20/17 –Phys.org “[New revelations from Superstorm Sandy data](#)”
 3/8/16 – Science Daily “[Why Hurricane Irene fizzled as it neared New Jersey in 2011](#)”
 7/7/14 – Science Daily: “[Antarctic climate and food web strongly linked](#)”
 10/29/13 – Popular Science: “[Underwater Gliders Gather Data To Help Predict The Next Big Storm](#)”
 12/23/13- USA Today: “[Rutgers robot’s Sandy mission may aid hurricane forecasts](#)”
 11/12/13 – Fox News Channel: “[Predicting Unpredictable Hurricanes, Superstorms](#)”
 4/25/13 – The Daily Targum: “[University students use glider to gather storm data](#)”
 11/8/12 – Newsworks: “[How Rutgers oceanographers got data from below Superstorm Sandy](#)”
 11/6/12 – Asbury Park Press: “[Rutgers researchers analyze ocean data from storm](#)”
 2/20/12 – Popular Mechanics: “[Science on ice: what its like to live and work in Antarctica](#)”
 12/9/10 – Nature News Blog: “[Research trip to the Antarctic: Gliding in the Southern Ocean](#)”