

Dr. Sutara (Ata) Suanda

CONTACT INFORMATION	University of North Carolina Wilmington (UNCW) Department of Physics and Physical Oceanography Center for Marine Science Wilmington, North Carolina, USA	+01 617-710-4254 suandas@uncw.edu
EMPLOYMENT HISTORY	Associate Professor , UNCW Assistant Professor , UNCW Physical Oceanographer New Zealand MetService, Raglan, NZ Lecturer Department of Marine Science, University of Otago, NZ Postdoctoral Researcher Scripps Institution of Oceanography, UCSD	<i>Aug 2025 - present</i> <i>Jan 2021 - Aug 2025</i> <i>Jan 2020 - Nov 2020</i> <i>May 2018 - Nov 2020</i> <i>Mar 2014 - May 2018</i>
DEGREES	Oregon State University , Corvallis, OR Ph.D., Oceanography (2014) M.S., Oceanography (2009) Wesleyan University , Middletown, CT B.A., Physics (2003)	
RESEARCH NARRATIVE	I am a coastal Physical Oceanographer who uses <i>in situ</i> observations and numerical models to study multi-scale physical processes in nearshore, estuarine and continental shelf environments. My interests focus on processes that cause nearshore material transport and dispersion. My Ph.D. thesis combined optical remote sensing and moored observations to quantify coastal internal wave variability. For post-doctoral research, I worked on the parameterization of unresolved wave-driven rip currents in numerical wave models and worked to combine regional circulation modeling with observational analysis of small-scale turbulence on the continental shelf. I continue these research themes as a member of interdisciplinary teams. I have applied numerical models and collected measurements within tidal inlets in support of aquaculture and shell-fishing management efforts. I have active research projects to better understand wave dissipation over rocky shorelines and maintain repeat observations over cape-attached shoals and in the Gulf Stream transition region. I am enthusiastic and passionate about oceanographic research and am dedicated to impart this enthusiasm to students.	
SELECT JOURNAL PUBLICATIONS	1. Liu, B., Feddersen, F., Suanda, S. H., Spydell, M. S., Merrifield, M. A., (2026). Scaling breaking-wave vorticity generation in the surfzone. <i>Journal of Physical Oceanography</i> 56(4), doi:10.1175/JPO-D-25-0161.11 2. Nuss, E. S., Moulton, M., Suanda, S.H., Baker, C. M. (2025) Modeled surf-zone eddies on a laboratory scale barred beach with varying wave conditions. <i>Journal of Geophysical Research: Oceans</i> 130(1), doi:10.1029/2023JC020549 3. Santana, R., O'Callaghan, J., Macdonald, Suanda, S. H., Wakes, S. (2025). Eddy-driven cross-shelf exchange and variability in the East Auckland Current. <i>Journal of Geophysical Research: Oceans</i>, 130(3), doi.org/10.1029/2024JC021601 4. Suanda, S.H., Smith, R. O. (2024) Spring stratification and internal temperature oscillations near a coastal inlet. <i>New Zealand Journal of Marine and Freshwater Research</i> 59(5), doi:10.1080/00288330.2024.2439088	

5. Vance, J., Currie, K. I, **Suanda, S. H.**, Law, C.S. (2024) Drivers of seasonal to decadal mixed layer carbon cycle variability in subantarctic water using the Munida Time Series. *Frontiers in Marine Science* 11, doi:10.3389/fmars.2024.1309560
6. Johnson, E. E., **Suanda, S.H.**, Wing, S. R., Currie, K. I., Smith, R. O. (2023) Episodic summer Chlorophyll-a blooms driven by along-front winds at Aotearoa's southeast Shelf Break Front. *Journal of Geophysical Research: Oceans* 128(7), doi:10.1029/2022JC019609.
7. Montañó, M. M., **Suanda, S.H.**, DeSouza, J., (2023) Modelled coastal circulation and Lagrangian statistics from a large coastal embayment: The case of Bay of Plenty, Aotearoa New Zealand. *Estuarine, Coastal and Shelf Science* 281, doi:10.1016/j.ecss.2023.108212
8. DeSouza, J., **Suanda, S.H.**, Couto, P. P., Smith, R. O., Kerry, C., Roughan, M. (2023) Moana Ocean Hindcast - a 25+ years simulation for New Zealand Waters using the ROMS v3.9 model. *Geoscientific Model Development* 16(1), doi:/10.5194/gmd-16-211-2023
9. Moulton, M., **Suanda, S.H.**, Garwood, J. C., Kumar, N., Fewings, M. R., Pringle, J. (2022) Exchange of plankton, pollutants, and particles across the nearshore region *Annual Reviews of Marine Science* 15, doi:10.1146/annurev-marine-032122-115057
10. O'Connell-Milne, S., Wing, S. R., **Suanda, S.H.**, Udy, J. A., Durante, L. M., Salmond, N. H., Wing, L. C. (2020). Interactions between bivalve filter feeding and oceanographic forcing drive the fluxes of organic matter and nutrients at an estuarine-coastal interface. *Marine Ecology Progress Series* 655, doi:10.3354/meps13522.
11. O'Callaghan, J., Stevens C., Roughan M., et al. inc **Suanda, S.H.** (2019) Developing an Integrated Ocean Observing System for New Zealand. *Frontiers in Marine Science* 6. doi:10.3389/fmars.2019.00143.
12. **Suanda, S.H.**, Feddersen, F., Spyrell, M. S., Kumar, N., (2018) The effect of barotropic and baroclinic tides on three-dimensional coastal dispersion. *Geophysical Research Letters* 45(20), doi:10.1029/2018GL079884.
13. **Suanda, S.H.**, Kumar, N., Miller, A.J., DiLorenzo, E., Haas, K., Cai, D., Edwards, C.A., Washburn, L., Fewings, M., Torres, R., Feddersen, F. (2016) Wind relaxation and a coastal buoyant plume north of Pt. Conception, CA: observations, simulations, and scalings. *Journal of Geophysical Research* 121(10), doi:10.1002/ 2016JC011919.
14. **Suanda, S.H.**, and Feddersen, F. (2015) A self-similar scaling for cross-shelf exchange driven by transient rip currents. *Geophysical Research Letters*, 42(13), doi: 10.1002/2015GL063944.

HONORS

- UNCW James F. Merritt Million Dollar Club 2023
- National Science Foundation Postdoctoral Fellowship Oct 2015
- Heceta Head Coastal Conference Best Poster Award Fall 2012
- Burt Graduate Student Award for Physical Oceanography Fall 2009
- Matthews Memorial Fund Recipient Summer 2009

MEMBERSHIPS

- AGU 2014 - present
- ASLO 2024 - present