

Tal Ezer

Old Dominion University
Center for Coastal Physical Oceanography
4111 Monarch Way, Norfolk, VA 23508
(Phone: 757-683-5631, Email: tezer@odu.edu)

Education:

1989 Ph.D. *Physical Oceanography*, Florida State University, Tallahassee, FL
1984 M.Sc. *Atmospheric Sciences*, Hebrew University, Jerusalem, Israel
1981 B.Sc. *Physics and Mathematics*, Hebrew University, Jerusalem, Israel

Professional Experience:

2009-present *Professor*, Old Dominion Univ., Department of Ocean & Earth Sciences, Norfolk, VA
2007-2009 *Associate Professor*, Old Dominion University, Ocean, Earth & Atmospheric Sciences
9/2014-12/2014 *Visiting Professor*, National Oceanography Center & Univ. of Southampton, UK
1989-2007 *Research Staff/Scholar*, Princeton University, Atmospheric & Oceanic Sciences
1985-1989 *Research Assistant*, Florida State University, Oceanography Dept., Tallahassee, FL
1981-1985 *Research Scientist*, Israel Oceanographic & Limnological Research Inst., Haifa, Israel
1974-1978 *Officer*, Israeli Air Force

Honors and Awards:

2022- Elected Chair, Organizing Committee, International Workshop on Modeling the Ocean (IWMO)
2022- Selection Board, Georg Wust Prize, German Society for Marine Research and Nature-Springer
2020- Stanford University world ranking of scientists (top 2% most-cited scientists in different fields)
2019 National Council of Nominators for the 25th Annual Heinz Award in Environment
2018 MIT SOLVE, ODU/GreenStream winning team for coastal community resilience solutions
2017 College of Sciences *Distinguished Research Award*
2016 Paper on sea level rise was most cited paper of *JGR-Oceans* 2013-2016.
2014-2019 Two “Highly Cited Papers” (top 1% in field), 1 in Geosciences 1 in Plants & Animal Sci.
2013 Editors’ Citation for Excellence in Refereeing for *Geophysical Research Letters*
2009 SCHEV Virginia Outstanding Faculty Award, Internal Nominee (not selected)
2007 AGU Outstanding Student Paper Award (co-author with advisee student)
2002 National Ocean Partnership Program (NOPP), Excellence in Partnering Award
2001 Distinguished Visiting Professor, Academia Mexicana de Ciencias

Professional Societies:

American Geophysical Union (AGU), The Oceanography Society (TOS), Marine Technology Society (MTS), Coastal Education and Research Foundation (CERF).

Other Professional Activities:

Editor-in-Chief (2021-present), *Ocean Dynamics* by Springer-Nature

Co-Editor (2001-2021), *Ocean Dynamics* (responsible editor for over 80 papers)

Editor, International Workshop on Modeling the Ocean, 13 Special Issues, Springer-Nature Publ. (IWMO-2009 to IWMO-2022).

Co-Editor, Special Issue of Ocean Modelling on Coupled Models, Elsevier Publ. (2019-2021)

Convener/session chair various international meetings (WPGM2006, Beijing; PICES2008, Dalian, China; IWMO2009, Taipei, Taiwan; IWMO2010, Norfolk, VA; IWMO2011, Qingdao, China; IWMO2012, Yokohama, Japan; IWMO2013, Bergen, Norway; IWMO2014, Halifax, Canada; IWMO2015, Canberra, Australia; IWMO2016, Bologna, Italy; IWMO2018, Brazil; IWMO2019, Wuxi, China; IWMO2022, Ann Arbor, MI)

Manager, Princeton Ocean Model (POM) users group (~5000 users; 70 countries)

Refereed Publications (past 5 years)

- ~140 total refereed publications (~50% as first author; 30 different journals; 6 book chapters)
- Google Scholar Citations~7000 (H-Index~43, I10 Index ~83)

Ezer, T. (2022), A demonstration of a simple methodology of flood prediction for a coastal city under threat of sea level rise: the case of Norfolk, VA, USA, *Earth's Future*, 10(9), doi:10.1029/2022EF002786.

Ezer, T. (2022), Sea level variability in the Gulf of Mexico since 1900 and its link to the Yucatan Channel and the Florida Strait flows, *Ocean Dynamics*, 72(11-12), 741-759, doi:10.1007/s10236-022-01530-y.

Ezer, T. and S. Dangendorf (2022) Spatiotemporal variability of the ocean since 1900: Testing a new approach using global sea level reconstruction, *Ocean Dynamics*, 72(1), 79-97, doi:10.1007/s10236-021-01494-5.

Ezer, T. and S. Dangendorf (2022), The impact of remote temperature anomalies on the strength and position of the Gulf Stream and on coastal sea level variability: A model sensitivity study, *Ocean Dynamics*, 72(3-4), 223-239, doi:10.1007/s10236-022-01500-4.

Park, K., I. Federico, E. Di Lorenzo, **T. Ezer**, K. M. Cobb, N. Pinardi, and G. Coppini (2022) The contribution of hurricane remote ocean forcing to storm surge along the Southeastern U.S. coast *Coastal Engineering*, doi:10.1016/j.coastaleng.2022.104098.

Ezer, T. (2022), Reevaluation of sea level rise and acceleration in the Chesapeake Bay: Past trends, future projections, and spatial variations within the Bay, *Ocean Dynamics*, submitted.

Ezer, T., S. Henderson-Griswold and T. Updyke (2022), Dynamic observations in the Hampton Roads region: how surface currents at the mouth of Chesapeake Bay may be linked with winds, water level, river discharge and remote forcing from the Gulf Stream, *Oceans2022*, MTS/IEEE eXplore Publ..

Dangendorf, S., N. Hendricks, Q. Sun, J. Klinck, **T. Ezer**, T. Frederikse, F. Calafat, T. Wahl, T. Tornquist, (2022), Acceleration of U.S. southeast and Gulf Coast sea-level rise amplified by internal climate variability, *Nature Communications*, submitted.

Ezer, T. and S. Dangendorf (2021), Variability and upward trend in the kinetic energy of Western Boundary Currents over the last century: impacts from barystatic and dynamic sea level change, *Climate Dynamics*, 57(9-10), 2351-2373, doi:10.1007/s00382-021-05808-7.

Ezer, T., X. Fanghua, Z. Liu, E. Stanev, S. Wang and J. Wei (2021), The 11th International Workshop on Modeling the Ocean (IWMO 2019) in Wuxi, China, June 17-20, 2019, *Ocean Dynamics*, 71(4), 471-474, doi:10.1007/s10236-021-01448-x.

Dangendorf, S., T. Frederikse, L. Chafik, J. Klinck, **T. Ezer**, and B. Hamlington, (2021) Data-driven reconstruction reveals large-scale ocean circulation control on coastal sea level, *Nature Climate Change*, 11, 514-520, doi:10.1038/s41558-021-01046-1.

Ezer, T., Editorial: On the 20th Anniversary of *Ocean Dynamics* and farewell to Jörg-Olaf Wolff, *Ocean Dynamics*, Vol. 71, July 2021, <https://www.springer.com/journal/10236/updates/19278284>.

Qiao, F., **T. Ezer**, K. Fennel, I. Ginis, J. McWilliams (Eds.) (2021) Coupled Models, Special Issue of *Ocean Modelling*, 2019-2021, Elsevier Pbl., <https://www.sciencedirect.com/journal/ocean-modelling/special-issue/109681JX5X0/>.

Ezer, T. and S. Dangendorf (2020), Global sea level reconstruction for 1900-2015 reveals regional variability in ocean dynamics and an unprecedented long weakening in the Gulf Stream flow since the 1990s, *Ocean Science*, 16(4), 997-1016, doi:10.5194/os-16-997-2020.

Ezer, T. (2020), The long-term and far-reaching impact of hurricane Dorian (2019) on the Gulf Stream and the coast, *Journal of Marine Systems*, 208, doi:10.1016/j.jmarsys.2020.103370.

Ezer, T., (2020), Analysis of the changing patterns of seasonal flooding along the U.S. East Coast, *Ocean Dynamics*, 70(2), 241-255, doi:10.1007/s10236-019-01326-7.

Ezer, T., R. de Camargo, C. A. S. Tanajura, F. Xu, and H. Xue (2020), The 10th International Workshop on Modeling the Ocean (IWMO 2018) in Santos, Brazil, June 25-28, 2018, *Ocean Dynamics*, 70(6), 839-841, doi:10.1007/s10236-020-01374-4.

Bruciaferri, D., G. Shapiro, S. Stanichny, A. Zatsepin, **T. Ezer**, F. Wobus, X. Francis and D. Hilton (2020), The development of a 3D computational mesh to improve the representation of dynamic

processes in ocean models: application and testing in the Black Sea, *Ocean Modelling*, 146(2020), doi:10.1016/j.ocemod.2019.101534.

Han, W., D. Stammer, P. Thompson, **T. Ezer**, H. Palanisamy, X. Zhang, C. Domingues, L. Zhang and D. Yuan, (2020), Impact of basin-scale climate modes on coastal sea level: a review, Chap. 9, pp. 247-295, In: Ponte et al. (Eds.), *Relationships Between Coastal Sea Level and Large Scale Ocean Circulation*, Space Sci. Ser. ISSI Vol. 75, 978-3-030-45633-7, Springer Nature, Switzerland.

Lawson, G., M. Sosonkina, **T. Ezer** and Y. Shen, (2020), Applying EMD/HHT analysis to power traces of applications executed on systems with Intel Xeon Phi, *International Journal of High Performance Computing Applications*, 34(2), 187-198, doi:10.1177/1094342017731612.

Oey, L.Y., Y. Noh, J. Berntsen, S.Y. Kim, H. Mitsudera and **T. Ezer** (2020), Editorial- The 9th International Workshop on Modeling the Ocean (IWMO 2017) in Seoul, Korea, July 3-6, 2017, *Ocean Dynamics*, 70(1), 163-164, doi:10.1007/s10236-019-01322-x.

Ezer, T., (2019), Regional differences in sea level rise between the Mid-Atlantic Bight and the South Atlantic Bight: Is the Gulf Stream to blame?, *Earth's Future*, 7, 771-783, doi:10.1029/2019EF001174.

Ezer, T., (2019), Numerical modeling of the impact of hurricanes on ocean dynamics: sensitivity of the Gulf Stream response to storm's track, *Ocean Dynamics*, 69(9), 1053-1066, doi: 10.1007/s10236-019-01289-9.

Ponte, R. M. et al (**T. ezer** and 53 co-authors) (2019), Towards comprehensive observing and forecasting systems for monitoring and predicting regional to coastal sea level, *OceanObs19*, *Frontiers in Marine Science*, section Coastal Ocean Processes, doi:10.3389/fmars.2019.00437.

Han, W., D. Stammer, C. Domingues, **T. Ezer**, H. Palanisamy, P. Thompson, X. Zhang, L. Zhang and D. Yuan, (2019), Impact of natural internal climate modes on coastal sea level: a review, *Surveys in Geophysics*, doi:10.1007/s10712-019-09562-8.

Ezer, T., (2018), On the interaction between a hurricane, the Gulf Stream and coastal sea level, *Ocean Dynamics*, 68, 1259-1272, doi:10.1007/s10236-018-1193-1.

Ezer, T., (2018), The increased risk of flooding in Hampton Roads: On the roles of sea level rise, storm surges, hurricanes and the Gulf Stream. In: *The Hampton Roads Sea Level Rise Preparedness and Resilience Intergovernmental Pilot Project*, Toll, R. and G. F. Kuska (Eds.), *Marine Technology Society Journal*, 52(2), 34-44, doi:10.4031/MTSJ.52.2.6.

Ezer, T., L.-Y. Oey, H. Xue, M. Zavatarelli, G. Sannino, R. de Camargo (2018), Editorial - The 8th International Workshop on Modeling the Ocean (IWMO 2016) in Bologna, Italy, June 7-10, 2016, *Ocean Dynamics*, 68(1), 153-156, doi:10.1007/s10236-017-1123-7.

Boesch, D.F., W.C. Boicourt, R.I. Cullather, **T. Ezer**, G.E. Galloway, Jr., Z.P. Johnson, K.H. Kilbourne, M.L. Kirwan, R.E. Kopp, S. Land, M. Li, W. Nardin, C.K. Sommerfield, W.V. Sweet.

(2018), Sea-level Rise Projections for Maryland 2018, University of Maryland Center for Environmental Science, Cambridge, MD, 28pp.

Atkinson, L. and **T. Ezer**. (2018), Norfolk, Virginia: A city dealing with increased flooding, Chapter 9.1, pp. 322-326, In: Climate Change and Cities, Second Assessment Report of the Urban Climate Change Research Network, Editors: Rosenzweig, C., W. D. Solecki, P. Romero-Lankao, S. Mehrotra, S. Dhakal and S. A. Ibrahim, Cambridge University Press.

Hermann, M., S. Doney, **T. Ezer**, K. Gedan, P. Morefield, B. Muhling, D. Pirhalla, S. Shaw, (2018) Scientific and Technical Advisory Committee Review of the Chesapeake Bay Program Partnership's Climate Change Assessment Framework and Programmatic Integration and Response Efforts. STAC Publication Number 18-001, Edgewater, MD., 32pp.

Rueda-Roa, D., **T. Ezer** and F. Muller-Karger (2018), Description and mechanisms of the mid-year upwelling in the southern Caribbean Sea from remote sensing and local data, Journal of Marine Science and Engineering, 6(2), 36, doi:10.3390/jmse6020036.

Lawson, G., M. Sosonkina, **T. Ezer** and Y. Shen, (2018), Applicability of the Empirical Mode Decomposition for power traces of large-scale applications, In: Wyrzykowski R., Dongarra J., Deelman E., Karczewski K. (eds) Parallel Processing and Applied Mathematics. PPAM 2017, 10778, 71-80, Springer, doi:10.1007/978-3-319-78054-2-7.