

Curriculum Vitae (3-years period)

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Tal Ezer

Old Dominion University
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Education:

- 1989 Ph.D. *Physical Oceanography* ("Summa Cum Laude")
Florida State University, Tallahassee, FL
- 1984 M.Sc. *Atmospheric Sciences* ("Cum Laude")
Hebrew University, Jerusalem, Israel
- 1981 B.Sc. *Physics* (major) and *Mathematics* (minor)
Hebrew University, Jerusalem, Israel

Professional Experience:

- 2009-present *Professor*, Old Dominion University, Department of Ocean,
Earth & Atmospheric Sciences, Norfolk, VA
- 2007-present *Affiliated Faculty*, Virginia Modeling, Analysis & Simulation Center, Suffolk, VA
- 2007-present *Affiliated Faculty*, Center for Coastal Physical Oceanography, Norfolk, VA
- 2012-present *Affiliated Faculty*, ODU's Climate Change & Sea Level Rise Initiative
- 9/2014-12/2014 *Visiting Professor*, National Oceanography Center & Univ. of Southampton, UK
- 2007-2010 *Visiting Research Collaborator*, Princeton University, Program in Atmospheric &
Oceanic Sciences, Princeton, NJ
- 2007-2009 *Associate Professor*, Old Dominion University, Department of Ocean, Earth &
Atmospheric Sciences, Norfolk, VA
- 1989-2007 *Research Staff/Research Scholar*, Princeton University, Program in Atmospheric &
Oceanic Sciences, Princeton, NJ
- 1985-1989 *Research Assistant*, Florida State University, Department of Oceanography,
Tallahassee, FL
- 1981-1985 *Research Scientist*, National Institute of Oceanography, Department of Physical
Oceanography, Haifa, Israel

Honors and Awards:

- 2017 College of Sciences *Distinguished Research Award*
- 2016 Paper on sea level rise was most cited paper of *JGR-Oceans* 2013-2016;
"Highly Cited Paper" (top 1% of Geosciences), Thomson's Web of Science.

- 2013 Editors' Citation for Excellence in Refereeing for *Geophysical Research Letters*
- 2012 "Most Inspiring Professor" and advisor for the student awarded the "Outstanding Undergraduate Student in Oceanography"
- 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
- 1999- Listing: Who's Who in Science and Engineering
- 1987 The Honor Society of Phi Kappa Phi
- 1985-1988 Israel Oceanographic and Limnological Research Scholarship
- 1984 The Hebrew University's Gershon Meirbaum Scholarship
- 1983 The Hebrew University's Shindel Prize
- 1982 Israel Maritime League Award

Professional Societies:

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

Other Professional Activities:

- Co-Editor, International Workshop on Modeling the Ocean, Special Issues, Springer Publ. (IWMO-2009 I,II; IWMO-2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018).
- Co-Editor (2001-present), *Ocean Dynamics* (responsible editor for over 70 papers)
- 2017 Chesapeake Bay Program- review panel of the CB Climate Change Assessment
- 2013 Maryland Sea Level Rise Projection, Climate Change Commission
- Consultant to the *World Bank's* international project: The Red Sea- Dead Sea Conveyer Feasibility Study
- 2014/15 Validation Test Panel for NRL model development, The Naval Oceanographic Office
- 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)
- Organizer, workshops of terrain-following ocean model users (1996-2003)
- Manager, Princeton Ocean Model (POM) users group (~5000 users; 70 countries)
- Journals Reviewer, CSR, DAO, GRL, JGR, JMS, JPO, JTECH, OD, OM.
- Proposals Reviewer, NOAA, NASA, NSF, international (UNESCO, Hong Kong, Research Council, Israel-US Bi-national Science Foundation; NSF Poland)
- Review Panel: Gulf of Mexico Research Initiative (overseeing ~\$115M of grant money from BP Oil Spill Response)

Old Dominion University Service and Activities:

Committees-

OEAS Undergraduate Education Committee, 2015-

OEAS Coordinator, Modeling and Simulation Graduate Certificate in Oceanography

OEAS Promotion and Tenure Committee (Chair), 2010-2013

OEAS Dept. Chair Search Committee, AY-2009/10

Chemistry and Biochemistry Dept. Chair Search Committee, AY-2010/11

OEAS Faculty Search Committees, AY-2007/08/12/13/14

CCSLRI Postdoc Search Committee, AY-2013/14

OEAS Space Planning Committee, AY-2013/14

Member of Research Centers/Initiatives-

Geospatial & Environmental Opportunities for Interdisciplinary Studies (GEOIDS).

Climate Change and Sea Level Rise Initiative (CCSLRI)

Consortium for Maritime Research (CMR)

Virginia Coastal Energy Research Consortium (VCERC)

Virginia Modeling, Analysis & Simulation Center (VMASC), affiliated faculty

Advisory Board, Institute for Jewish Studies & Interfaith Understanding (IJIU)

Additional Department Activities-

Coordinator of OEAS Dept. seminar series and Ludwig Lecture, AY-2008/09

Education and Outreach Activities-

Norfolk Public School Science Fair, volunteer judge at the 2011 competition.

National Ocean Science Bowl: Volunteer judge and reviewer of questions for the regional Blue Crab competition, 2008-2010.

PUBLICATIONS

- Over 100 total refereed publications (in 25 different journals and 5 book chapters)
- Google Scholar Citations: over 5000 (H-Index~39, I10 Index ~58)

Recent Publications (last 3 years):

Ezer, T., 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, 2018.

Ezer, T., 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, 2018.

- Ezer, T.**, L.-Y. Oey, H. Xue, M. Zavatarelli, G. Sannino, R. de Camargo, 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, 2018.
- Hermann, M., S. Doney, **T. Ezer**, K. Gedan, P. Morefield, B. Muhling, D. Pirhalla, S. Shaw, 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, 2018.
- Rueda-Roa, D., **T. Ezer** and F. Muller-Karger, 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, 2018.
- Lawson, G., M. Sosonkina, **T. Ezer** and Y. Shen, 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, 2018.
- Ezer, T.**, L. P. Atkinson and R. Tuleya, Observations and operational model simulations reveal the impact of Hurricane Matthew (2016) on the Gulf Stream and coastal sea level, *Dynamics of Atmospheres & Oceans*, 80, 124-138. doi:10.1016/j.dynatmoce.2017.10.006, 2017.
- Ezer, T.**, A modeling study of the role that bottom topography plays in Gulf Stream dynamics and influencing the tilt of mean sea level along the U.S. East Coast, *Ocean Dyn.*, 67(5), 651-664, doi: 10.1007/s10236-017-1052-5, 2017.
- Ezer, T.** and L. P. Atkinson, On the predictability of high water level along the U.S. East Coast: can the Florida Current measurement be an indicator for flooding caused by remote forcing?, *Ocean Dyn.*, 67(6), 751-766, doi: 10.1007/s10236-017-1057-0, 2017.
- Cheng, Y., **T. Ezer** and L. P. Atkinson, Analysis of tidal amplitude changes using the EMD method, *Continental Shelf Research*, 148, 44-52, doi:10.1016/j.csr.2017.09.009, 2017.
- Oey, L.-Y., **T. Ezer**, J. Sheng, F. Chai, J. Gan, K. Lamb and Y. Miyazawa, Editorial - The 6th International Workshop on Modeling the Ocean (IWMO 2014), *Ocean Dynamics*, 67(2), 317-319, doi:10.1007/s10236-016-1028-x, 2017.
- Lawson, G., M. Sosonkina, **T. Ezer** and Y. Shen, Empirical Mode Decomposition for modeling of parallel applications on Intel Xeon Phi processors, Proc., CCGrid '17 Proceedings of the 17th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing pp. 1000-1008, doi:10.1109/CCGRID.2017.99, 2017.
- Lawson, G., M. Sosonkina, **T. Ezer** and Y. Shen, Applying EMD/HHT analysis to power traces of applications executed on systems with Intel Xeon Phi, *Intern. J. High Perf. Comp. Appl.*, doi:10.1177/1094342017731612, 2017.
- Lawson, G., M. Sosonkina, **T. Ezer** and Y. Shen, Applicability of the Empirical Mode Decomposition for power traces of large-scale applications, Proceedings of the 12th International Conference on Parallel Processing and Applied Mathematics, PPAM-2017, 2017.
- Ezer, T.**, Revisiting the problem of the Gulf Stream separation: on the representation of topography in ocean models with different types of vertical grids, *Ocean Modelling*, 104, 15-27. doi:10.1016/j.ocemod.2016.05.008, 2016.
- Ezer, T.**, Can the Gulf Stream induce coherent short-term fluctuations in sea level along the U.S. East Coast?: A modeling study, *Ocean Dynamics*, 66(2), 207-220, doi:10.1007/s10236-016-0928-0, 2016.
- Ezer, T.**, I. D. Haigh and P. L. Woodworth, Nonlinear sea-level trends and long-term variability on western European coasts, *J. Coastal Res.*, 32(4), 744-755, doi:10.2112/JCOASTRES-D-15-00165.1, 2016.

- Chen, Y., **T. Ezer**, B. Hamlington, Sea level acceleration in the China Seas, in: Sea Level Changes, A. Hu (Ed.), *Water*, 8(7), 293. doi:10.3390/w8070293, 2016.
- Ezer, T.** and L. Atkinson, Sea level rise in Virginia- causes, effects and response. *Virginia Journal of Science*, 66(3), 355-359, Virginia Academy of Science Publ., 2015.
- Ezer, T.**, Detecting changes in the transport of the Gulf Stream and the Atlantic overturning circulation from coastal sea level data: The extreme decline in 2009-2010 and estimated variations for 1935-2012, *Global and Planetary Change*, 129, 23-36, doi:10.1016/j.gloplacha.2015.03.002, 2015.
- Erisman, B., W. Heyman, S. Kobara, **T. Ezer**, S Pittman, O. Aburto-Oropeza, R. Nemeth, Fish spawning aggregations: where well-placed management actions can yield big benefits for fisheries and conservation, *Fish and Fisheries*, doi:10.1111/faf.12132, 2015.

Abstracts and Presentations in last 3-years (*invited)

2018

- Allen, T. and T. Ezer, Climate and oceanic processes impacting communities in the Southern Rivers Watershed, Sea Level Rise Summer Symposium Series, City of Virginia Beach, September 19.
- Ezer, T., Numerical modeling of the interactions between hurricanes, the Gulf Stream and sea level, The 10th International Workshop on Modeling the Ocean (IWMO-2018), Santos, Brazil, June 25.
- Ezer, T., Sea level rise and flooding in the Hampton Roads, Seminar to REU students, Old Dominion University, June 21.
- Ezer, T., Sea level rise and variability in the Chesapeake Bay: numerical modeling of the impact of climate change, hurricanes and the Gulf Stream, Chesapeake Research & Modeling Symposium, Annapolis, MD, June 12.
- *Ezer, T., Sea level rise, flooding and the role of the Gulf Stream, College of Sciences Advisory Board Meeting, Old Dominion University, Norfolk, VA, April 18.
- *Ezer, T., Ocean dynamics and coastal sea level along the US coast, Centre for Coastal and Ocean Science and Engineering, Plymouth University, Plymouth, UK, March 14.
- *Ezer, T., Interactions between large-scale ocean dynamics and sub-mesoscale processes: impact on coastal sea level, Workshop of the International Space Science Institute, Bern, Switzerland, March 5.
- Ezer, T., The contribution of the Gulf Stream to sea level variability, Ocean Sciences Meeting, Portland, OR, February 12.

2017

- *Ezer, T., The Dead Sea: science, history and the Dead Sea-Red Sea Conduit project, Temple Sinai, Newport News, VA, October 27.
- *Ezer, T., Regional ocean modeling setup and tools, UNESCO/IOC Training Course on Development of Coupled Regional Ocean Models, Ocean Dynamics and Climate Center, Qingdao, China, June 12-23.
- *Ezer, T., The Gulf Stream's influence on sea level along the U.S. East Coast, South Florida Water Management District, West Palm Beach, FL, May 9.
- *Ezer, T., Sea level rise in the Hampton Roads area, Public Journalism class, ODU, Norfolk, VA, March 21.
- *Ezer, T., The Gulf Stream and sea level rise, Unitarian Church of Norfolk, Norfolk, VA, March 3.

*Ezer, T., Climate change, sea level rise and impacts on the Hampton Roads region, Hampton University Atmospheric and Planetary Sciences Seminar, Hampton, VA, January 18.

2016

*Ezer, T., Progress, challenges and failures in ocean circulation modeling: the Gulf Stream case. Dr. Chet Grosch Symposium "The Art of Fluid Dynamics", Norfolk, VA, October 13.

Qiu, Q., S. Barbot, E. Hill, J. D. P. Moore, L. Feng and T. Ezer, Transient flow in the mantle wedge in the last decade following great earthquakes in the Sumatran subduction zone. AGU Fall Meeting, San Francisco, December 12-16.

*Ezer, T., The science of sea level rise and the role of the Gulf Stream. Flood Adaptation Forum, Hampton Roads Planning District, Hampton, VA, July 29.

*Ezer, T., Review of sea level change in the Chesapeake Bay area. Workshop #1 of NCPC Climate Science Task Group, National Capital Planning Commission, Washington, DC, June 28.

Ezer, T., Revisiting the problem of the Gulf Stream separation in ocean models. 8th International Workshop on Modeling the Ocean (IWMO-2016), Bologna, Italy, June 8.

Ezer, T., From POM-1996 to IWMO-2016: an overview of 20 years of ocean modeling and users participation (in honor of Prof. Emeritus G. Mellor, the recipient of the 2016 Historical Oceanography Society Award). 8th International Workshop on Modeling the Ocean (IWMO-2016), Bologna, Italy, June 9.

*Ezer, T., Sea level rise for the Chesapeake Bay area: causes, trends and future projections. Workshop on the development of climate projections for use in Chesapeake Bay program assessments. The Scientific and Technical Advisory Committee (STAC), Annapolis, MD, March 7.

Ezer, T., Gulf Stream's induced variations in coastal sea level: Can the same mechanism work from daily to decadal time-scales?, Ocean Sciences Meeting, New Orleans, LA, February 26.

Ezer, T., Sea level rise and variability along the U.S. east coast and the impact from the Gulf Stream and AMOC, George Mason University, Fairfax, VA, January 21.