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EDUCATION

Ph.D., 2009, Oceanography, Rutgers, The State University of New Jersey

M.E., 2003, Fluid Mechanics, Zhejiang University, China

B.E., 2000, Fluid Mechanics, Zhejiang University, China

WORK EXPERIENCES

2011 – present, Assistant Scientist, Woods Hole Oceanographic Institution

2009 – 2011, Post-doctoral Scholar, Woods Hole Oceanographic Institution

2004 – 2009, Research assistant, Institute of Marine and Coastal Sciences, Rutgers University

RESEARCH INTERESTS

Coastal ocean dynamics, Internal wave dynamics, Numerical ocean modeling, Data assimilation, Model-based observing system design, Biophysical interactions

REFEREED PUBLICATIONS**Zhang, W. G.**, C. Cenedese, 2014: The dispersal of dense water formed in an idealized coastal polynya on a shallow sloping shelf, *Journal of Physical Oceanography*, in press.**Zhang, W. G.**, T. F. Duda, Ilya A. Udovychenkov, 2014: Modeling and analysis of internal-tide generation and beam-like onshore propagation in the vicinity of shelfbreak canyons, *Journal of Physical Oceanography*, 44, 834-849.**Zhang, W. G.**, T. F. Duda, 2013: Intrinsic nonlinear and spectral structure of internal tides at a shelfbreak, *Journal of Physical Oceanography*, 43, 2641-2660.**Zhang, W. G.**, D. J. McGillicuddy, and G. G. Gawarkiewicz, 2012: Is biological productivity enhanced at the New England Shelfbreak Front? *Journal of Geophysical Research – Oceans*, 118, 517-535.Garau, B., Ruiz, B., **W. G. Zhang**, A. Pascual, E. Heslop, J. Kerfoot, and J. Tintore, 2011, Thermal lag correction on Slocum CTD glider data, *Journal of Atmospheric and Oceanic Technology*, 28, 1065-1071.Wilkin, J.L., **W. G. Zhang**, B. Cahill and R. C. Chant, 2011, Integrating coastal models and observations for studies of ocean dynamics, observing systems and forecasting, In *operational Oceanography in the 21st Century*, A. Shiller and G. Brassington (eds.), Springer, pp 487-512, doi: 10.1007/978-94-007-0332-2_19.**Zhang, W.G.**, G.G. Gawarkiewicz, D.J. McGillicuddy, and J.L. Wilkin, 2011, Climatological mean circulation at the New England shelf break. *Journal of Physical Oceanography*, 41, 1874-1893.**Zhang, W.G.**, J.L. Wilkin, J.C. Levin, 2010, Towards building an integrated observation and modeling system in the New York Bight using variational methods, Part II: representer-based observing system evaluation, *Ocean Modelling*, 35, 134-145.**Zhang, W.G.**, J.L. Wilkin, H.G. Arango, 2010, Towards building an integrated observation and modeling system in the New York Bight using variational methods, Part I: 4DVAR data assimilation, *Ocean Modelling*, 35, 119-133.

- Zhang, W.G.**, J.L. Wilkin, O.M.E. Schofield, 2010, Simulation of age and residence time in the New York Bight, *Journal of Physical Oceanography*, 40, 965-982.
- Zhang, W.G.**, J.L. Wilkin, J.C. Levin, H.G. Arango, 2009, An Adjoint Sensitivity Study of Buoyancy- and Wind-driven Circulation on the New Jersey Inner Shelf, *Journal of Physical Oceanography*, 39, 1652-1668.
- Zhang, W.G.**, J.L. Wilkin, R.J. Chant, 2009, Modeling of the pathways and mean dynamics of river plume dispersal in New York Bight, *Journal of Physical Oceanography*, 39, 1167-1183.
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- Wilkin, J.L., **W.G. Zhang**, 2007, Modes of mesoscale sea surface height and temperature variability in the East Australian Current, *Journal of Geophysical Research*, 112, C01013, doi:10.1029/2006JC003590.
- Lin Jianzhong, Sun Ke, **Zhang Weifeng**, 2008, Orientation distribution of fibers and rheological property in fiber suspensions flowing in a turbulent boundary layer, *ACTA MECHANICA SINICA*, 24(3), 243-250.
- Zhang Shanliang, Lin Jianzhong, **Zhang Weifeng**, 2007, Numerical research on the fiber suspensions in a turbulent T-shaped branching channel flow, *Chinese Journal of Chemical Engineering*, 15(1), 30-38, doi:10.1016/S1004-9541(07)60030-5.
- Lin Jianzhong, Zhang Lingxin, **Zhang Weifeng**, 2006, Rheological behavior of fiber suspensions in a turbulent channel flow, *Journal of Colloid and Interface Science*, 296(2): 721-728.
- Zhang Lingxin, Lin Jianzhong, **Zhang Weifeng**, 2006, Theoretical model of particle orientation distribution function in a cylindrical particle suspension subject to turbulent shear flow, *Progress in Natural Science*, 16(1): 16-20.
- Lin Jianzhong, Li Jun, **Zhang Weifeng**, 2005, Orientation distribution of fibres in a channel flow of fibre suspension, *Chinese Physics*, 14: 2529-2538, doi:10.1088/1009-1963/14/12/026.
- Lin, Jianzhong, Wang Yelong, **Zhang Weifeng**, 2005, Sedimentation of short cylindrical pollutants with mechanical contacts, *Journal of Environmental Sciences*, 17(6): 906-911.
- You, Zhenjiang, Lin, Jianzhong, Shao, Xueming, **Zhang, Weifeng**, 2004, Stability and drag reduction in transient channel flow of fibre suspension, *Chinese Journal of Chemical Engineering*, 12(3):319-323.
- Lin, Jianzhong, Li, Jun, **Zhang, Weifeng**, 2004, The force for cylindrical particles in an elongational-shear flow, *International Journal of Nonlinear Sciences and Numerical Simulation*, 5(1): 9-16.
- Lin, Jianzhong, **Zhang, Weifeng**, Yu, Zhaosheng, 2004, Numerical Research on the orientation distribution of fibers immersed in laminar and turbulent pipe flows, *Journal of Aerosol Science*, 35: 63-82.
- Zhang, Weifeng**, Lin, Jianzhong, 2004, Research on the Motion of Particles in the Turbulent Pipe Flow of Fiber Suspensions, *Applied Mathematics and Mechanics*, 25(7): 417-750.
- Zhang, Weifeng**, Lin, Jianzhong, 2003, Research on the Orientation of Cylindrical Particles in Gas-Solid Two-Phase Pipe Flows, *ACTA Aerodynamica Sinica* 21(2): 237-243. (In Chinese)
- Lin, Jianzhong, **Zhang, Weifeng**, Wang, Yelong, 2002, Research on the orientation distribution of fibers immersed in a pipe flow, *Journal of Zhejiang University SCIENCE (English Edition)* 3(5): 501-506.

CONFERENCE PROCEEDINGS

- Duda, T. F., **W. G. Zhang**, and Y.-T. Lin, 2012, Studies of internal tide generation at a slope with nonlinear and linearized simulations: Dynamics and implications for ocean acoustics. *Oceans 2012*, Hampton Road, Virginia, Oct. 14-19, MTS/IEEE, submitted.
- Duda, T. F., Y.-T. Lin, **W. G. Zhang**, B. D. Cornuelle, P. F. J. Lermusiaux, 2011: Computational studies of three-dimensional ocean sound fields in areas of complex seafloor topography and active ocean dynamics, in *Proceedings of 10th International Conference on Theoretical and Computational Acoustics*, ICTCA 2011, Taipei, Taiwan, World Scientific Publishing.

Duda, T.F., Y.-T. Lin, A.E. Newhall, **W. G. Zhang**, and J.F. Lynch, 2010: Computational studies of time-varying three-dimensional acoustic propagation in canyon and slope regions. *Oceans 2010*, Seattle, WA, IEEE/MTS, 1-6.

Wilkin, J., J. Zavala-Garay, J., Levin, and **W. G. Zhang**, 2008: Four-dimensional variational assimilation of satellite temperature and sea level data in the coastal ocean and adjacent deep sea, *Geoscience and Remote Sensing Symposium*, IGARSS 2008, IEEE International, 3, pp.III-427-III-430, 7-11 July 2008, doi: 10.1109/IGARSS.2008.4779375.

PRESENTATIONS

Zhang, Weifeng (2013) "Dispersal of dense water formed in an idealized coastal polynya." Coastal Ocean and Fluid Dynamics Lab seminar, Woods Hole Oceanographic Institution.

Zhang, Weifeng (2013) "Dispersal of the Hudson River plume in the New York Bight." Ocean College, East China Normal University, Shanghai, China.

Zhang, Weifeng (2013) "Dispersal of the Hudson River plume in the New York Bight." Ocean College, Zhejiang University, Hangzhou, China.

Zhang, Weifeng (2013) "Distributed source physics of internal tide horizontal beam patterns near shelfbreak canyons", AOP&E department seminar, Woods Hole Oceanographic Institution.

Zhang, Weifeng (2012) "Is biological productivity enhanced at the New England Shelfbreak?" The Middle Atlantic Bight Physical Oceanography and Meteorology Conference, Nov. 7-8, University of Connecticut, Avery Point, Connecticut.

Zhang, Weifeng (2012) "Is biological productivity enhanced at the New England Shelfbreak?" The School for Marine Science and Technology, University of Massachusetts Dartmouth.

Zhang, Weifeng (2012), "Mean circulation and biological production at the New England Shelfbreak", *Ocean Science Meeting*, Feb 20-24, 2012, Salt Lake City, UT (poster).

Zhang, Weifeng (2012) "Mean biological production at the New England Shelfbreak", Coastal Ocean and Fluid Dynamics Lab seminar, Woods Hole Oceanographic Institution.

Zhang, Weifeng (2011) "Climatological mean circulation at the New England Shelfbreak", AOP&E department seminar, Woods Hole Oceanographic Institution.

Zhang, Weifeng (2010) "Pathways and time scales of the freshwater dispersal on the New York Bight", Graduate School of Oceanography, University of Rhode Island.

Zhang, Weifeng (2010) "Towards an integrated coastal ocean observation and modeling system", AOP&E department seminar, Woods Hole Oceanographic Institution.

Zhang, Weifeng (2010) "Coastal ocean *modeling* for studying circulation and transport across the continental shelf in the Mid-Atlantic Bight", AOP&E department seminar, WHOI.

Zhang, Weifeng (2010) "Towards an integrated coastal ocean observation and modeling system", *Ocean Science Meeting*, Feb. 22-26, 2010, Portland, Oregon (poster).

Zhang, Weifeng (2009) "Towards building an integrated observation and modeling system in the New York Bight using variational methods", *Glider Data Assimilation Workshop*, Sep. 17-18, 2009, Chapel Hill, North Carolina.

Zhang, Weifeng (2009) "Representative-based observing system in the New York Bight", *The 8th Workshop on Adjoint Model Applications in Dynamic Meteorology*, May 18-22, 2009, Tannersville, Pennsylvania.

Zhang, Weifeng (2008) "Simulation of age and residence time in the New York Bight", Dec. 15-19, 2008, *AGU Fall Meeting*, San Francisco, California.

Zhang, Weifeng (2008) "Modeling of the New York Bight for freshwater dispersal study and observing system

- design”, Dec. 10, 2008, Department of Applied Ocean Physics & Engineering, Woods Hole Oceanographic Institution, Massachusetts.
- Zhang, Weifeng (2008) “Coastal Ocean Modeling Using Variational Methods for Data Assimilation and Observing System Design”, Oct. 17, 2008, Department of Civil and Environmental Engineering, Princeton University, New Jersey.
- Zhang, Weifeng (2008) “Coastal Ocean Modeling Using Variational Methods for Data Assimilation and Observing System Design”, *Physical Oceanography Dissertation Symposium*, Oct. 5-10, 2008, Honolulu, Hawaii.
- Zhang, Weifeng, John Wilkin, and Robert Chant (2008) “Modeling of the mean dynamics and freshwater pathways in New York Bight”, *Ocean Science Meeting*, Mar. 3-7, 2008, Orlando, FL (poster).
- Zhang, Weifeng, John Wilkin, and Julia Levin (2006) “Adjoint Sensitivity Analysis of SST on New Jersey coast”, *Proceedings of The 7th International Workshop on Adjoint Applications in Dynamics Meteorology*, Oct. 8-13, 2006, Obergurgl, Tyrol, Austria. Abstract (208), p39.
- Zhang, Weifeng (2005) “Sensitivity Analysis of SST along New Jersey coast with ROMS Adjoint model”, *ROMS workshop*, Oct. 24-26, 2005, La Jolla, CA.

PROFESSIONAL SOCIETIES

American Geophysical Union

American Meteorological Society

The Oceanographic Society