Xiangming Zeng

Dept. of Marine, Earth & Atmospheric Sciences, North Carolina State University
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EDUCATION

- 2012-2016   Ph.D., Marine, Earth and Atmospheric Sciences, North Carolina State University
- 2007-2010   M.S., Physical Oceanography, Second Institute of Oceanography
- 2003-2007   B.S., Mathematics, Ocean University of China

WORK EXPERIENCE

- 2012-present Research Assistant, North Carolina State University
- 2010-2012   Research Associate, Second Institute of Oceanography
- 2007-2010   Research Assistant, Second Institute of Oceanography

RESEARCH INTEREST

- Ocean Modeling and Dynamics
- Machine Learning
- Coastal Sediment Transport
- Satellite Remote Sensing Application
- Numerical Analysis

HONORS AND AWARDS

- 2012-2016   Graduate Research Fellowship, North Carolina State University
- 2010   Outstanding Thesis Award, Second Institute of Oceanography
- 2007-2010   Graduate Research Fellowship, Second Institute of Oceanography
- 2003-2007   Undergraduate Student Fellowship, Ocean University of China
- 2005, 2006 China Undergraduate Mathematical Contest in Modeling Awards

PROFESSIONAL ACTIVITIES

- 2012-present Member, American Geophysical Union (AGU)
- 2012-present Member, Society for Industrial and Applied Mathematics (SIAM)
- 2014-present Member, International Association for Mathematical Geosciences
- 2014-present Member, Marine Technology Society
- 2015-present Referee of International Journal of Remote Sensing
- 2015-present Referee of Journal of Atmospheric and Oceanic Technology

PUBLICATIONS

[1] **Zeng, X.** and R. He, 2016. Gulf Stream variability and a triggering mechanisms of its large meander in the South Atlantic Bight. Under review.

[2] **Zeng, X.**, R. He, Z. Xue, H. Wang, Y. Wang, Z. Yao, W. Guan, and J. Warrillow, 2015. River-derived sediment suspension and transport in the Bohai, Yellow, and East China Seas: A modeling study. Continental Shelf Research 111, 112-125.

[3] **Zeng, X.**, Y. Li, and R. He, 2015. Predictability of the Loop Current variation and eddy shedding process in the Gulf of Mexico using an artificial neural network approach. Journal of Atmospheric and Oceanic Technology 32, 1098-1111.

[4] **Zeng, X.**, Y. Li, R. He, and Y. Yin, 2015. Clustering of Loop Current patterns based on the satellite-observed sea surface height and self-organizing map. Remote Sensing Letters 6(1), 11-19.

[5] Wang, H., A. Wang, N. Bi, **X. Zeng**, and H. Xiao, 2014. Seasonal distribution of suspended sediment in the Bohai Sea, China. Continental Shelf Research 90: 17-32.

[6] Yin, Y., X. Lin, Y. Li, and **X. Zeng**, 2014. Seasonal variability of Kuroshio intrusion northeast of Taiwan as revealed by self-organizing map. Chinese Journal of Oceanography and Limnology 32(6): 1435-1442.

[7] **Zeng X.-M.**, W.-B. Guan, and C. Pang, 2011. Cumulative influence of long term reclamation on hydrodynamics in the Xiangshangang Bay. Journal of Marine Science 29(1), 73-83.

[8] Dong L.X., W.B. Guan, Q. Chen, X.H. Li, X.H. Liu, and **X.M. Zeng**, 2011. Sediment transport in the Yellow Sea and East China Sea. Estuarine, Coastal and Shelf Science 93, 248-258.

[9] **Zeng, X.**, 2010. Master Thesis: Simulation and Analysis of the Yangtze River-derived sediment transport over the adjacent continental shelf.

MEETINGS AND TALKS

[1] **Zeng, X.** and R. He, 2016. Diagnosing a large Gulf Stream meander using adjoint sensitivity analysis (oral presentation). Ocean Sciences Meeting. New Orleans, LA.

[2] **Zeng, X.**, R. He, 2015. An adjoint sensitivity analysis of Gulf Stream path variation in the South Atlantic Bight. Graduate Climate Conference (poster presentation). Woods Holes, MA.

[3] **Zeng, X.**, Y. Li, and R. He, 2015. Predictability of the Loop Current variation and eddy shedding process in the Gulf of Mexico using an artificial neural network approach (poster presentation). Gordon Research Conference and Seminar on Coastal Ocean Modeling. University of New England in Biddeford, ME.

[4] **Zeng, X.** and R. He, 2015. River-derived sediment suspension and transport in the Bohai, Yellow, and East China Seas: a modeling study. 10th Annual NC State University Graduate Student Research Symposium (**nominated poster presentation**). Raleigh, NC.

[5] 2014 COAWST Modeling System Training Workshop (Webex). Woods Hole Oceanographic Institution. Woods Hole, MA.

[6] Cao, F., Class, C., Loudon, T., Nadal-Quiros, M., Quintana, S., Ritz, B., and **Zeng, X.**, 2014. Simulation-Based Optimization of Membrane Performance. 20th Industrial Mathematical and Statistical Modeling Workshop. Raleigh, NC.

[7] 2014 Graduate Student Summer Teaching Institute. North Carolina State University. Raleigh, NC.

[8] 2014 North Carolina State University Postdoctoral Research Symposium (poster presentation judge). Raleigh, NC.

[9] 2014 North Carolina State University Undergraduate Research Symposium (poster presentation judge). Raleigh, NC.

[10]   **Zeng, X.**, R. He, and Y. Li, 2014. Predictability of Loop Current Eddy Shedding Process in the Gulf of Mexico Using an Artificial Neural Network Modeling Approach. 9th Annual NC State University Graduate Student Research Symposium (**nominated poster presentation**). Raleigh, NC.

[11]   **Zeng, X.**, R. He, and Y. Li, 2013. Predictability of Loop Current Eddy Shedding Process in the Gulf of Mexico Using an Artificial Neural Network Modeling Approach. MEAS-FER Graduate Student Joint Symposium, North Carolina State University. Raleigh, NC.

[12]   **Zeng, X**., 2011. Hong Kong University of Science and Technology Ocean Modeling Training Workshop. Hong Kong.

[13]   **Zeng, X.**, W.B. Guan, 2010. Numerical Simulation of Float Trajectories near Green Tide Source Area-Jiangsu coast. Harmful Algal Blooms 973 Project Meeting. Chongqing, China.

[14]   **Zeng, X.**, W.B. Guan, 2010. Yangtze River Sediment transport along adjacent continental shelves. Sediment Dynamics of Key Estuaries in China Project Meeting. Qingdao, China.

[15]   **Zeng, X.**, et al., 2010. The 2nd China-Italy Scientific Workshop on Operational Oceanography and Climate Change in shelf and coastal seas. Shanghai, China.

[16]   **Zeng, X.**, W.B. Guan, 2009. Simulation of the Yangtze River-derived sediment transport over the adjacent continental shelf. Workshop on Sediment Dynamics of Chinese Muddy Coasts and Estuaries. Nanning, China.

RESEARCH CRUISES

[1] 2012.10   US East Connectivity Survey   R/V Cape Hatteras
[2] 2012.04   HAB 973 East China Sea Survey   R/V Runjiang1
[3] 2011.05   HAB 973 Jiangsu Coast Survey   R/V Suyu
[4] 2009.08   Yangtze River Estuary Survey   R/V Zheyu
[5] 2009.05   Argo 973 Luzon Strait Survey   R/V Dongfanghong2
[6] 2008.10   Argo 973 Luzon Strait Survey   R/V Dongfanghong2
[7] 2008.08   Yangtze River Estuary Survey   R/V Zheyu
[8] 2008.05   China Sea Productivity 973 Survey   R/V Beidou

VOLUNTEER EXPERIENCES

[1] 2014.03 Service Raleigh, Raleigh, NC
[2] 2014.03 Blue Heron Bowl—National Ocean Sciences Bowl, Raleigh, NC.
[3] 2013.09 2nd Chinese Harvest Moon Festival, Raleigh, NC.
[4] 2013.03 Service Raleigh, Raleigh, NC