XINFENG LIANG

Contact Information

College of Marine Science
University of South Florida
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Research Interests

Roles of Oceans in the Climate System, Influence of Mesoscale Eddies on Deep Ocean Processes, Ocean Mixing and the Associated Dynamical Processes, Ocean Current Measurement and Ocean State Estimation

Education

Ph.D., Physical Oceanography, Columbia University, 2012

M.A., Physical Oceanography, Columbia University, 2009

B.S., Marine Sciences, Ocean University of China, 2003

Research Experience

Assistant Professor, University of South Florida, 2016/01–

Visiting Scholar, Woods Hole Oceanographic Institution, 2013/08–

Postdoctoral Associate, MIT, 2012/12–2015/12

Research Assistant, Columbia University, 2007/09–2012/08

Seagoing Experience

The Southern Ocean, DIMES UK4, RSS James Clark Ross, 2013 (46 days)
Lowered ADCP Measurements and Data Processing

The Southern Ocean, DIMES UK3, RSS James Cook, 2012 (54 days)
Lowered ADCP Measurements and Data Processing

The Southern Ocean, DIMES UK2, RSS James Cook, 2011 (39 days)
Vessel ADCP Measurements and Data Processing

The Eastern Tropical Pacific, LADDER 3, RV Atlantis, 2007 (25 days)
CTD Data Collection and Salinity Calibration

The South China Sea, SCME, RV Dongfanghong II, 2005 (27 days)
Vertical Microstructure Measurements and Data Processing

Publications

Yang, Q., W. Zhao, **X. Liang** and J. Tian, 2016, Three-dimensional distribution of turbulent mixing in the South China Sea, *J. Phys. Oceanogr.*, In Press.

Zhang, Y., Z. Liu, Y. Zhao, J. Li and **X. Liang**, 2015, Effect of surface mesoscale eddies on deep-sea currents and mixing in the northeastern South China Sea, *Deep-Sea Res. II*, 122: 6–14

Forget, G., D. Ferreira and **X. Liang**, 2015, On the observability of turbulent transport rates by Argo: supporting evidence from an inversion experiment, *Ocean Sci.*, 11: 839–853.

Liang, X. and C. Wunsch, 2015, Note on the redistribution and dissipation of tidal energy over mid-ocean ridges, *Tellus A*, 67, 27385, doi: 10.3402/tellusa.v67.27385.

Liang, X., C. Wunsch, P. Heimbach and G. Forget, 2015, Vertical redistribution of oceanic heat content, *J. Climate*, 2015, 28, 3821-3833.

Liang, X., 2014, Semidiurnal tidal currents in the deep ocean near the East Pacific Rise between 9° and 10°N, *J. Geophys. Res.*, 119:4262–4277

Yang, Q., J. Tian, W. Zhao, **X. Liang** and L. Zhou, 2014, Observations of turbulence on the shelf and slope of northern South China Sea, *Deep-Sea Res. I*, 87:43–52.

Zhang, Z., W. Zhao, J. Tian and **X. Liang**, 2013, A mesoscale eddy pair southwest of Taiwan and its influence on deep circulation, *J. Geophys. Res.*, doi: 10.1002/2013JC008994.

Liang X. and A. Thurnherr, 2012, Eddy-modulated internal waves and mixing on a mid-ocean ridge, *J. Phys. Oceanogr.*, 42(7):1242–1248.

Adams D., D. J. McGillicuddy Jr., L. Zamudio, A. Thurnherr, **X. Liang**, O. Rouxel, C. R. German, and L. Mullineaux, 2011, Surface-generated mesoscale eddies transport deep-sea products from hydrothermal vents, *Science*, 332(558):580–583.

Liang X., A. Thurnherr, 2011, Subinertial variability in the deep ocean near the East Pacific Rise between 9 and 10°N, *Geophys. Res. Lett.*, 38, doi:10.1029/2011GL046675.

Tian J., Q. Yang, **X. Liang** et al., 2006, Observation of Luzon Strait transport. *Geophys. Res. Lett.*, 33(19), doi:10.1029/2006GL026272.

Liang X., J. Tian, X. Zhang, 2006, Observation of thermal microstructure over shelf break in the East China Sea, *Prog. Nat. Sci*, 16:1268–1274.

Liang X., X. Zhang, J. Tian, 2005, Observation of internal tides and near-inertial motions in the upper 450 m layer of the northern South China Sea, *Chin. Sci. Bull.*, 50(24):2890–2895.

Zhang X., **X. Liang**, J. Tian, 2005, Estimates of mixing on the South China Sea Shelf. *Acta Oceanologica Sinica*, 24:1–8.

Tian J., L. Zhou, X. Zhang, **X. Liang** et al., 2003, Estimates of M_2 internal tide energy fluxes along the margin of Northwestern Pacific using TOPEX/POSEIDON altimeter data, *Geophys. Res. Lett.*, 30(17), doi:10.1029/2003GL018008.

Manuscripts

Liang, X. and C. Wunsch, Estimations of global ocean vertical velocity, *J. Geophys. Res.*, in revison

Liang, X. and L. Yu, Variations of the global net air-sea heat flux during the "Hiatus" period (2001–2011), *J. Climate*, in revision.

Liang, X., G. Forget, P. Heimbach and C. Wunsch, Estimates of the global ocean diapycnal and vertical diffusivities, *Geophys. Res. Lett.*, to be submitted

Liang, X., J-B Sallee and A. Thurnherr, Circulation and mixing in Orkney Passage, *J. Phys. Oceanogr.*, to be submitted.

Technical Reports

Liang X., Lowered Acoustic Doppler Current Profiler (LADCP). In Cruise report: RRS James Clark Ross, JR281, 2013.

Liang X., Lowered Acoustic Doppler Current Profiler (LADCP). In Cruise report: RRS James Cook, JC069, 2012.

Liang X., A. Brearley. Vessel-mounted ADCP. In Cruise report: RRS James Cook JC054, 2011.

Liang X., A. Thurnherr, Evaluating a High-Power Prototype of the Teledyne/RDI Workhorse ADCP, 2009.

Conferences

Liang X., C. Wunsch, P. Heimbach and G. Forget, Vertical redistribution of oceanic heat content, *AGU Fall Meeting*, San Francisco, CA, 2014

Liang X., C. Wunsch, Estimation of the global ocean vertical velocity, *Ocean Sciences*, Honolulu, HI, 2014

Liang X., C. Wunsch, Redistribution and dissipation of tidal energy over an idealized ridge, *Ocean Turbulence Conference*, Santa Fe, NM, 2013

Liang X., A. Thurnherr, Eddy modulation of internal tides over the East Pacific Rise near 10°N, *AGU Fall Meeting*, San Francisco, CA, 2012

Liang X., A. Thurnherr, Eddy-modulated internal waves and mixing on a mid-ocean ridge, *AGU Ocean Sciences*, Salt Lake City, UT, 2012

Liang X., A. Thurnherr et al, Subinertial variability in the deep ocean near the East Pacific Rise, *AGU Ocean Sciences*, Portland, OR, 2010

Liang X., L. Yang, J. Tian, Estimates of M_2 internal tide energy fluxes using TOPEX/POSEIDON altimeter data, *Western Pacific Geophysics Meeting*, Beijing, China, 2006

Professional Service

Journal Reviews: *Geophysical Research Letters*, *Journal of Geophysical Research*, *Deep-Sea Research I*, *Journal of Marine Systems*, *Chinese Journal of Oceanology and Limnology*

Grant Proposal Reviews: *National Science Foundation* (USA)