

Lixin Qu

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Education

Ph.D. Oceanography, Texas A&M University, 2014–2019 (expected).

Certificate: High Performance Computing in Geoscience (expected).

M.Sc. Physical Oceanography, Ocean University of China, 2011–2014.

Study Abroad: Sino-German summer school on marine sciences, Germany, Summer 2012.

B.Sc. Information and Computing Science, Ocean University of China, 2007–2011.

Exchange Program: School of Mathematics, Shandong University, China, Fall 2008 and Spring 2009.

Research Experience

Research Assistant, Department of Oceanography, Texas A&M University, 2014–present.

Research Assistant, College of Oceanic and Atmospheric Sciences, Ocean University of China, 2011–2014.

Research

Publications

Peer-reviewed

Qu, L. and R. D. Hetland (in preparation). Non-geostrophic baroclinic instability over sloping bathymetry. *Journal of Physical Oceanography*.

Qu, L. and R. D. Hetland (in preparation). Temporal resolution of wind forcing required for river plume prediction. *Ocean Modelling*.

Qu, L., X. Lin, R. D. Hetland, and J. Guo (2018). The asymmetric continental shelf wave in response to the synoptic wind burst in a semienclosed double-shelf basin. *Journal of Geophysical Research: Oceans*. doi:10.1002/2017JC013025.

Qu, L. and X. Lin (2014). The effect of continental shelf slope around island on the Island Rule. *Journal of Ocean University of China*, 44 (Sup.), 001-006 (in Chinese with English abstract).

Other and Products

Qu, L. and T. Zu (2017). “Pearl River Forecast System,” An operational high-resolution ocean circulation forecast model in the Pearl River plume region. <http://pong.tamu.edu/~lixin/Pearl>.

Qu, L. (2014). The oceanic responses to the synoptic wind bursts in the Yellow Sea and Bohai Sea (Master’s dissertation).

Conference Presentations

L. **Qu** , R. D. Hetland and L. N. Thomas, "Effects of near-inertial wind forcing on baroclinic instabilities in a large buoyancy driven current," Ocean Sciences Meeting, Portland, OR, February 11–16, 2018.

Poster Presentations

L. **Qu** and R. D. Hetland, "Non-geostrophic baroclinic instability over sloping bathymetry," AGU Virtual Poster Showcase, April, 2018.

L. **Qu** and R. D. Hetland, "Temporal resolution of wind forcing required for river plume prediction," Ocean Sciences Meeting, Portland, OR, February 11–16, 2018.

L. **Qu** , T. Zu, and R. D. Hetland, "An operational high-resolution ocean circulation forecast model on the Northern South China Sea shelf," Supercomputing 2017 Conference, Denver, CO, November 12–17, 2017.

L. **Qu** and R. D. Hetland, "Temporal resolution of wind forcing required for river plume prediction," Gordon Research Conference: Coastal Ocean Modeling, University of New England, June 11–16, 2017.

L. **Qu** , T. Zu, and R. D. Hetland, "An operational high-resolution ocean circulation forecast model on the Northern South China Sea shelf," High Performance Research Computing: Research Computing Week, Texas A&M University, June 5–9, 2017.

T. Zu, J. Li, L. **Qu**, Y. Shu, J. Chen, H. Zhu, J. Yao, and D. Wang, "Variability of the coastal circulation revealed by High-Frequency Radar in the Guangzhou Bay of the northern South China Sea," AGU Fall Meeting, San Francisco, CA, December 12–16, 2016.

L. **Qu**, X. Lin and R. D. Hetland, "The semienclosed oceanic response to wind bursts: the sub-inertial processes in the Yellow Sea and Bohai Sea," WCRP/CLIVAR Second International Symposium on Boundary Current Dynamics, Li Jiang, Yun Nan, China, July 8–9, 2013.

Selected Other Conferences and Workshops Attended

SciPy Conference and Tutorial, Austin, TX, July, 2015, 2016, and 2017.

Special HPC Seminar and Workshop on Cloud Computing, Texas A&M University, March 21, 2017.

Presenting Data and Information Workshop, Houston, TX, October 12, 2016.

COAWST Model Training (via WebEx USGS), Woods Hole, MA, August 15–19, 2016.

NVIDIA GPU Programming Workshop, Texas A&M University, April 27–28, 2016.

Ocean Sciences Meeting, New Orleans, LA, February 21–26, 2016.

Teaching

Teaching Assistant, Python for Geoscientists (OCNG 469/669), Texas A&M University, Spring 2017.

Student Lecturer, Summer School on Marine Sciences, University of Bremen/GEOMAR, Summer 2012.

Teaching Assistant, Visual Basic Programming (Fundamental Series), Ocean University of China, Fall 2011.

Field Work

Texas continental shelf: R/V Point Sur, NSF RAPID, September 27–29, 2017.

Honors & Awards

Chapman Research Award, Texas A&M University, 2017.

Donald and Melba Ross Scholarship, Texas A&M University, 2017.
A.T. Webber '22 and A.T. Webber, Jr. '49 Fellowship in Oceanography, Texas A&M University, 2016.
Robert O. Reid Oceanography Fellowship, Texas A&M University, 2015.
James Sharp Memorial Fellowship, Texas A&M University, 2014.
National Scholarship for Studying Abroad, China Scholarship Council, 2014.
Outstanding Postgraduate Student Award, Ocean University of China, 2012.
Excellent Graduate Student Award, Ocean University of China, 2011.
Aihua Scholarship, Ocean University of China, 2010.
CUMCM Second Prize, Shandong Division of CUMCM Council, 2009.
National Scholarship, Ministry of Education of China, 2009 and 2010.
Honor of Outstanding Student, Ocean University of China, 2008, 2009, and 2010.
First Class Academic Scholarship, Ocean University of China, 2008, 2009, and 2010.

Service

Reviewer for Journal of Geophysical Research – Oceans
Peer judge for AGU Spring Virtual Poster Showcase, 2018

Skills

Numerical Modeling

Extensively used ROMS ocean modeling code; experience with COAWST and GOTM modeling.

Programming Language

Proficient in Python; skilled in Fortran, C, C++, and Matlab.

High Performance Computing

Extensive experience with MPI and OpenMP; familiar with GPU programming, OpenACC and CUDA.

Visualization

Experience with JavaScript, HTML, Visual Basic, and AutoCAD.

Other Skills

Skilled in Mathematica; proficient in \LaTeX ; extensive experience with Linux system administration, using a cluster, and shell scripting.