

**Lixin Qu**  
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Department of Oceanography  
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## **PERSONAL DETAILS**

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## **RESEARCH INTERESTS**

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Coastal circulation forecasting; river plume dynamics; ocean turbulence associated with coastal mixing processes; data assimilation; and theory and numerical simulation of flow in estuarine, coastal, and continental shelf environments.

## **EDUCATION**

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**Ph.D. Oceanography** 2014 - present  
*Texas A&M University, United States*

**M.S. Physical Oceanography** 2011 - 2014  
*Ocean University of China, China*  
Study Abroad: University of Bremen, Germany (Summer 2012)

**B.S. Information and Computing Science** 2007 - 2011  
*Ocean University of China, China*  
Exchange Program: School of Mathematics, Shandong University, China (2008 - 2009)

## **RESEARCH EXPERIENCE**

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**Particle Tracking Bias** 2017 - present  
*Physical Oceanography Numerical Group, TAMU*  
Graduate researcher for investigating Lagrangian tracking errors due to temporal subsampling of numerical model output in collaboration with Dr. Kristen Thyng.

**Pearl River Forecast System** 2016 - 2017  
*Physical Oceanography Numerical Group, TAMU*  
Graduate researcher for developing a high-resolution forecast model in the Pearl River region of China. The system is a fully operational ocean circulation forecast model on the South China Sea shelf and provides the real-time analysis and 7-day forecast data for investigating the coastal environments in the Pearl River region.

**River Plume Prediction** 2015 - 2016  
*Physical Oceanography Numerical Group, TAMU*

Graduate researcher for studying the wind forcing mechanism controlling the structure, instability, and evolution of river plume under the advisement of Dr. Robert Hetland. This research quantified the temporal resolution of wind forcing required for river plume prediction.

### **Yellow Sea Warm Current**

2012 - 2014

*Ocean Circulation Team, OUC*

Graduate research assistant for studying the effect of continental shelf wave on the path of Yellow Sea Warm Current under the guidance of Dr. Xiaopei Lin. This research provided the first observational evidence of continental shelf wave in the Yellow Sea and revealed its importance in this region.

### **Island Rule**

2011 - 2012

*Ocean Circulation Team, OUC*

Graduate research assistant for studying the effect of continental shelf slope around island on the classic Island Rule theory under the advisement of Dr. Xiaopei Lin. This research provided a modified theory by quantifying the topographic effect on Island Rule.

## **ACADEMIC AND TEACHING EXPERIENCE**

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### **Teaching Assistant**

Spring 2017

*Texas A&M University, United States*

Python for Geosciences (OCNG 669). Hands-on programming instruction.

### **Student Lecturer**

Summer 2012

*University of Bremen, Germany*

Sino-German summer school on marine sciences in Leibniz Centre for Tropical Marine Ecology and GEOMAR - Helmholtz Centre for Ocean Research Kiel.

### **Graduate Teaching Assistant**

Fall 2011

*Ocean University of China, China*

Visual Basic Programming (Teaching Center for Fundamental Courses). Hands-on programming lab.

## **PUBLICATIONS**

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Qu, L., T. Zu, and R. D. Hetland, (in preparation): An operational high-resolution ocean circulation forecast system in Pearl River region. *Journal of Operational 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, (submitted): The asymmetric continental shelf wave in response to the synoptic wind event in a semi-enclosed double-shelf basin. *Journal of Geophysical Research*.

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)

## **SKILLS**

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<i>Analytics</i>	PYTHON, MATLAB, MATHEMATICA
<i>Computing</i>	FORTRAN, C, C++, SHELL SCRIPTING
<i>Modelling</i>	ROMS, COAWST, GOTM
<i>Parallelization</i>	MPI(CPU), OpenMP(CPU), CUDA(GPU), OpenACC(GPU)
<i>Visualization</i>	JAVASCRIPT, VISUAL BASIC, AutoCAD
<i>Software</i>	L <sup>A</sup> T <sub>E</sub> X, MICROSOFT

## **SCHOLARSHIPS AND AWARDS**

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<i>2016 - 2017</i>	Webber Scholarship, Department of Oceanography, TAMU
<i>2015 - 2016</i>	Robert O. Reid Fellowship, Department of Oceanography, TAMU
<i>2014 - 2015</i>	James Memorial Scholarship, Department of Oceanography, TAMU
<i>2014 - 2018</i>	National Fellowship (Studying Abroad), China Scholarship Council
<i>2011 - 2012</i>	Outstanding Postgraduate Student Award, OUC
<i>2010 - 2011</i>	Excellent Graduate Student Award, OUC
<i>2009 - 2010</i>	Aihua Scholarship, School of Mathematical Sciences, OUC
<i>2009 - 2010</i>	CUMCM Second Prize, Shandong Division of CUMCM Council
<i>2008 - 2010</i>	National Scholarship (Two-time), Ministry of Education of China
<i>2007 - 2010</i>	Outstanding Undergraduate Student Award (Three-time), OUC
<i>2007 - 2010</i>	First Class Academic Scholarship (Three-time), OUC