### SCHOOL OF OCEANOGRAPHY SHANGHAI JIAO TONG UNIVERSITY 上海交通大学 海洋学院







School of Oceanography (SOO) at Shanghai Jiao Tong University is seeking scientific and technological solutions for basic and emerging questions in the global ocean, providing a vigorous educational program in ocean sciences for both undergraduate and graduate students, and caring environmental justice, social equality, and global governance. The School of Oceanography, as a rising star from the ocean horizon, is striving for excellence in research, education and service to our global communities.





# Introduction

The School of Oceanography is a joint venture between Shanghai Jiao Tong University and the Second Institute of Oceanography at the Ministry of Natural Resources. Shanghai Jiao Tong University founded the Institute of Oceanography (IOO) in 2013 for the discipline of ocean science and technology. In the past five years, IOO established PhD and MS degree programs in ocean science. To broaden impacts on education, research and service, SOO was jointly formed in 2018 and will begin to recruit undergraduate students in ocean science and technology in 2019.

The School conducts education and research in areas of physical, chemical, biological and geological oceanography and ocean technologies. The mission is to explore phenomena and processes of marine environment, ecology, life and climate change, to develop sensor and platform technologies for ocean observation and analysis, and to study strategies and policies related to marine environment, the ecosystem, resource protection and sustainability.

As a joint venture, SOO takes advantage of the resources and the strengths of both the university and government to conduct disciplinary, interdisciplinary and transdisciplinary education, research and service, and to promote creativity and innovation for solving global challenges.

SOO has a global vision based on international collaborations in both research and education, carrying out a number of international collaborative research projects with institutions around the world, participating in cruises, and organized international conferences and workshops, and recruiting talented international scientists, engineers, and students in both undergraduate and graduate studies. SOO has become a major member among national and international ocean research and education communities.

## Research

#### **Physical Oceanography**

- Ocean circulation
- Mesoscale and sub-mesoscale oceanic processe
- Ocean and atmosphere interaction
- Polar oceanography
- Coastal and estuarine processes
- Coupled physical and biological ocean processes





#### **Biological Oceanography**

- Marine resources
- Plankton ecology
- Population, behavior and evolution
- Polar biology

#### **Marine Strategy and Management**

- Marine social economics and sustainability
- Human impacts on marine ecosystem and resources
- Resource management and policy



#### **Chemical Oceanography**

- Biogeochemistry
- Global carbon cycle
- Isotope geochemistry
- Pale climatology
- Analytical methods





#### Geological oceanography

- Paleo-oceanography
- Marine sedimentology
- Sea floor science
- Resource metallogenic processes
- Submarine exploration

#### Marine Technology

- Underwater vehicles
- Ocean sensors
- Observation network theories and technology





# **Distinguished Faculty Members**

SOO currently has more than 60 faculty members, including 3 academicians of the Chinese Academy of Sciences (CAS), 3 academicians of the Chinese Academy of Engineering (CAE), 1 academician of the US National Academy of Sciences (NAS), 4 Chair Professors from the National Thousand Talents Plan (NTTP), and 3 winner of the Excellent-Youth-Fund from the Nature Science Foundation of China.

### Physical Oceanography -



#### Meng Zhou

Dean of SOO, Zhiyuan Chair Professor, Awardee of NTTP-National Distinguished Experts.

Research areas: Physical and biological oceanography, polar oceanography, biomathematics, sensor-integration.

#### **Jilan Su**

Academician of the Chinese Academy of Sciences, Chair Professor.

Research areas: Physical oceanography and marine policy.





#### **Dake Chen**

Co–Dean of SOO, Academician of the Chinese Academy of Sciences, Awardee of NTTP–National Distinguished Experts, Chair Professor.

Research areas: Tropical air-sea interaction and ocean circulation.

#### Fei Chai

Awardee of NTTP–National Distinguished Experts, Chair Professor.

Research areas:

Physical-biogeochemistry and ecological dynamics, ecosystem modelling, tropical oceanography, El Nino, and ocean carbon cycle.



### Chemical Oceanography -



#### Michael L. Bender

Academician of the US National Academy of Sciences, Fellows of American Geophysical Union, Geochemical Society and European Association of Geochemistry, Visiting Chair Professor.

Research areas: Chemical oceanography and climate change.

#### **Jing Zhang**

Academician of the Chinese Academy of Sciences, Chair Professor.

Research areas: Chemical Oceanography and marine biogeochemistry.



### **Biological Oceanography-**



#### Walker O. Smith Jr.

Awardee of NTTP–National Distinguished Foreign Experts, Chair Professor.

Research areas: Biological oceanography and polar oceanography.

#### Xiang Xiao

Awardee of Distinguished Young Scientist Grant of National Natural Science Foundation of China (NSFC)

Research area: Marine microbiology.





#### **Fengping Wang**

Awardee of Distinguished Young Scientist Grant of National Natural Science Foundation of China (NSFC)

Research Area: Microbial ecosystem and geochemical roles in deep ocean and subsurface environments, Microbial Oceanography.

### Geological oceanography -



#### Jiabiao Li

Academician of the Chinese Academy of Engineering, Chair Professor.

Research areas: Submarine geosciences, submarine detection engineering, geodynamics.

#### **Xianglong Jin**

Academician of the Chinese Academy of Engineering, Chair Professor.

Research areas: Submarine geology and marine geophysics.



### Marine Technology -



#### Lian Lian

Professor, Chair of the IEEE/OES Shanghai Chapter. Research area: Ocean engineering and technologies.

#### **Delu Pan**

Academician of the Chinese Academy of Sciences, Chair Professor.

Research area: Marine remote sensing.





#### Xianqiang He

Awardee of Nature Science Foundation of China National Distinguished Young Scientist Grant.

Research areas: Marine and atmospheric radiation transmission and ocean color satellite remote sensing.



# **Degree Programs**

SOO offers Master's and Doctoral degrees in ocean science as well as undergraduate degree in ocean science and technology, and provides students unique opportunities for interdisciplinary study and research in physical, chemical, biological, geological oceanography, marine technology and marine strategy and management. Applicants are expected to have a strong background in science, technology, engineering or mathematics. We welcome students from all over the world to join SOO for studying and exploring the mysteries of the ocean.

















