School of Naval Architecture, Ocean and Civil Engineering

http://naoce.sjtu.edu.cn/

Ⅰ. Introduction to Disciplines and Main Research Fields

There are five departments in the School of Naval Architecture, Ocean and Civil Engineering (NAOCE), namely, Naval Architecture and Ocean Engineering, Engineering Mechanics, Civil Engineering, Architecture, and International Shipping. The school has five primary disciplines, and offers five Bachelor Degree Programs, five Master Degree Programs, and five Engineer Master Programs. Departments of Naval Architecture and Ocean Engineering as well as Engineering Mechanics and Civil Engineering offer PhD programs of primary disciplines and furnish postdoctoral programs. And the school also features two State Key Academic Programs at primary discipline level (i.e., Naval Architecture and Ocean Engineering, Engineering Mechanics) and two Shanghai key disciplines (Fluid Mechanics, Geotechnical Engineering).

Disciplines and Main Research Fields

Primary Disciplines	Research Fields
Naval Architecture and Ocean Engineering	Ship Design and Digitalized Ship Building, Ship Performance, Ship Hydrodynamics, Ship Structure Mechanics, Ocean Engineering, Underwater Engineering, Marine Engineering, Acoustic Engineering
Engineering Mechanics	High-speed Hydrodynamics, Environmental Fluid Mechanics, Bio-fluid Mechanics, Mechanical Behavior of Materials, Structural Mechanics of Composite Materials, Multi-body System Dynamics and Control, Non- linear Dynamics
Civil Engineering	Geotechnical Engineering, Hydraulic Geotechnical Engineering, Steel Structure, Structural Engineering, Engineering Safety and Disaster Prevention, Modern New Space Structures
Architecture	Ecological Architecture Design, Urban Planning, Architecture Conservation and History
International Shipping	Shipping and Logistics Management, Transportation Safety, Transportation System Planning, Multi-model Transportation and Informationization

Ⅱ. Faculty

1. Overview of Faculty

By Dec. 31st, 2014, there are 365 faculty and staff members in our school, of whom 222 are full-time faculty, 78 professors and 91 associate professors. There are 190 faculty members holding PhD degrees (among whom 59 faculties got doctorates from overseas universities). There are two academicians of Chinese Academy of Sciences (including one jointly-appointed academician), four academicians of Chinese Academy of Engineering (including two jointly-appointed academicians), nine members of the Thousand Talents Plan, six Chang Jiang Scholars, two winners of the National Science Fund of China for Distinguished Young Scholars, one nationally outstanding teacher, six members of the Thousand Talents Program (youth), one winner of National Science Fund for Outstanding Youths, one member of the Top-notch Young Talents Program, one member of Shanghai Outstanding Talents, one winner of Shanghai Outstanding Teachers, two members of the Thousand Talents Program of Shanghai, three members of the Outstanding Academic Leaders Program of Shanghai, and one member of Shanghai Oriental Scholar.

2. Renowned Professors

No.	Name	Research Interest	No.	Name	Research Interest
1	LIAO Shijun	Fluid Mechanics	11	WU Guoxiong	Computational Fluid Mechanics
2	YANG Jianmin	Hydrodynamics	12	LIU Xila	Structural Engineering
3	MA Ning	Ship Fluid Mechanics	13	LUO Yong	Ocean Engineering
4	SHI Zhong	Offshore Engineering	14	WANG Jin	Ocean Engineering
5	LU Jian	Transportation Management	15	ZHENG Dongsheng	Marine Soil Mechanics
6	YANG Chi	Ship Hydrodynamics	16	TAO Longbin	Ocean Engineering
7	PENG Zhongren	Transportation Management	17	QIAO Pizhong	Solid Mechanics
8	DONG Cheng	Biomechanics	18	Francis Lucien Noblesse	Ocean Engineering
9	QIAO Pizhong	Solid Mechanics	19	HONG Jiazhen	Dynamics, Vibration and Control
10	LIU Hao	Biofluid Mechanics	20	WAN Decheng	Computational Fluid Mechanics

Ⅲ. Achievements

1. Significant Research Achievements in The Last Three Years

Year	Project	Participants	Award	Class
2014	Basic Theory and Method of the Interaction Analysis between Saturated Soil and Pile Foundation	WANG Jianhua, LU Jianfei, ZHOU Xianglian, CHEN Jinjian	Natural Science Award of the Ministry of Education	First Prize
2014	The Origin of Architectural Narratology	LU Shaoming	12th Shanghai Awards for Achievements in Philosophy and Social Science	First Prize
2014	Net Structure of Taizhou University Football Field Weather-proof Fence	CHEN Wujun, DONG Shilin, LV Zizheng, HE Yanli	Awards for Spactial Structure Design	Silver Award
2012	3500m Deep Sea Remotely Operating Vehicle	ZHU Jimao	National Science and Technology Progress Award	Second Prize
2012	Mechanical Behavior and Construction Technologies of the Long-distance Pipe Jacking in Complex Geo-environment	WANG Jianhua	MOE Science and Technology Progress Award	Second Prize
2012	Study and Application of the Key Techniques of Steel Structure for Super Tower Boiler	ZHAO Jincheng	Shanghai Science and Technology Progress Award	Second Prize
2012	Large Space Deployable Structure Analysis Theory and Key Technology	CHEN Wujun	Shanghai Science and Technology Progress Award	Third Prize

2. Major Scientific Projects at Present

Key Projects Supported by National Natural Science Foundation of China

Research on the Dynamic Mechanism of the Freak Wave and its Nonlinear Interaction with the Deep Water Platforms	Yang Jianmin
Theories and Experimental Research of Key Problems of Flexible Multibody Systems with Changing Topologies Dynamics	Hong Jiazhen

(continued)

Research on Disaster-causing Mechanism, Warning and Control of Construction of Deep and Large Foundation Pits in Coastal Areas	WANG Jianhua
Research on the Design and the Evaluation Indexes System of Indoor Thermal Environment in Civilian Construction	LIAN Zhiwei

The Major National Basic Research Program (973)

Continental Slope Ecological System Dynamics and Sustainable Exploitation of Biological Resources in the South China Sea	ZHOU Meng

The Major National Basic Research Program (973) of Ministry of Science and Technology

Dynamic Research on Very Large Ocean Floating Structures Complex Mooring Systems	WANG Xuefeng
Dynamic Property Research on Offshore Floating Wind Turbine under the Combine Effect of Wind, Wave, and Current	LIU Hua
Dynamic Property and Safety Research on Offshore Fixed Wind Turbine Supporting Structure and Basis	XUE Leiping

Key Research Programs of the Ministry of Science and Technology

Water Tank Model Experimental Research of FLNG/FLPG、FDPSO Equipment	YANG Jianmin
Nitrogen Reduction Technology Research of Qian Tang River Water Diversion and Physical Model Research of Outer Lake Water Diversion of West Lake	HE Shengbing

National High Technology Research and Development Program (863) of the Ministry of Science and Technology

Ground Measurement Technique Research of Underwater Production System	LI Changchun

International Cooperation Program of the Ministry of Science and Technology

Key Technology Research of High-efficient Clean Combustion of Diesel Engine Biological Alcohol Fuel	LI Tie

Project of China Ocean Mineral Resources R & D Association

Observing and Sampling ROV System	GE Tong

Program of the Ministry of Transport

Underwater Guided Mud Penetrator	GE Tong

Strategic Leading-edge Scientific Program of the Chinese Academy of Sciences

Active Source Seismic, Electromagnetic Joint Imaging and Reservoir Fracture Connectivity	FENG Shaokong

Ⅳ. International Collaboration

In recent years, the school has launched the following joint education programs: 2+2 Dual-degree Undergraduate Program with Newcastle University; Dual-degree Master Program with Paris Tech; Undergraduate and Graduate Dual-degree Program with the School of Civil Engineering in University of Birmingham. The cooperation was further strengthened with MIT, Texas A&M University, NTNU, Yokohama National University, and Nanyang Technological University, etc. Last year, the school of NAOCE sets up the International Students Recruitment Committee, and selected teachers and students for short-term exchange tours or academic visits to Chiba University, Yokohama National University, Nanyang Technological University, and Ludwig Maximilian University of Munich. The number of students sent to Yokohama National University reached 30, and to Chiba University reached 25. By now, seven students have graduated from the joint master's education program with Chiba University and one from the Dual-degree PhD Program with Yokohama National University.

Ⅴ. Platforms for Scientific Innovation

1. Research Centers

- Design Institutes of Ship and Ocean Engineering
- Institute of Underwater Engineering
- Institute of Structural Mechanics
- Institute of Power Plant and Automation
- Institute of Underwater Acoustic Engineering
- Institute of Port and Hydraulic Engineering
- Institute of Fluid Mechanics and Engineering Simulation
- Institute of Solid Mechanics and Strength of Engineering Structures
- Institute of Spacecraft Dynamics and Control
- Research Center of Engineering Mechanics
- Institute of Geotechnics and Engineering
- Institute of Engineering Safety & Disaster Prevention
- Institute of Structural Engineering
- Institute of Engineering Management
- Space Structure Research Center
- Institute of Architectural Design and Landscape Environment

- International Research Center of Architectural Culture Heritage Protection
- Transportation Research Center
- SJTU-Wengfu-Shengyi Geo-environmental Research Center
- SJTU-CU International Cooperative Center
- CNOOC-SJTU Deepwater Engineering Technology Research Center
- Application Research Center of Intelligent Transportation and Unmanned Aerial Vehicle

2. Key Laboratories

- Key National Laboratory of Ocean Engineering
- Key Laboratory of Hydrodynamics of the Ministry of Education

3. Co-built Social Practice Bases (CSPB) for Graduate Students

a) CSPB with 701, 719, 702 Institutes of China Shipbuilding Industry Corporation (CSIC)
b) CSPB with Wuchang Shipbuilding Industry Group Co., Ltd
c) CSPB with Hudong-Zhonghua Shipbuilding (Group) Co., Ltd
d) CSPB with China Shipping Container Lines Co., Ltd

Ⅵ. Distinguished Alumni

- YANG You, Academician of Chinese Academy of Sciences, Senior Professor of SJTU, graduating from SJTU in 1940
- WENG Shilie, Academician of Chinese Academy of Engineering, Former President of SJTU, graduating from SJTU in 1952
- HE Yousheng, Academician of Chinese Academy of Engineering, Expert in Ship Fluid Mechanics and Hydrodynamics, Former Chairperson of the University Council, graduating from SJTU in 1952
- XU Xueyan, Academician of Chinese Academy of Engineering, graduating from SJTU in 1948
- LIN Zhongqin, Academician of Chinese Academy of Engineering, Vice President of SJTU, graduating from SJTU in 1981