Jianyong HE

CONTACT

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WORK EXPERIENCE

JUL 2021 - PRESENT	School of Ocean and Civil Engineering, Shanghai Jiao Tong University I am a Research Assistant at the Department of Engineering Mechanics, my main work is assisting other professors with scientific research related to experiments, as well as teaching laboratory courses to undergraduate students.

EDUCATION

SEP 2018 – JUN 2021	**Zhejiang University (ZJU)**, Hangzhou, China M.Phil., Naval Architecture and Ocean Engineering Thesis: *Numerical Investigation on Flow Behaviors and Vortex-Induced Vibration of a Catenary Curved Riser*
SEP 2014 – JUN 2018	**China University of Petroleum (East China) (UPC)**, Qingdao, China B.E., Naval Architecture and Ocean Engineering Thesis: *Study on Design of Sinker for Flexible Submarine Pipeline*

PUBLICATIONS

1 Liu, J., **He, J.**, Hong, Y., & Gong, Z. (2024). Experimental and Numerical Study on Impact Loads During Wedge Water-entry Under Wave Conditions. Ocean Engineering. (under review).

2 Wang, Q., Lu, H., Tang, W., **He, J.**, & Liu, H. (2024). Stereo Reconstruction of the Free Surface of Breaking Bow Waves in a Towing Tank for DTMB 5415 Model. Ocean Engineering. (under review).

3 Yuan, Q., Gong, Z., Zhao, Z., & **He, J.** (2024). lce Model Crevice Effect on Vertical Water-entry of a Sphere. Ocean Engineering, 300, 117425.

4 Lu, H., Wang, Q., **He, J.**, & Liu, H. (2024). Binocular Reconstruction of Breaking Ship Bow Waves in Circulating Water Channel. Ocean Engineering, 300, 117426.
5 Wang, Q., Lu, H., **He, J.**, & Liu, H. (2024). Feasibility Study on Binocular Reconstruction of Three-Dimensional Bow Wave Shape. Paper presented at the "The Fifteenth ISOPE Pacific/Asia Offshore Mechanics Symposium", Chennai, India.
6 Shan, Z., Dou, Y., Sun, M., Wang, K., Qu, L., **He, J.**, & Zhu, J. (2022). Experimental Investigation the Characteristics of Three-dimensional Wave Field and Its Effect on Sandy Sloping Seabed. Marine Georesources & Geotechnology, 41(7), 791–805.
7 Gao, Y., **He, J.**, Ong, M. C., Zhao, M., & Wang, L. (2021). Three-Dimensional Numerical Investigation on Flow Past Two Side-by-Side Curved Cylinders. Ocean Engineering, 234, 109167.
8 **He, J.**, Gao, Y., Wang, L., Wo E., &. Zhang, Z. (2021). Three-Dimensional Numerical Simulation of Flow Past a Catenary Riser. The Ocean Engineering, 39(5):119-134. (in Chinese)

PATENTS

1 Gong, Z., **He, J.**, Hong, Y., Liu, H., Chen, Y., Li, J., Liu, J., & Bai, Y. (2024). Experimental Apparatus and Method for Water Entry and Exit Loads of Water Surface Aircraft. (CN Pub. No. CN118618630A).
2 Wang, Q., Lu, H., **He, J.**, & Liu, H. (2024). Wave Measurement System. (CN Pub. No. CN117799794A).
3 Wang, Q., Lu, H., **He, J.**, & Liu, H. (2024). Method, Device, Electronic Equipment, and Storage Medium for Three-Dimensional Wave Image Reconstruction. (CN Pub. No. CN117876599A).
4 Gao, Y., Zhu, J., Li, X., Chen, Y., **He, J.**, & Wang, L. (2023). A Method for Predicting Deformation and Load of Marine Cables and Pipelines Based on CNN Model. (CN Pub. No. CN116127866A).
5 Guo, C., Gao, Y., Chen, W., **He, J.**, & Zhu, J. (2021). An Experimental Apparatus and Method for Investigating the Dynamic Response and Flow Field Characteristics of Anchor Chains Under Cyclic Motion. (CN Patent No. CN111122142B).
6 Guo, C., Gao, Y., Chen, W., Zhu, J., & **He, J.** (2021). An Experimental Apparatus for Investigating the Dynamic Response and Flow Field Characteristics of Anchor Chains Under Cyclic Motion. (CN Patent No. CN211784223U).

RESEARCH EXPERIENCE/PROJECTS

NOV 2023 – DEC 2024

Comprehensive Experimental Study on Water Landing Load Testing of Water Surface Aircraft in a Towing Flume

Under both calm water and wave conditions, the horizontal motion of a linear motor and the vertical motion of a servo motor are utilized to achieve the constrained water landing motion of a water surface aircraft model. Force sensors record the load data of the model, while high-speed cameras capture the landing attitude.

SEP 2022 – SEP 2023

Unsteady Free Surface Measurement and Simulation Technology

By applying binocular vision technology, the three-dimensional morphology of the gas-liquid two-phase surface during solitary wave run-up and breaking, as well as wave breaking induced by structures, is reconstructed and measured, effectively capturing the complex interface morphologies.

JAN 2019 – DEC 2020

Study on Coupled Dynamic Response and Catastrophe Mechanisms of Fixed Offshore Wind Turbine Jacket Foundations in Deep and Far Seas

The experiment of flow field visualization of the risers was carried out in precision water flume, and analysis of the wake characteristics and force properties of the risers using Particle Image Velocimetry (PIV) technology and force sensors.

MAR 2019 – JUN 2020

Formation Mechanisms and Evaluation System of Offshore Landslides Based on Large-Scale Physical Model Tests

The shallow hydration process of wave propagation and the dynamic effect on the terrain were analyzed through harbor basin experiments.

APR 2019 – DEC 2019

Health Condition Investigation and Evaluation Project for Typical In-Service Wharves of Zhejiang Seaport Group

The numerical analysis of the scouring behind the pier was carried out by FLOW-3D, and the flow field change of the rear of the pier under the influence of different arrangements of the diversion embankment was studied, and the force of the pile foundation was analyzed.

SEP 2018 – DEC 2019

Investigation and Assessment of The Impact of Sea Level Change in Zhejiang Province, China

The erosion of the shore beach embankment in the coastal area of Zhejiang (Zhoushan) was measured, the data was collected and compared with the results of previous years, and the assessment report was written to provide a reference for the prevention of marine natural disasters and the restoration of the shore beach.

AWARDS & HONORS

2018	Academic Scholarship, Zhejiang University
2017	Second Prize Scholarship, China University of Petroleum (East China)
2016	Third Prize Scholarship, China University of Petroleum (East China)
2016	Merit Student Title, China University of Petroleum (East China)

SKILLS

Extensive experience with C and Matlab
Intermediate experience with C++ and Python
Familiar with HTML/CSS, Fortran and Labview

LANGUAGES

English (Professional Proficiency), Mandarin (Native Proficiency)