Jiang Yiyi

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EDUCATION

Zhejiang Univeristy (985)& Laoshan Laboratory *Qingdao, China*
Ph.D. In Ocean Technology and Engineering, Ocean College *Sep.2024 – Ongoing*
GPA: 83/100

Zhejiang University (985) *Zhoushan, China*
MPhil. In Mechanicial Engineering, Ocean College *Sep.2021 – June.2024*
GPA: 83/100
Outstanding graduates student；Outstanding graduates

Dalian Maritime University （211） *Dalian,China*
B.Eng. in Marine Engineering college *Sep.2017 – June.2021*
GPA:4.0/5.0 (Ranked 1st in class of 85 students)
National scholarship；Outstanding graduates

RESEARCH PROJECT

Fluid Flux Measurement Methods of Hydrothermal Vent Based on In-Situ Observations *2025.01-ongoing*

- This study proposes a systematic method for measuring hydrothermal fluid velocity, combining chemical analysis from Raman in-situ observations with visual 3D terrain reconstruction to calculate the output flux of hydrothermal vents into the ocean.

Batch Processing and Automated Damage Identification of Comet Experiment Images *2024.04-2024.12*

- The research focuses on processing comet assay images, which are used to indicate the level of cellular damage under various environmental influences. The proposed method enables rapid batch processing of images, automatic identification of comet cells, calculation of their damage levels, and statistical analysis.

Research on Coral Detection Technology Based on Machine Vision *2023.01-2024.03*

- The project's objective is to develop a coral information processing technology utilizing image processing and neural networks to identify corals accurately and extract details regarding coral quantity, size, and depth.

Design and Manufacturing of AUH (Autonomous Underwater Helicopter) *2021.09-2022.12*

- The objective of the project is to design and manufacture an AUH specifically for coral detection , aimed at mid-scale coral exploration.

SCIENTIFIC RESEARCH ACHIEVEMENTS

- **Jiang Y,** Zhang F, Xia S, et al. Evaluating microplastics and antibiotics induced genotoxicity in marine mussels through deep learning-based processing images of comet assay[J]. Ecotoxicology and Environmental Safety, 2025, 305: 119295.
- **Jiang Y,** Qu M, Chen Y. Coral Detection, Ranging, and Assessment (CDRA) algorithm-based automatic estimation of coral reef coverage[J]. Marine Environmental Research, 2023, 191: 106157.
- Zhang F, Jia X, Lin Z, **Y Jiang**, M Qu. The outbreak of Drupella snails and its catastrophic effects on coral reefs: a comprehensive review[J]. Frontiers in Marine Science, 2024.
- Xin, G., Xie, H., Kang, S., Chen, Y., & **Jiang, Y**.. Improved research on coral bleaching detection model based on FCOS model[J]. Marine Environmental Research, 2024, 200: 106644.
- Qu, M., **Jiang, Y.**, Di, Y., et al. Method and application for identification and counting of micro-nucleated cells in marine bivalves based on deep learning [P]. Hainan Province: CN117253229A, July 02, 2024.
- Qu, M., **Jiang, Y.**, Di, Y., et al. An early detection and warning method for marine environmental pollution [P]. Hainan Province: CN117611588B, May 24, 2024.

- Ying Chen, Haoda Li, Xinyu An, Zhikun Wang, **Yiyi Jiang**, and Haocai Huang. A dual-mode underwater helicopter with gliding and propulsion[P]. Hainan Province:CN119460035B, May 09, 2025.

CRUISE PARTICIPATION

Oct 2025 *Deep Sea No.1.* *The South China Sea*
ROV, spectral, Seabed Sheet Light Laser, and other equipment sea trials

May 2025 *Deep Sea No.1.* *The South China Sea*
ROV, 3D laser line scanning device, CTD, and other equipment sea trials

Nov 2022 *BEI DIAO 996 Research Vessel* *The South China Sea*
Water sampler, CTD, and other equipment sea trials

Jul-Aug 2019 *YUKUN Wheel* *Yellow Sea*
Crew ship familiarization internship

INVITED TALKS

[1] Nov 2024 “Research on Coral Reef Detection Method Based on Autonomous Underwater Helicopter (AUH),” Academic exchange at the University of Macau, Macau, China.

[2] Jul 2023 “Medium-Scale Coral Detection Platform--AUH,” Academic exchange at The Chinese University of Hong Kong, Hong Kong, China.

[3] May 2023 “Research on a novel coral detection platform -- HN-AUH.，”the 6th national conference on ocean technology, Zhoushan, China.

CAMPUS ACTIVITIES

- Nov 2022 School swimming competition Team first place
- Dec 2024 School swimming competition Team second place
- Apr 2025 College water sports event Team event second place
- May 2025 College swimming competition Individual first place