Qixian Wang

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EDUCATION

Sep.2020-Jun.2024

Bachelor in Engineering, Zhejiang University
Ocean Engineering, Ocean College
Cumulative GPA: 3.96/4.0; 90.6/100 (Rank 3/146)

Undergraduate researcher, Georgia Institute of Technology
Robotics, School of Mechanical Engineering

RESEARCH INTERESTS

Computing, Soft Robot, Robot Manipulation, Control Strategy

PUBLICATIONS

Papers:

- [1] Yu K, Han Y, **Wang Q**, Saxena V, Xu D, Zhao Y. MimicTouch: Leveraging Multi-modal Human Tactile Demonstrations for Contact-rich Manipulation. (Submitted to CoRL)
- [2] Wang Q*, Qi M*, Xia Y, Chen Z. Precision control and simulation verification of hydraulic manipulator under unknown load. The 16th International Conference on Intelligent Robotics and Applications (ICIRA), vol 14271. (Oral). [pdf]
- [3] Wang Q*, Qi M*, Xia Y, Zhou S, Chen Z. Adaptive robust control of multi-DOF hydraulic manipulator with precise online load estimation. Chinese Journal of Mechanical Engineering (Accepted).

 [pdf]
- [4] Zhang Y*, **Wang Q***, Han J, Xie Y. Effects of unsteady stream on hydrodynamic behavior of flexible hydrofoil in semi-passive mode. Renewable energy, 206 (2023) 451-475. [pdf]
- [5] Han J, Xie Y, Wang Y, Wang Q, Zhang Y, Ju J, Zhang X, Pan Z. Investigation on unstable fluid load compensation of a diverged flow poppet valve. Energy Reports, 8 (2022) 12237-12254 [pdf]

Thesis and Patent

- [1] Wang Q. Bipedal locomotion foot design, control and contact sensing. Zhejiang University.
- [2] **Wang Q**. A fish tail type tidal current power generation device. CN 108035841 A, Published Chinese patent application

RESEARCH EXPERIENCE

Aug. 2023-Feb. 2024

Bipedal locomotion foot design and contact sensing

Research Assistant

School of mechanical engineering, Georgia Institute of Technology

Supervisor: Prof. Ye Zhao

- Designed tarsal segments and deployable cleats of humanoid robot foot which can adaptively increase traction.
- Developed tactile sensors for multi-model contact sensing and terrain classification algorithm.
- Guided nine Gatech undergraduates in robotics scientific research projects.
- Participated in the design and experiments of MimicTouch project.

Sep. 2022-Jul. 2023

Research Assistant

Adaptive robust control of hydraulic manipulator with payload estimation and friction compensation

Ocean college, Zhejiang University

Supervisor: Prof. Zheng Chen

• Constructed the dynamic model of the manipulator with payload compensation by use of Simscape.

• Constructed a DIARC controller. Included the unknown payload into parametric space and modified parameter adaptation law to accurately estimate the mass of payload online. Contributing to 70% of the total workload of the project.

Jul. 2019-Aug. 2022

Analysis on the flexible hydrofoils and renewable energy

Research Assistant

School of Mechanical Engineering, Shandong University

Supervisor: Prof. Yudong Xie

- Analyzed the hydrodynamic characteristics of a flexible oscillating hydrofoil in the tidal current by Fluent. The significant contributions include modeling and data analysis of flexible hydrofoils.
- Invented a fish tail shaped tidal power generation mechanism that applied for a Chinese patent.
- Developed a *Savonius* type power generator for tidal current energy.

TEACHING EXPERIENCE

Aug. 2023-Dec. 2023 Supervisor in Vertical Integration Program (VIP) in Georgia Tech Jan. 2022-Aug. 2022 Teaching assistant in Materials Mechanics and Digital Circuit in ZJU

HONORS & SCHOLARSHIPS

Jun.2024	Provincial Outstanding Graduate
Jun.2024	Outstanding Graduate of Zhejiang University
Jun. 2023	Course Award of Underwater Robotics Design Competition
Nov. 2022	China Harbor First Class Scholarship (awarded to top 1% students)
Jan. 2022	Provincial Third-class Prize in National College Physics Competition
Nov. 2021	Second-class Prize in Zhejiang Marine Science and Technology Competition
Sep. 2021	Second prize scholarship of Zhejiang University (Received three times)

SKILLS

Computer Skills C++, Matlab, Solidworks, CAD, Python, Ansys, Multisim.

Experimental Skills 3D-printing, Arduino, STM32.

EXTRACURRICULAR ACTIVITIES

Jun. 2022-Aug. 2022	International Summer Campus of Korea University (GPA:4.5/4.5)	
Jun. 2021-Present	Hongde College Entrance Examination Analysis Company	Co-founder
Jul. 2021	Summer Campus of University of Auckland	
Feb. 2021-Jun. 2022	Underwater Robot Association of Zhejiang University	Organizer