Wenyu Yang 杨雯语

Information

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Advanced Manufacturing Technology Laboratory.
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Education

- **M.Eng. Harbin Institute of Technolog** **09/2019-Present**
  Advisor: Dr. Chengxi Lei Dept. of Mechantronic
  Research Topic：Robotic, Mechanic, Machine Learning.
- **B.Eng. Ocean University of China** **09/2015-06/2019**
  Mechanical Design Manufacture & Automation
  GPA:3.21/4 Rank:8/63

IELTS: Toatal 6.5; *L7 R7.5 W6 S6*

Honors and Awards

- First scholar **2018**
- Second Prize in 14th Electromechanical Innovation Competition Shandong Zone **2017**
- Second Prize in 7th National Marine Vehicle Design and Manufacture Competition. Wuhan. **2018**
- Second Prize in 6th "Internet +" innovation and entrepreneurship contest. Heilongjiang Zone **2020**

Skills

- **Programming Skills:** C/C++, Matlab, Pyhton
- **Robot Frameworks:** ROS, Gazebo
- **Tools:** Linux, Visual Studio, Pycharm, Keil

Research Intrest

- Robotics; Control; Sensor Fusion; Machine learning.

Work Experience

- **2016.10-2017.06 Hydraulic based Exoskeleton.**
  Mainly responsible for programming.
  The pressure signal is obtained by the pressure sensor close to the calf muscle to judge the leg movement (lift/fall), and the signal is sent to MCU through I2C serial port communication, which serves as the basis for the control signal to control the opening and closing of the hydraulic servo valve, so as to make the hydraulic cylinder move.

- **2017.09-2018.06 UAV with manipulator based on binocular camera**
  Responsible for designing of ROV & manipulator; camera calibration and binocular vision algorithm.
  The underwater robot is composed of eight thrusters and a four-degree-of-freedom manipulator, which can complete underwater grasping operation under experimental conditions.

- **2019.10-2020.09 SLAM-Based Underwater Catcher Robot**
  Subsequent work of *UAV with manipulator based on binocular camera.* UAV based on SLAM and A-star algorithm. Make the UAV works like a household floor-sweeping robot in circumstances like aquafarm. It won a silver prize in “Internet +” competition and ¥ 5000.

- **2019.10-Present SLAM-Based Follow-up Teaching and Explaining Robot** Use single-line lidar and monocular camera as sensors for map building and human detection. Follow-up algrithm is based on KCF.