

Honghao Lv

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Education

- ◆ Feb. 2018–Present:
Doctoral Candidate in Mechatronic Engineering, School of Mechanical Engineering, Zhejiang University (ZJU), Hangzhou, China
- ◆ May 2018: Training Programme of Simulation in RobotStudio, ABB Engineering Ltd., Shanghai, China
- ◆ Sep. 2014–Jun. 2018:
B. Eng. in Mechanical Engineering, School of Mechatronic Engineering, China University of Mining and Technology (CUMT), Xuzhou, China
Academic Achievement: average score 91.63(100), GPA 3.8635(4), rank 3/360
- ◆ English Proficiency: CET-4 512, CET-6 468
- ◆ Computer Skills: NCRE Rank II (Visual Basic), NCRE Rank III (Internet technology)

Specialty

- ◆ Dual-arm Robotic Teleoperation & Human-Robot Collaboration
- ◆ Human-Robot Intelligent Interface & Safe Interaction
- ◆ Artificial Intelligence and its applications in Robotics

Publication List

- ◆ Journal Papers:
 - [1] Lv **Honghao**, Geng Yang*, Huiying Zhou, Xiaoyan Huang, Huayong Yang, Zhibo Pang, “IoT-enabled Dual-arm Motion Capture and Mapping for Telerobotics in Home Care,” IEEE Journal of Translational Engineering in Health and Medicine (IEEE JTEHM), IF: 2.075, Jun. 2020. DOI: 10.1109/JTEHM.2020.3002384.
 - [2] Wenzheng Heng, Geng Yang, Gaoyang Pang, Zhiqiu Ye, **Honghao Lv**, Juan Du, Guodong Zhao, and Zhibo Pang, “Fluid-Driven Soft CoboSkin for Safer Human-Robot Collaboration: Fabrication and Adaptation,” Advanced Intelligent Systems, Jun. 2020. DOI: 10.1002/aisy.202000038. (Early View)
 - [3] Geng Yang*, Lv **Honghao**, Zhiyu Zhang, Liu Yang, Siqi You, Juan Du, Huayong Yang, “Keep Healthcare Workers Safe: Application of Teleoperated Robot in Isolation Ward for COVID-19 Prevention and Control” Chinese Journal of Mechanical Engineering (CJME), IF: 1.413, vol. 33, no. 47, Jun. 2020. DOI: 10.1186/s10033-020-00464-0.
 - [4] Huiying Zhou, **Honghao Lv**, Zhibo Pang, Xiaoyan Huang, Huayong Yang, Geng Yang*, “IoT-enabled Dual-arm Motion Capture and Mapping for Telerobotics in Homecare” IEEE Journal of Biomedical and Health Informatics (IEEE JBHI), 2019
 - [5] Yang Geng, Lv **Honghao**, Chen Feiyu, Pang Zhibo, Wang Jin, Yang Huayong, Zhang Junhui*, “A Novel Gesture Recognition System for Intelligent Interaction with a Nursing-Care Assistant Robot” Applied Sciences-Basel, IF:2.217, vol. 8, (12), art. no. 2349, Dec. 2018. DOI: 10.3390/app8122349.
 - [6] Chen Feiyu, Lv **Honghao**, Pang Zhibo, Zhang Junhui, Hou Yonghong, Gu Ying, Yang Huayong and G. Yang*, “WristCam: A Wearable Sensor for Hand Trajectory Gesture Recognition and Intelligent Human-Robot Interaction” IEEE Sensors Journal. IF: 3.076, pp. 1-1, Oct. 2018. DOI: 10.1109/JSEN.
- ◆ Conference Papers (peer-reviewed):
 - [1] Ruibin Zhang, **Honghao Lv**, Huiying Zhou, Yurui Zhang, Chenhao Liu, and Geng Yang*, “A Gait Recognition System for Interaction with a Homecare Mobile Robot”, in the 46th Annual Conference of the IEEE Industrial Electronics Society (IECON 2020), Singapore, 16-20 October. 2020. (Accepted)
 - [2] Yuqi Wang, **Honghao Lv**, Huiying Zhou, Qi Cao, Zikang Li, and Geng Yang*, “A Sensor Glove Based on Inertial Measurement Unit for Robot Teleoperation”, in the 46th Annual Conference of the IEEE Industrial Electronics

Society (IECON 2020), Singapore, 16-20 October. 2020. (Accepted)

- [3] Huiying zhou, **Honghao Lv**, Kang Yi, Zhibo Pang, Huayong Yang, Geng Yang*, “An IoT-Enabled Telerobotic-Assisted Healthcare System Based on Inertial Motion Capture” in the 2019 IEEE International Conference on Industrial Informatics (INDIN 2019), Helsinki, 22-25 Jul., 2019.
- [4] Pan Shimin, **Lv Honghao**, Duan Hong, Pang Gaoyang, Yi Kang, and Yang Geng*, “A Sensor Glove for the Interaction with a Nursing-Care Assistive Robot”, in the 2019 IEEE International Conference on Industrial Cyber-Physical Systems (ICPS 2019), Taipei, 6-9 May, 2019.
- [5] Huiying Zhou, Liu Yang, **Honghao Lv**, Kang Yi, Huayong Yang, and Geng Yang*, “Development of a Synchronized Human-Robot-Virtuality Interaction System using Cooperative Robot and Motion Capture Device”, in the IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM 2019), Hongkong, 8-12 Jul., 2019.

◆ Patents:

- [1] Yang Geng, **Lv Honghao**, Zhang Zhiyu, Yang Huayong, Zhejiang University; A Software for Acquisition and Analysis of Dual-arm Robot’s Movement Status: Registration No.2020SR0061078.
- [2] Yang Geng, **Lv Honghao**, Pang Gaoyang, Yang Huayong, Zhejiang University; A Dirigible Dual-arm Omnidirectional Mobile Nursing-care Robot: ZL. 2018 1 0534638.1 [P]. 2018-10-26. (Granted)
- [3] **Lv Honghao**, Hao Jingbin, Jia Kun, China University of Mining and Technology; A Smart Home System Based on LabView and TCP/IP Network Protocol: CN201721694857.3[P]. 2017-12-07. (Utility model)
- [4] Ding Haigang, **Lv Honghao**, Cheng Gang, Zhao Jiyun, Cao Chao, China University of Mining and Technology; A Speed Measuring Device for Large Diameter Rotating Shaft without Protruding End.: CN201711391943.1[P]. 2017-12-21. (Invention publication)

Research Projects

- ◆ Pre-research Supported by a Research Project * 2020:
Project Leader *Research on teleoperation technology for dual-arm special robot, using Kinova Gen2 Ultra Robot*
- ◆ Zhejiang University Special Scientific Research Fund for COVID–19 Prevention and Control (Grant No. 2020XGZX017) 2020:
Project Leader *Application of Tele-Robotic Technology for Auxiliary Diagnosis and Treatment of COVID–19 in Isolation Ward, using YuMi Robot*
- ◆ Robotics Institute of Zhejiang University (Grant No. K18-508116-008-03) 2019:
Project Leader *Human-robot Collaborative Assembly Based on Target Recognition Using Kinect and Security Interaction Design, using YuMi Robot*
- ◆ Robotics Institute of Zhejiang University (Grant No. K18-508116-008-03) 2018:
Project Leader *Cooperative Control System of Dual-Arm Robot Based on Human Action Recognition, using YuMi Robot*

Awards

- ◆ Gold Prize, International College Students’ “Internet+” Innovation and Entrepreneurship Competition of Zhejiang Province Aug. 2020
- ◆ 1st Prize in Robot Innovative Design Competition of ZJU Jun. 2020
- ◆ 2nd Prize, ChapHoyea Scholarship of ZJU Dec. 2019
- ◆ 2nd Prize in Robot Innovative Design Competition of ZJU Jun. 2019
- ◆ Excellent Graduation Project of CUMT Jun. 2018
- ◆ National Scholarship Nov. 2017
- ◆ National Scholarship Nov. 2016
- ◆ National Scholarship Nov. 2015
- ◆ 2nd prize, China Undergraduate Mathematical Contest in Modeling Sep. 2015
- ◆ 3rd prize, Virtual Instrument Contest of Jiangsu Province Oct. 2016
- ◆ 3rd prize, Mathematical Modeling Contest of Jiangsu Province May 2016
- ◆ 1st prize, Curriculum Design of Machine Design Contest Mar. 2017

Honors & Social Activities

◆ Merit Graduate Student of ZJU	2019
◆ Excellent Graduate Student of ZJU	2019
◆ Sun-Yueqi Outstanding Student Award	2018
◆ Outstanding Graduates of CUMT	2018
◆ Merit Student of Jiangsu Province	2018
◆ Outstanding Student Cadre of Shandong Province	2014
◆ Merit Student of Zibo City	2011
◆ Excellent Individual in Military Training	2014
◆ Vice president of Party Workstation	2017
◆ Excellent Student Cadre and League Member of CUMT	2015, 2016, 2017
◆ Excellent volunteer of Xuzhou Central Hospital	2015

Research Experience in CUMT

- ◆ Project Leader Apr. 2016–Dec. 2016
Participated in Training Program of Innovation for Undergraduates with the project called *the development of a portable friction coefficient tester*; Built a prototype which has been tested successfully; In charge of designing the hardware circuit and programming the whole LabVIEW codes.
- ◆ Participant Jul. 2016–Jun. 2018
Took part in the project called *the development of intelligent home based on face recognition and voice control*; Obtained the 3rd prize in the Virtual Instrument Contest of Jiangsu Province; In charge of assembling and debugging of the hardware.
- ◆ Participant Apr. 2017–Jun. 2018
Involved in the project named *the design of robot key parts based on the 3D printing*; In charge of modeling and analyzing the 3D models.