

Binghao Huang

Email: b6huang@ucsd.edu Mobile: 858 241 5007 Personal Website: <https://binghao-huang.github.io>

EDUCATION BACKGROUND

University of California San Diego

Aug 2021- now

- Major: Mechanical Engineering, Degree: Master of Science
- GPA: 3.662/4.0

Zhejiang University of Technology

Sep 2015 – Jun 2019

- Major: Mechanical Engineering, Degree: Bachelor of Engineering
- Average Score: 83.9/100

PUBLICATION

CoRL 2022. Generalizable Point Cloud Policy Learning for Sim-to-Real Dexterous Manipulation

Yuzhe Qin*, **Binghao Huang***, Zhao-Heng Yin, Hao Su, Xiaolong Wang.

[\[Webpage\]](#),[\[Paper\]](#)

Under Review. Learning Continuous Grasping Function with a Dexterous Hand from Human Demonstrations

Jianglong Ye*, Jiashun Wang*, **Binghao Huang**, Yuzhe Qin, Xiaolong Wang.

[\[Webpage\]](#),[\[Paper\]](#)

RESEARCH & WORKING EXPERIENCES

UC San Diego

Sep2021- now

Research Assistant, Advisor: [Prof. Xiaolong Wang](#)

- Manipulation of a Robot arm with Dexterous Hand based on ROS, building the arm-hand system with hardware design, control, and trajectory optimization.
- Dexterous manipulation RL policy with Point Cloud input and applied it to the real robot system. Using Xarm with Allegro-Hand robot system to deploy multitasks with point cloud RL policy and overcome sim2real gap.
- Human-Level Bimanual Dexterous Manipulation with Reinforcement Learning. Transfer the task of throwing and catching balls from sim to real.

Zhejiang University

Aug2020-Aug2021

Research Assistant, Lab of Flexible Sensors and Intelligent Equipment,

- Achieved a Speech offline Control Strategy by using Pocketsphinx, Auto-Navigation with 2D-Lidar of mobile robot based on ROS
- Designed a vision tracking method for obstacle avoidance of a mobile robot by using object detective
- Designed an Auto-Navigation Method combined with Computer Vision and 2D-Lidar of mobile robot in Medical Service Assist Combating COVID-19

SKILLS & INTERESTS

- **Technical Skills in ME:** AutoCAD, Catia, Solidworks, Ansys, Matlab, PLC, 3D printing, Electronic Circuits Design
- **Technical Skills in CS:** C++, Python, Reinforcement Learning, Computer Vision, ROS, SLAM
- **Other Skills and Interests:** 5 years of Teaching experience, Office, Video production, Graphic design, Reading, Model Making, Drawing
- **Activities:** Content Creator in Robotics with 64000+ fans: [\[My Video Channel\]](#).

OTHER ACTIVITIES

NEXTEV Formula Student Electric China (FSEC), Participant Oct 2016 – Sep 2017

- In charge of the steering system design part in the team, completed engineering drawing, commissioned factory processing, and finally assembled with other departments into a formula car
- Selected a reasonable steering trapezoidal layout through Matlab optimization; corrected and manufactured the corresponding steering assembly, pressing device, and adjust tie rod with Adams
- Applied for a patent [[Google Patent](#)]: A kind of university student's equation motorcycle race steering, manufacture and its installation method:2017105998790.1

Zhejiang College Student Mechanical Innovation Design Competition Project, Leader Dec 2016 – Aug 2017

- Designed a machine that helped the baby do exercises for the purpose of replacing the manual labor
- The action of the machine was programmed according to the current action of artificial baby exercise
- Prepared a platform for the baby to lie and to carry out the device for assisting the movement; a motor drove the hand joints, the other controlled the leg joints; controlled the motor rotation sequence by PLC programming

HONORS & AWARDS

Excellent Graduation Thesis <i>Tracked Chassis Design</i>	Jun 2019
Second-class Scholarship of Zhejiang University of Technology	Sep 2018
National third prize in NEXTEV Formula Student Electric China (FSEC)	Sep 2017
Second-class Scholarship of Zhejiang University of Technology	Sep 2017
Third prize in Zhejiang College Student Mechanical Innovation Design Competition	Aug 2017
Second-class Scholarship of Zhejiang University of Technology	Sep 2016