Zhengdong Hong

+1 858-518-3995 (USA) | Personal Page | hzddltql@gmail.com | San Diego, USA

Education

Zhejiang University — Hangzhou, China

Ph.D. in Computer Science, State Key Laboratory of CAD&CG at Zhejiang University — *Sep 2021 – Jun 2026*

B.Sc. in Electrical and Electronics Engineering; ***Rank: 1/48*** — *Sep 2017 – Jun 2021*

Electrical Engineering Excellence Program: I spent 6 days a week in the 24-hour open circuit design and debugging laboratory, independently learning and building embedded hardware and software systems.

Research Experience

University of California, San Diego, Prof. Hao Su's Group — UC San Diego, USA

Reseach Scholar, Junior Specialist — *Aug 2023 – March 2025*

- Independently lead the project *Learning Particle-based World Model from Human for Robotic Dexterous Manipulation* in Prof. Hao Su's group.
- Published a first-author IROS 2024 paper *EasyHeC++: Fully Automatic Hand-Eye Calibration with Pretrained Image Models*, advised by Prof. Hao Su.
- Responsible for hardware design and robot maintenance in Prof. Hao Su's Group since November, 2023.

Zhejiang University — Hangzhou, China

3D computer vision (human pose estimation and dynamic scene reconstruction) — *Sep 2021 – Aug 2023*

- Independently published a first-author ECCV 2024 paper *Free-Viewpoint Video of Outdoor Sports Using a Drone* project page, which is focused on human pose estimation and 4D scene reconstruction.

Awards

Championship in 8th Texas Instrument Electronic Design Competition — Texas Instrument

Ranking: 1/1847 (TI Cup, Highest Award) — *Nov 2020*

- In 2020, I lead my team and championed 8th Texas Instrument (TI) Electronic Design Competition, where I lead the whole process of the design and evaluation of Amplifier Nonlinear Harmonic Distortion Analysis System.

Publications

- **Zhengdong Hong**, Yulin Liu, Haowen Hou, Bo Ai, Jun Wang, Tongzhou Mu, Yuzhe Qin, Jiayuan Gu, Hao Su, *Learning Particle-based World Model from Human for Robotic Dexterous Manipulation*, in Submission.
- **Zhengdong Hong**, Guofeng Zhang, *Learning Human-Object Interaction Priors for Robotic Dexterous Manipulation*, submitted to ICRA 2026.
- Liangzhi Shi, Yulin Liu, Lingqi Zeng, Bo Ai, **Zhengdong Hong**, Hao Su, *Learning Adaptive Dexterous Grasping from Single Demonstrations*, IROS 2025 (Oral). project page
- **Zhengdong Hong**, *Free-Viewpoint Video of Outdoor Sports Using a Drone*, ECCV 2024. project page
- **Zhengdong Hong**, Kangfu Zheng, Linghao Chen, Hao Su,*EasyHeC++: Fully Automatic Hand-Eye Calibration with Pretrained Image Models*, IROS 2024 (Oral). project page

Robot Systems

I have **both software and hardware** skills for robotics , which enables me to independently build several complete robotic systems for Prof. Hao Su's Lab, including algorithm, hardware and system design. see details.

- **Su Lab's first mobile manipulation robot** equipped with a xArm and an ability hand (onboard power supply).
- **Dexterous manipulation platform** with 2 xArm7 and 2 ability hands for articulated object manipulation.

Hardware Skills

I have plenty of hardware experiences, see details here. Here are some of my hardware skills:

- **Electronics:** electronic design, PCB design, PSpice electronic simulation, robotic power design.
- **Embedded systems:** DSP, PLC, other microcomputers (STM32, MSP430, etc.)
- **Hardware debugging and electronic design for robotics Labs**, see this document for details.