

Zhengdong Hong

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EDUCATION

Zhejiang University

Hangzhou, China

Ph.D. in Computer Science, State Key Laboratory of CAD&CG at Zhejiang University Sep 2021 – 2026 (expected)

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 hardware design and debugging laboratory, independently learning and building embedded hardware and software systems.

RESEARCH EXPERIENCE

Amazon Frontier AI & Robotics

San Francisco, USA

Research Scientist Intern

May 2026 – Present

- Working on **agentic open-world mobile manipulation** on a wheeled humanoid — from robot bring-up to an end-to-end autonomous system, fully onboard.

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

UC San Diego, USA

Research Scholar

Aug 2023 – Dec 2024

- Led the dexterous manipulation project *Learning Particle-based World Model from Human for 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 maintenance in Prof. Hao Su's Group since November 2023.

Zhejiang University

Hangzhou, China

3D computer vision (dynamic scene reconstruction)

Sep 2021 – Aug 2023, Jan 2025 – Present

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

AWARDS

Championship in the 8th Texas Instruments Electronic Design Competition

Texas Instruments

Ranking: 1/1847 (TI Cup, Highest Award)

Nov 2020

- In 2020, I led my team to the national championship of the 8th Texas Instruments (TI) Electronic Design Competition, leading the end-to-end design and evaluation of an Amplifier Nonlinear Harmonic Distortion Analysis System.

PUBLICATIONS

- Zhengdong Hong***, Shenrui Wu*, Haozhe Cui*, Boyi Zhao, Yiyang He, Hangxing Zhang, Ran Ji, Zundong Ke, Jun Wang, Guofeng Zhang, Jiayuan Gu, *R3D: Revisiting 3D Policy Learning*. [project page](#)
- Jingjing Wang, **Zhengdong Hong**, Chong Bao, Yuke Zhu, Junhan Sun, Guofeng Zhang, *LAMP: Lift Image-Editing as General 3D Priors for Open-world Manipulation*. [project page](#)
- 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 Dexterous Manipulation*, RSS 2025-Dex (Oral). [venue page](#)
- Zhengdong Hong**, Guofeng Zhang, *Learning Object-Centric Motion Priors from Human for Robotic Dexterous Manipulation*, AAAI 2026 (Oral). [venue page](#)
- 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 Flying Camera*, ECCV 2024. [project page](#)
- Zhengdong Hong***, Kangfu Zheng*, Linghao Chen, *EasyHeC++: Fully Automatic Hand-Eye Calibration with Pretrained Image Models*, IROS 2024 (Oral). [project page](#)

ROBOT SYSTEMS

I have **both software and hardware** skills, which enables me to independently build complete robot systems and full-stack robot infrastructure, spanning algorithm, hardware, and system design. [see details](#).

- **Su Lab's first mobile manipulator** 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.
- **Full-stack perception–navigation–manipulation infrastructure** for agentic open-world mobile manipulation on a wheeled humanoid at Amazon FAR, running fully onboard.

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, power design.
- **Embedded systems:** DSP, PLC, other microcomputers (STM32, MSP430, etc.)
- **Hardware debugging and electronic design for Labs**, [see this document for details](#).