

Zhe Hu

Curriculum Vitae

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Education

- 2017–2021 **Ph.D.**, City University of Hong Kong, Hong Kong. CGPA 4.2/4.3.
2012–2016 **Bachelor**, Department of Computer Science, University of Electronic Science and Technology of China, China. GPA 3.73/4.0 (rank 6/343).

Work Experience

- 09,2023-present **Researcher**, University of Electronic Science and Technology of China, Chongqing, China
Artificial intelligence-based ADC calibration algorithm
- 11,2021-present **Computer Vision Algorithm Expert**, Cyber Lab, XGIMI, Chengdu, China
Deep learning based vision algorithm; Leading several innovative projects
- 05,2020-11,2021 **Intern, Rhino-bird Elite Program**, Robotics X Lab, Tencent, Shenzhen, China
Living object grasping and manipulation
- 06-09, 2019 **Intern**, Robotics and Autonomous Driving Lab, Baidu Research, Beijing, China
Navigation based on human instructions and visual semantics; Tea pouring robot
- 04-08, 2018 **Intern**, Robotics and Autonomous Driving Lab, Baidu Research, Beijing, China
Navigation based on human instructions and visual semantics
- 2016-2017 **Research Assistant**, City University of Hong Kong, Hong Kong, China
3D deformable object manipulation using machine learning technology
- 02-10, 2016 **Intern**, Dorabot Inc, Shenzhen, China
Pose estimation and grasping for 3D objects

Award

- 2015 **Best Engineering Award**, ABU Robocon (Asia-Pacific Robot Contest)
2015 **Champion**, National Robot Contest for College Students
2015 **Best Design Award**, National Robot Contest for College Students
2014 **Silver Award**, Creative Technology In Life of UESTC
2014 **The Third Prize**, Intel Cup Embedded System Design Invitational Contest
- 2014-2015 **National Scholarship**
2013-2014 **Samsung Scholarship**

Research

- 2022 **Grasping Living Objects with Adversarial Behaviors using Inverse Reinforcement Learning**
Zhe Hu, Yu Zheng, Jia Pan
IEEE Transactions on Robotics, JCR Q1

- 2021 **Soft Magnetic Skin for Super-resolution Tactile Sensing with Force Self-decoupling**
Youcan Yan, **Zhe Hu**, Zhengbao Yang, Wenzhen Yuan, Chaoyang Song, Jia Pan, Yajing Shen
Science Robotics, JCR Q1
- 2021 **Surface Texture Recognition by Deep Learning-enhanced Tactile Sensing**
Youcan Yan, **Zhe Hu**, Yajing Shen, Jia Pan
Advanced Intelligent Systems, JCR Q1
- 2021 **A Computational Framework for Robot Hand Design via Reinforcement Learning**
Zhong Zhang, Yu Zheng, **Zhe Hu**, Lezhang Liu, Xuan Zhao, Xiong Li, Jia Pan
IROS 2021
- 2021 **Living Object Grasping using Two-Stage Graph Reinforcement Learning**
Zhe Hu, Yu Zheng, Jia Pan
RAL and ICRA 2021, JCR Q1
- 2020 **Human-robot Collaboration Using Variable Admittance Control And Human Intention Prediction**
Weifeng Lu, **Zhe Hu**, Jia Pan
CASE 2020
- 2020 **An Actor-Critic Approach for Legible Robot Motion Planner**
Xuan Zhao, Tingxiang Fan, Dawei Wang, **Zhe Hu**, Tao Han, Jia Pan
ICRA 2020
- 2019 **3-D Deformable Object Manipulation using Deep Neural Networks**
Zhe Hu, Tao Han, Peigen Sun, Jia Pan, Dinesh Manocha
RAL and IROS 2019, JCR Q1
- 2019 **A General Robotic Framework for Automated Cloth Assembly**
Peigen Sun, **Zhe Hu**, Jia Pan
Best Student Paper Award, ICARM 2019
- 2019 **Safe Navigation with Human Instructions in Complex Scenes**
Zhe Hu, Jia Pan, Tingxiang Fan, Dinesh Manocha
RAL and ICRA2019, JCR Q1
- 2019 **Cloth Manipulation Using Random-Forest-Based Imitation Learning**
Biao Jia, Zherong Pan, **Zhe Hu**, Jia Pan, Dinesh Manocha
RAL and ICRA2019, JCR Q1
- 2018 **Three-Dimensional Deformable Object Manipulation Using Fast Online Gaussian Process Regression**
Zhe Hu, Peigen Sun, Jia Pan
RAL and ICRA2018, JCR Q1
- 2018 **Manipulating Highly Deformable Materials Using a Visual Feedback Dictionary**
Biao Jia, **Zhe Hu**, Jia Pan, Dinesh Manocha
ICRA2018
- 2017 **Grasp Quality Evaluation and Planning for Objects with Negative Curvature**
Shuo Liu, **Zhe Hu**, Hao Zhang, Mingu Kwon, Zhikang Wang, Yi Xu, Stefano Carpin
ICRA2017
- 2023 **Role Adaptation of Human-Robot Physical Interaction Based on the Distribution of Learned Belief**
Weifeng Lu, Longfei Zhao, **Zhe Hu**, Jia Pan
IAS 2023

- 2021 **Personalized Human-Robot Collaboration using Fuzzy Reinforcement Learning with Natural Language Rewards**
Zhe Hu, Weifeng Lu, Yu Zheng, Jia Pan
RO-MAN 2023
- 2024 **Evolution Strategy and Controlled Residual Convolutional Neural Networks for ADC Calibration in the Absence of Ground Truth**
Zhe Hu, Bowen Zhang, He Tang, Jia Pan, Xizhu Peng
Accepted by ISCAS 2024

Patent

US010875189B2

System and Method for Manipulating Deformable Objects

WO2018161305A1

Grasp quality detection method, and method and system employing same

CN114926709A

Data labeling method and device and electronic equipment

CN105477845A

Method and system for predicting motion trajectory of shuttlecock

CN105513074B

A shuttlecock robot camera calibration method and body to the world coordinate system

CN105549586B

Badminton robot tracking human movement control method and system

CN105373128B

Badminton robot and its audience targeting methods

CN106325302B

Moving object position tracking platform, tracking device and tracking method

CN117560474A

Projection system and projection apparatus

CN116939172A

Follow-up projection method and device and electronic equipment

CN117557934A

Target detection method, device, equipment and medium