Hongjie Fang

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Education

Shanghai Jiao Tong University *2022/09 – present*
Ph.D. Student, Wu Wenjun Honorable Class, Computer Science and Engineering Shanghai, China

Shanghai Jiao Tong University *2018/09 – 2022/06*
Bachelor of Engineering, major in Computer Science and Engineering, Shanghai, China
Bachelor of Economics, minor in Finance
- GPA 4.03 / 4.3, Ranking: 2 / 149.

Awards

Shanghai Outstanding Graduates *2022*
85′ Alumni and Yang Yuanqing Education Fund Scholarship *2021*
Shanghai Scholarship *2020*
Fuguang Scholarship *2018 - 2022*
Zhiyuan Scholarship *2018 - 2022*
National Olympics in Informatics (**NOI**) *Bronze Medal* *2017*
National Olympics in Informatics in Provinces (**NOIP**) *First Prize* *2015 & 2016*

Publications

1. AirExo: Low-Cost Exoskeletons for Learning Whole-Arm Manipulation in the Wild
   Hongjie Fang*, Hao-Shu Fang*, Yiming Wang*, Jieji Ren, Jingjing Chen, Ruo Zhang, Weiming Wang, Cewu Lu
   *IEEE International Conference on Robotics and Automation (**ICRA**), 2024.*

2. TransCG: A Large-Scale Real-World Dataset for Transparent Object Depth Completion and A Grasping Baseline
   Hongjie Fang, Hao-Shu Fang, Sheng Xu, Cewu Lu
   *IEEE Robotics and Automation Letters (**RA-L**), 2022; Presented at ICRA 2023.*

3. RH20T: A Comprehensive Robotic Dataset for Learning Diverse Skills in One-Shot
   Hao-Shu Fang, **Hongjie Fang**, Zhenyu Tang, Jirong Liu, Chenxi Wang, Junbo Wang, Haoyi Zhu, Cewu Lu
   *IEEE International Conference on Robotics and Automation (**ICRA**), 2024*

4. RISE: 3D Perception Makes Real-World Robot Imitation Simple and Effective
   Chenxi Wang, **Hongjie Fang**, Hao-Shu Fang, Cewu Lu
   *IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**), 2024.*

5. Open X-Embodiment: Robotic Learning Datasets and RT-X Models
   Open X-Embodiment Collaboration, 147 authors
   *IEEE International Conference on Robotics and Automation (**ICRA**), 2024.*
   Best Conference Paper Award

6. AnyGrasp: Robust and Efficient Grasp Perception in Spatial and Temporal Domains
   Hao-Shu Fang, Chenxi Wang, **Hongjie Fang**, Minghao Gou, Jirong Liu, Hengxu Yan, Wenhai Liu, Yichen Xie, Cewu Lu
   *IEEE Transaction on Robotics (**T-RO**), 2023; Presented at ICRA 2024.*

7. Flexible Handover with Real-Time Robust Dynamic Grasp Trajectory Generation
   Gu Zhang, Hao-Shu Fang, **Hongjie Fang**, Cewu Lu
   *IEEE/RSJ International Conference on Intelligent Robots and Systems (**IROS**), 2023.*

8. Graspness Discovery in Clutters for Fast and Accurate Grasp Detection
   Chenxi Wang*, Hao-Shu Fang*, Minghao Gou, **Hongjie Fang**, Jin Gao, Cewu Lu
   *IEEE/CVF International Conference on Computer Vision (**ICCV**), 2021.*

9. Target-Referenced Reactive Grasping for Dynamic Objects
   Jirong Liu, Ruo Zhang, Hao-Shu Fang, Minghao Gou, **Hongjie Fang**, Chenxi Wang, Sheng Xu, Hengxu Yan, Cewu Lu
   *IEEE/CVF Conference on Computer Vision and Pattern Recognition (**CVPR**), 2023.*

Preprints

1. Towards Effective Utilization of Mixed-Quality Demonstrations in Robotic Manipulation via Segment-Level Selection and Optimization
   Jingjing Chen, **Hongjie Fang**, Hao-Shu Fang, Cewu Lu
   arXiv, 2024.

2. CAGE: Causal Attention Enables Data-Efficient Generalizable Robotic Manipulation
   Shangning Xia, **Hongjie Fang**, Hao-Shu Fang, Cewu Lu
   arXiv, 2024.

3. Motion Before Action: Diffusing Object Motion as Manipulation Condition
   Yue Su*, Xinyu Zhan*, **Hongjie Fang**, Yong-Lu Li, Cewu Lu, Lixin Yang
   arXiv, 2024.

4. FoAR: Force-Aware Reactive Policy for Contact-Rich Robotic Manipulation
   Zihao He*, **Hongjie Fang***, Jingjing Chen, Hao-Shu Fang, Cewu Lu *arXiv, 2024.*

Academic Services

Reviewer for journal *RA-L*.
Reviewer for conferences including *ICRA*, *IROS*, *ICLR*, *etc.*

Teaching

Teaching Assistant, *Algorithm and Complexity* *Spring, 2022*
Teaching Assistant, *C++ Programming Language (Honor)* *Fall, 2020*
Teaching Assistant, *Data Structure (Honor)* *Spring, 2019*
Teaching Assistant, *Linear Algebra (Honor)* *Fall 2021 & Fall, 2022*
Teaching Assistant, *Mathematical Analysis (Honor)* *Fall, 2020 & Fall, 2021*

Invited Talks

- 03/2024, Echo AI Talk, USyd, *Towards Efficient Robot Imitation Learning from Human Demonstrations* (Data).
- 11/2024, Zhixingxing Talk, *Towards Efficient Robot Imitation Learning from Human Demonstrations* (Data + Policy).