Yuanpei Chen

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WEBSITE

Personal Website https://cypypccpy.github.io/

Github https://github.com/cypypccpy

INTERESTS

Robotics, Dexterous Manipulation, Reinforcement Learning, Imitation Learning, Computer Vision, Sim-to-Real Transfer

EDUCATION

South China University of Technology, Guangzhou, Guangdong
Bachelor of Engineering, Intelligent Construction, May 2019 G.P.A. 3.4/4.0

PUBLICATION

Yuanpei Chen, Yaodong Yang, Tianhao Wu, Shengjie Wang, Xidong Feng, Jiechuang Jiang, Stephen Marcus McAleer, Hao Dong, Zongqing Lu, Song-chun Zhu, "Towards Human-Level Bimanual Dexterous Manipulation with Reinforcement Learning", Conference on Neural Information Processing Systems (**NeurIPS**), 2022, **Accepted**. *Arxiv:2206.08686*

Yiran Geng*, Boshi An*, Haorang Geng, **Yuanpei Chen**, Yaodong Yang, Hao Dong, "Generalizing Object Manipulation through End-to-End Visual Affordance Learning", International Conference on Robotics and Automation (**ICRA**), 2022, **Under Review**. *Arxiv:2209.12941*

Yiran Geng*, Jiamg Ji*, **Yuanpei Chen***, Long Yang, Yaodong Yang, "TrustDeHands: A Massively Parallel Benchmark for Safe Dexterous Manipulation", The International Conference on Learning Representations (**ICLR**), 2022, **Under Review**.

Shangding Gu, Jakub Grudzien Kuba, **Yuanpei Chen**, Yali Du, Long Yang, Alois Knoll, Yaodong Yang, "Safe Multi-Agent Reinforcement Learning for Multi-Robot Control", Journal of Artificial Intelligence (**AIJ**), 2022, **Under Review**.

Yuanpei Chen, Chao Zeng, Zhiping Wang, Peng Lu, Chenguang Yang, "Zero-Shot Sim-to-Real Transfer of Reinforcement Learning Framework for Robotics Manipulation with Demonstration and Force Feedback", IEEE International Conference on Advanced Robotics and Mechatronics (**ICARM**), 2022, **Accepted**.

EXPERIENCE

Team Member Institute for Artificial Intelligence, Peking University Summer 2022-Present

As a member of the Peking University Multi Agent Reinforcement Learning Group (PKU-MARL) supervised by Prof.Yaodong Yang. I am doing reinforcement learning and robotics research in PKU-MARL group, details can be found on https://github.com/PKU-MARL/DexterousHands. The relevant results are accepted at the NeurIPS 2022 conference.

Team Member School of Automation, SCUT & Bristol Teleoperation Group Summer 2021-Present

As a member of the Prof.Chenguang Yang's group, responsible for the development of robot learning. I have applied reinforcement learning, imitation learning in manipulation and combined learning and control theory during this period.

Team Member Robotics Laboratory, SCUT Summer 2020-Present

As a member of the vision group, responsible for the development of robotics vision. I have applied SLAM, 3D perception, decision and motion planning in a robotic arm and a Automated Guided Vehicle during this period.

AWARDS

Honor Prize in the American College Students Mathematical Contest in Modeling, Feb 2021
Third Prize in the ICRA 2021 DJI RoboMaster University AI Challenge, Xi'An, June 2021
Second Prize in the Final of Huawei Embedded Software Competition,Dong Guang, July 2021
First Prize in the DJI RoboMaster University Championship, Shen Zhen, July 2021

PROFESSIONAL SKILLS

Programming

C++, Python, MatLab

Frameworks

PyTorch, ROS, MuJoCo, PyBullet, IsaacGym