

EDUCATION

- **UC San Diego** San Diego, CA
Ph.D in ECE / M.S in CS *Sep. 2021 - Present / Sep. 2019 - Mar. 2021*
- **Nankai University** Tianjin, China
B.E in Software Engineering *Sep. 2015 - Jul. 2019*

PUBLICATIONS & PREPRINTS

- [1] **Bunny-VisionPro: Real-Time Bimanual Dexterous Teleoperation for Imitation Learning**
Runyu Ding*, Yuzhe Qin*, Jiyue Zhu*, Chengzhe Jia, Shiqi Yang, **Ruihan Yang**, Xiaojuan Qi, Xiaolong Wang
Arxiv, 2024
- [2] **SpatialRGPT: Grounded Spatial Reasoning in Vision-Language Models**
An-Chieh Cheng, Hongxu Yin, Yang Fu, Qiushan Guo, **Ruihan Yang**, Jan Kautz, Xiaolong Wang, Sifei Liu
Arxiv, 2024
- [3] **Visual Whole-Body Control for Legged Loco-Manipulation**
Minghuan Liu*, Zixuan Chen*, Xuxin Cheng, Yandong Ji, **Ruihan Yang** Xiaolong Wang
Arxiv, 2024
- [4] **Learning Generalizable Feature Fields for Mobile Manipulation**
Ri-Zhao Qiu*, Yafei Hu*, Ge Yang, Yuchen Song, Yang Fu, Jianglong Ye, Jiteng Mu, **Ruihan Yang**,
Nikolay Atanasov, Sebastian Scherer, Xiaolong Wang
Arxiv, 2024
- [5] **Expressive Whole-Body Control for Humanoid Robots**
Xuxin Cheng*, Yandong Ji*, Junming Chen, **Ruihan Yang**, Ge Yang, Xiaolong Wang
RSS, 2024
- [6] **Harmonic Mobile Manipulation**
Ruihan Yang, Yejin Kim, Rose Hendrix, Aniruddha Kembhavi, Xiaolong Wang, Kiana Ehsani
IROS 2024 (Oral)
- [7] **Generalized Animal Imitator: Agile Locomotion with Versatile Motion Prior**
Ruihan Yang*, Zhuoqun Chen*, Jianhan Ma*, Chongyi Zheng*, Yiyu Chen, Quan Nguyen, Xiaolong Wang
Arxiv 2023, Workshop Best Paper @ CORL 2023 Deployable Workshop
- [8] **Neural Volumetric Memory for Legged Locomotion Control**
Ruihan Yang, Ge Yang, Xiaolong Wang
CVPR 2023 (Highlight)
- [9] **Learning Vision-Guided Quadrupedal Locomotion End-to-End with Cross-Modal Transformers**
Ruihan Yang*, Minghao Zhang*, Nicklas Hansen, Huazhe Xu, Xiaolong Wang
ICLR 2022 (Spotlight)
- [10] **Vision-Guided Quadrupedal Locomotion in the Wild with Multi-Modal Delay Randomization**
Chieko Sarah Imai*, Minghao Zhang*, Yuchen Zhang*, Marcin Kierebiński, **Ruihan Yang**,
Yuzhe Qin, Xiaolong Wang
IROS 2022
- [11] **DexMV: Imitation Learning for Dexterous Manipulation from Human Videos**
Yuzhe Qin*, Yueh-Hua Wu*, Shaowei Liu, Hanwen Jiang, **Ruihan Yang**, Yang Fu, Xiaolong Wang
ECCV 2022
- [12] **Multi-Task Reinforcement Learning with Soft Modularization**
Ruihan Yang, Huazhe Xu, Yi Wu, Xiaolong Wang
NeurIPS 2020 / ICLR BeTR-RL workshop, 2020 (Oral)
- [13] **Suphx: Mastering Mahjong with Deep Reinforcement Learning**
Junjie Li, Sotetsu Koyamada, Qiwei Ye, Guoqing Liu, Chao Wang, **Ruihan Yang**, Li Zhao, Tao Qin,
Tie-Yan Liu, Hsiao-Wuen Hon
Arxiv 2020

EXPERIENCE

- **The AI Institute (Boston Dynamics AI Institute)** Cambridge, MA
Research Intern @ DMM. *Starting - Oct. 2024*
 - Work on Mobile Manipulation
- **Allen Institute for AI (AI2)** Seattle, WA
Research Intern @ PRIOR. Work with Dr. Kiana Ehsani *Jun. 2023 - Dec 2023*
 - Work on Mobile Manipulation
- **Adobe Research** San Jose, CA(Remote)
Research Intern. Work with Dr. Ruben Villegas, Dr. Duygu Ceylan *Jun. 2021 - Dec. 2021*
 - Work on Motion Style Transfer
- **Microsoft Research Asia** Beijing, China
Research Intern at Machine Learning Group. Work with Qiwei Ye, Dr. Tao Qin *Mar. 2018 - Jun. 2019*
 - Built AI for Mahjong (One of the hardest imperfect-information game, **most popular board game in East Asia**, well matched to the **top professional human player**)

PROFESSIONAL SERVICE

Conference Reviewer ECCV / CVPR / ICCV / NeurIPS / ICLR / ICML
AAAI / ICRA / IROS / Humanoids

Journal Reviewer RA-L / TRO

TEACHING EXPERIENCE

- **Math 155A: 3D Computer Graphics** *Fall. 2020*
Teaching Assistant
- **ECE 176: Introduction to Deep Learning and Applications** *Winter. 2021 / Winter. 2023*
Teaching Assistant
- **ECE 285: Introduction to Visual Learning** *Spring. 2024*
Teaching Assistant

HONORS & AWARDS

- First Class Scholarship for Nankai University Undergraduate (Top 5%) *Dec. 2016, Dec. 2017*
- Public Dedication and All-round Capability Scholarship(15/96), Nankai University *Oct. 2018*

SELECTED PROJECTS

- **TorchRL** *Dec. 2018 - Present*
Personal implementation of various RL algorithms
 - Implemented various RL methods: off-policy and on-policy methods.
 - Earned over 150 stars on github.
- **AI for Prosthetics** *Jul. 2018 - Nov.2018*
NIPS 2018: AI for Prosthetics Challenge
 - Developed a controller to enable a physiologically-based human model with a prosthetic leg to walk and run.
 - Trained robotic controller using Proximal Policy Optimization(PPO), with symmetric loss / observation engineering / reward shaping / model using residual blocks. / dense goal-conditioned model
 - Ensembled multiple actors to cope with different circumstances
 - **Rank: 9th** (round1), **10th** (round2) & **Average Reward: 9800+**/10000

SKILLS & INTERESTS

Programming Languages C++/Python/C/Java/Bash/Latex/SQL
Techniques Git/OpenMP/SIMD/MPI/CUDA/Docker/Pybind/Pytorch/Tensorflow