

HUAZHE XU

Email: huazhe_xu@berkeley.edu \diamond Homepage: <http://hxu.rocks>

EDUCATION

Ph.D. Candidate, Computer Science, University of California, Berkeley, USA 08/2016 - present

- 5th year Ph.D. in Artificial Intelligence (AI)
- Advised by Prof. Trevor Darrell

Research interests: Model-based Deep Reinforcement Learning, Predictive Model on High-dimensional Data, Tactile Sensing, Robotics

Bachelor of Engineer, Electrical Engineering, Tsinghua University, China 08/2012 - 07/2016

- GPA Rank 5/238

Exchange, Electrical and Computer Engineer, University of Toronto, Canada 08/2014 - 12/2014

- Advised by Prof. Sanja Fidler and Prof. Raquel Urtasun

PUBLICATIONS AND MANUSCRIPTS

1. **Huazhe Xu***, Boyuan Chen*, Yang Gao, Trevor Darrell, Scoring, Aggregating, Planning: framework for learning task-agnostic priors from interactions and rewards for zero-shot generalization, *International Conference on Robot Automation (ICRA)*, 2021; also appeared at the *Thirty-Fourth AAAI Conference on Artificial Intelligence (AAAI-20) GenPlan Workshop* *spotlight*
2. Mike Lambeta, **Huazhe Xu**, Jingwei Xu, Po-wei Chow, Shaoxiong Wang, Trevor Darrell, Roberto Calandra, Pytouch: A Machine Learning Framework for Touch Processing, *International Conference on Robot Automation (ICRA)*, 2021
3. Zhenggang Tang*, Chao Yu*, Boyuan Chen, **Huazhe Xu**, Shaolei Du, Xiaolong Wang, Fei Fang, Yu Wang, Yi Wu, Finding a Better Nash Equilibrium via Reward-Randomized Policy Gradient, *International Conference of Learning Representation (ICLR)*, 2021
4. Yunfei Li, **Huazhe Xu**, Xiaolong Wang, Yi Wu, Self-Imitative Autocurricula via Task Reduction, *International Conference of Learning Representation (ICLR)*, 2021
5. Jiashun Wang, **Huazhe Xu**, Jingwei Xu, Sifei Liu, Xiaolong Wang, Synthesizing Long-Term 3D Human Motion and Interaction in 3D Scenes, *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021
6. Jingwei Xu*, **Huazhe Xu***, Bingbing Ni, Xiaokang Yang, Xiaolong Wang, Trevor Darrell, Hierarchical Style-based Networks for Motion Synthesis, *European Conference on Computer Vision (ECCV)*, 2020
7. Jingwei Xu*, **Huazhe Xu***, Bingbing Ni, Xiaokang Yang, Trevor Darrell, Video Prediction via Demonstration Guidance, *International Conference on Machine Learning (ICML)*, 2020
8. **Huazhe Xu***, Hang Gao*, Qi-zhi Cai, Ruth Wang, Fisher Yu, Trevor Darrell, Disentangling Propagation and Generation for Video Prediction, *International Conference on Computer Vision (ICCV)*, 2019
9. Yuping Luo*, **Huazhe Xu***, Yuanzhi Li, Yuandong Tian, Tengyu Ma, Algorithmic Framework for Model-based Reinforcement Learning with Theoretical Guarantees, *International Conference on Learning Representations (ICLR)*, 2019
10. Yang Gao*, **Huazhe Xu***, Fisher Yu, Sergey Levine, Trevor Darrell, Reinforcement Learning from Imperfect Demonstrations. Neurips 2018 Deep RL Symposium
11. **Huazhe Xu***, Yang Gao*, Fisher Yu, Trevor Darrell, End-to-end Learning of Driving Models from Large-scale Video Datasets. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017 *Oral*

12. Jierui Lin*, Yifei Xing*, **Huazhe Xu**, Trevor Darrell, Yang Gao, Learning a Perception-Logic Network for Unsupervised Scene Conditioned Driving Behavior, *Robotics: Science and System (RSS) workshop*
13. Ruihan Yang, **Huazhe Xu**, Yi Wu, Xiaolong Wang, Multi-Task Reinforcement Learning with Soft Modularization, *International Conference on Learning Representations (ICLR), 2020, also appear at RL workshop, Neurips 2020 Oral*
14. Yuping Luo, **Huazhe Xu**, Tengyu Ma, Learning Self-Correctable Policies and Value Functions from Demonstrations with Negative Sampling, *International Conference on Learning Representations (ICLR) 2020*
15. Haoran Tang*, Dennis Lee*, Jeffrey O Zhang, Huazhe Xu, Trevor Darrell, Pieter Abbeel, Modular Architecture for StarCraft II with Deep Reinforcement Learning. *The 14th AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment (AIIDE), 2018*
16. Ronghang Hu, **Huazhe Xu**, Marcus Rohrbach, Jiashi Feng, Kate Saeko, Trevor Darrell, Natural Language Object Retrieval. *Conference on Computer Vision and Pattern Recognition (CVPR), 2016 Oral*
17. Tianjun Zhang, **Huazhe Xu**, Xiaolong Wang, Yi Wu, Yuandong Tian, Multi-Agent Collaboration via Reward Attribution Decomposition, *under review*
18. Tianjun Zhang, **Huazhe Xu**, Xiaolong Wang, Yi Wu, Yuandong Tian, BEBOLD: Exploration Beyond the Boundary of Explored Regions, *under review*

ONGOING PROJECTS

Vision, Audio, Touch Three-way Multi-modal Predictive Model for Dexterous Hand Manipulation

- Joint Work with Shaoxiong Wang, Trevor Darrell, Roberto Calandra

RL-based Human-robot Interaction with Predictive Models

- Joint Work with Jingwei Xu, Zhiyang He, Anca Dragan, Trevor Darrell

AWARDS

- Graduate Excellence Award, 2016, UC Berkeley
- Annual Academic Excellence Award (2%), 2014/2015, Tsinghua
- Annual Comprehensive Excellence Award (2%), 2013, Tsinghua
- First Prize in 2013 Chinese Undergraduate Students' Physics Competition (top 1%)

PROFESSIONAL EXPERIENCE

Visiting Researcher, Facebook AI Research (FAIR), Menlo Park, CA, USA. 11/2019 - present

Mentor: Dr. Roberto Calandra

Research Intern, Facebook AI Research (FAIR), Menlo Park, CA, USA. 12/2017 - 12/2018

Mentor: Prof. Tengyu Ma Dr. Yuandong Tian

MISCELLANEOUS

A partial catalog of other aspects of me:

- Classically trained amateur pianist for more than 20 years
- Finished most of UC Berkeley Music Department non-performance classes
- Enjoy in-depth reading, tennis, pickle ball, jogging