

# TONGZHOU MU

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## EDUCATION

### University of California, San Diego

- *Ph.D. in Computer Science & Engineering* *Advisor: Hao Su* 2019 – Present
- *M.S. in Computer Science & Engineering* *GPA: 4.0/4.0* 2017 – 2019

**Zhejiang University** *B.Eng. in Computer Science* *GPA: 3.8/4.0, Major GPA: 3.97/4.00* 2013 – 2017

## RESEARCH INTERESTS

- Reinforcement Learning (especially object-centric RL and model-based RL)
- Planning & Control
- Concept Discovery and Reasoning

## PUBLICATIONS

- **Tongzhou Mu\***, Zhan Ling\*, Fanbo Xiang\*, Derek Yang\*, Xuanlin Li\*, Stone Tao, Zhiao Huang, Zhiwei Jia, and Hao Su. “ManiSkill: Generalizable Manipulation Skill Benchmark with Large-Scale Demonstrations.” In *the 35th Conference on Neural Information Processing Systems (NeurIPS) Datasets and Benchmarks Track*, 2021.
- **Tongzhou Mu\***, Jiayuan Gu\*, Zhiwei Jia, Hao Tang, and Hao Su. “Refactoring Policy for Compositional Generalizability using Self-Supervised Object Proposals.” In *the 34th Conference on Neural Information Processing Systems (NeurIPS)*, 2020.
- Fangchen Liu, Zhan Ling, **Tongzhou Mu**, and Hao Su. “State Alignment-based Imitation Learning.” In *the 8th International Conference on Learning Representations (ICLR)*, 2020.
- Xingchao Liu\*, **Tongzhou Mu\***, and Hao Su. “Transfer Value or Policy? A Value-centric Framework Towards Transferrable Continuous Reinforcement Learning.” In *the Deep Reinforcement Learning Workshop at the 32th Conference on Neural Information Processing Systems (NeurIPS)*, 2018.
- Zebang Shen, Hui Qian, **Tongzhou Mu**, and Chao Zhang. “Accelerated Doubly Stochastic Gradient Algorithm for Large-scale Empirical Risk Minimization.” In *the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, 2017.
- Zebang Shen, Hui Qian, Tengfei Zhou, and **Tongzhou Mu**. “Adaptive Variance Reducing for Stochastic Gradient Descent.” In *the 25th International Joint Conference on Artificial Intelligence (IJCAI)*, 2016.

\* indicates equal contribution

## INDUSTRY EXPERIENCES

**Amazon Alexa AI** Sunnyvale, United States  
*Full-Time Applied Scientist Intern* June 2021 – Sep 2021

- Designed an interpretable reinforcement learning framework for text-based games with graph inputs.

**Wormpex AI Research** Seattle, United States  
*Full-Time Research Intern* June 2020 – Sep 2020

- Designed a customer behavior model and optimized the convivence store environment layout based on it.

**Intel AI** San Diego, United States  
*Full-Time Research Intern* July 2019 – Sep 2019

- Worked on the memory-constrained navigation problem based on a method combining RL and planning.

**Microsoft Research Asia** Beijing, China  
*Full-Time Intern at Visual Computing Group* Apr 2017 – Aug 2017

- Conducted research on visual navigation in simulated indoor scenes by using deep reinforcement learning.

## AWARDS & HONORS

- ACM-ICPC (International Collegiate Programming Contest) Asia Regional Contest **Gold Medal** 2015
- Award of Excellence for Stars of Tomorrow Internship Program, Microsoft Research Asia 2017
- China Computer Federation Elite Collegiate Award (top 108 in China) 2016

## TEACHING

- Teaching Assistant for *CSE 152 Introduction to Computer Vision* at UC San Diego Fall 2018