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Contact Information

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Education

Department of Computer Science and Technology 2021.8 - 2026.6 (expected)

Ph.D Student, **Tsinghua University (THU)**, Beijing, China

· **TSAIL lab**, advised by Prof. **Jun Zhu** and A/Prof. **Hang Su**

· Research: Machine Learning, Reinforcement Learning, Embodied AI

Department of Mathematical Science 2017.8 - 2021.6

Bachelor of Science, **Tsinghua University (THU)**, Beijing, China

· Major in Mathematics and Applied Mathematics, Minor in Computer Application

· **GPA: 3.92/4.00** (156 credits); **Rank: 4/128**

· Average math GPA: **3.96/4.00** (82 credits); CS courses GPA: **4.00/4.00** (25 credits)

Work Experience

Research intern in **Tongyi Qwen**, Alibaba, Beijing, China 2025.5-Now

· Work on RL training of LLM agents for improving open-web search

Publications (First Author, *for equal contribution)

PEAC: Unsupervised Pre-training for Cross-Embodiment Reinforcement Learning

Chengyang Ying, Zhongkai Hao, Xinning Zhou, Xuezhou Xu, Hang Su, Xingxing Zhang, Jun Zhu

Neural Information Processing Systems (NeurIPS), Vancouver, Canada, 2024

On the Reuse Bias in Off-Policy Reinforcement Learning

Chengyang Ying, Zhongkai Hao, Xinning Zhou, Hang Su, Dong Yan, Jun Zhu

International Joint Conference on Artificial Intelligence (IJCAI), Macao, China, 2023

Towards Safe Reinforcement Learning via Constraining Conditional Value at Risk

Chengyang Ying, Xinning Zhou, Hang Su, Dong Yan, Ning Chen, Jun Zhu

International Joint Conference on Artificial Intelligence (IJCAI), Vienna, Austria, 2022

An early version is published in ICML 2021 Workshop on Adversarial Machine Learning

Consistent Attack: Universal Adversarial Perturbation on Embodied Vision Navigation

Chengyang Ying*, You Qiaoben*, Xinning Zhou*, Hang Su, Wenbo Ding, Jianyong Ai

Pattern Recognition Letters (PRL), 2023

Self-Consistent Model-based Adaptation for Visual Reinforcement Learning

Xinning Zhou*, **Chengyang Ying***, Yao Feng, Hang Su, Jun Zhu

International Joint Conference on Artificial Intelligence (IJCAI), Montreal, Canada, 2025

Exploratory Diffusion Model for Unsupervised Reinforcement Learning

Chengyang Ying, Huayu Chen, Xinning Zhou, Zhongkai Hao, Hang Su, Jun Zhu

arXiv preprint arXiv:2502.07279

Task Aware Dreamer for Task Generalization in Reinforcement Learning

Chengyang Ying*, Xinning Zhou*, Zhongkai Hao, Hang Su, Songming Liu, Dong Yan, Jun Zhu

arXiv preprint arXiv:2303.05092

ManiBox: Enhancing Spatial Grasping Generalization via Scalable Simulation Data Generation

Hengkai Tan*, Xuezhou Xu*, **Chengyang Ying***, Xinyi Mao, Songming Liu, Xingxing Zhang, Hang Su, Jun Zhu

arXiv preprint arXiv:2411.01850

Publications (Coauthor)

Embodied Active Defense: Exploiting Recurrent Feedback for Robust Visual Perception in Adversarial 3D Environments

Xiao Yang, Lingxuan Wu, Lizhong Wang, **Chengyang Ying**, Hang Su, Jun Zhu

IEEE Transaction on Pattern Analysis and Machine Intelligence (TPAMI), 2025

Fourier Controller Networks for Real-Time Decision-Making in Embodied Learning

Hengkai Tan, Songming Liu, Kai Ma, **Chengyang Ying**, Xingxing Zhang, Hang Su, Jun Zhu

International Conference on Machine Learning (ICML), Vienna, Austria, 2024

DPOT: Auto-Regressive Denoising Operator Transformer for Large-Scale PDE Pre-Training

Zhongkai Hao, Chang Su, Songming Liu, Julius Berner, **Chengyang Ying**, Hang Su, Anima Anandkumar, Jian Song, Jun Zhu

International Conference on Machine Learning (ICML), Vienna, Austria, 2024

Understanding Adversarial Attacks on Observations in Deep Reinforcement Learning

You Qiaoben, **Chengyang Ying**, Xinning Zhou, Hang Su, Jun Zhu, Bo Zhang

SCIENCE CHINA Information Sciences (SCIS), 2024

GNOT: A General Neural Operator Transformer for Operator Learning

Zhongkai Hao, Zhengyi Wang, Hang Su, **Chengyang Ying**, Yinpeng Dong, Songming Liu, Ze Cheng, Jun Zhu, Jian Song

International Conference on Machine Learning (ICML), Hawaii, USA, 2023

NUNO: A General Framework for Learning Parametric PDEs with Non-Uniform Data
 Songming Liu, Zhongkai Hao, **Chengyang Ying**, Hang Su, Ze Cheng, Jun Zhu
International Conference on Machine Learning (ICML), Hawaii, USA, 2023

Offline Reinforcement Learning via High-Fidelity Generative Behavior Modeling
 Huayu Chen, Cheng Lu, **Chengyang Ying**, Hang Su, Jun Zhu
International Conference on Learning Representations (ICLR), Kigali, Rwanda, 2023

Bi-level Physics-Informed Neural Networks for PDE Constrained Optimization using
 Broyden's Hypergradients
 Zhongkai Hao, **Chengyang Ying**, Hang Su, Jun Zhu, Jian Song, Ze Cheng
International Conference on Learning Representations (ICLR), Kigali, Rwanda, 2023

Physics-Informed Machine Learning: A Survey on Problems, Methods and Applications
 Zhongkai Hao, Songming Liu, Yichi Zhang, **Chengyang Ying**, Yao Feng, Hang Su, Jun Zhu

A Unified Hard-Constraint Framework for Solving Geometrically Complex PDEs
 Songming Liu, Zhongkai Hao, **Chengyang Ying**, Hang Su, Jun Zhu, Ze Cheng
Neural Information Processing Systems (NeurIPS), New Orleans, USA, 2022

GSmooth: Certified Robustness against Semantic Transformations via Generalized
 Randomized Smoothing
 Zhongkai Hao, **Chengyang Ying**, Yinpeng Dong, Hang Su, Jian Song, Jun Zhu
International Conference on Machine Learning (ICML), Baltimore, USA, 2022

Strategically-timed State-Observation Attacks on Deep Reinforcement Learning Agents
 You Qiaoben, Xinning Zhou, **Chengyang Ying**, Jun Zhu
 ICML 2021 Workshop on Adversarial Machine Learning, 2021

Selected Awards

· Tsinghua Friends - Weihai Talent Scholarship	2023
· Yang Huiyan Scholarship, Dept. CS, THU	2022
· Beijing Outstanding Graduates , THU (5% on THU)	2021
· Tsinghua Good Graduates , THU (10% on THU)	2021
· Honorable Mention of Mathematical Contest In Modeling(MCM/ICM)	2020
· ZhaoFangxiong Scholarship, Dept. Math, THU(top 1 in course Numerical Analysis)	2020
· WQF Scholarship	2020
· Hengda Scholarship, Hengda Corporation	2019
· Three star volunteer, Dept. Math, THU	2019
· China National Scholarship , Ministry of Education of China (2% in THU)	2018
· Comprehensive Excellence Award , Dept. Math, THU	2018, 2019, 2020
· First prize of “Gao Jiao She Bei” national mathematical modeling competition	2018
· The first prize of national college students' Mathematics Competition	2018
· Silver model of Chinese Mathematical Olympiad (CMO)	2016

Services

Conference & Journal Review: Reviewer for ICML 2022-2025, NeurIPS 2022-2025, ICLR 2024-2025, IJCAI 2024-2025, AAAI 2025-2026, CVPR 2024-2025, ICCV 2025, AISTATS 2025, ECAI 2025, TCSVT

Teaching

2024 Fall, **TA** in ***Advanced Machine Learning***, instructed by Prof. Jie Tang and Prof. Jun Zhu

2022 Spring, **TA** in ***Deep Learning***, instructed by A/Prof. Xiaolin Hu and Prof. Jun Zhu

2022 Spring, **TA** in ***Statistical Machine Learning***, instructed by Prof. Jun Zhu

2021 Spring & 2021 Fall & 2023 Spring & 2024 Spring & 2025 Spring, **TA** in ***Discrete mathematics for Computer Science***, instructed by A/Prof Hang Su

Computer Skills

Language: C++, Python, Matlab

Deep Learning Skill: Pytorch