

Yi Tian

CONTACT INFORMATION	77 Massachusetts Ave, 32-D572 Massachusetts Institute of Technology Cambridge, MA 02139	+1 (617) 949-1178 yitian@mit.edu http://yi-t.github.io
RESEARCH INTERESTS	Machine/Reinforcement Learning, Control Theory, Robotics, Optimization, Game Theory, and their intersections	
EDUCATION	Massachusetts Institute of Technology , Cambridge, MA, USA Ph.D. Student in Electrical Engineering and Computer Science Minor in Mathematics M.S. in Electrical Engineering and Computer Science, May 2021 Tsinghua University , Beijing, China B.E. in Automation, Jul. 2019, Top Grade Scholarship (10/3600) Excellent Graduate Awards , both Tsinghua University and City of Beijing	
RESEARCH EXPERIENCE	Massachusetts Institute of Technology , Cambridge, MA, USA Sep. 2019 – Present Research Assistant with Suvrit Sra, Laboratory for Information and Decision Systems <ul style="list-style-type: none">• Sample-efficient representation learning for control (also with Russ Tedrake, Kaiqing Zhang)• Sample-efficient reinforcement learning in Markov decision processes and Markov games Tsinghua University Oct. 2018 – Jun. 2019 Research Assistant with Keyou You, Institute of System Integration <ul style="list-style-type: none">• Asynchronous and decentralized distributed training of deep neural networks Tsinghua University Nov. 2016 – Jun. 2018 Research Assistant with Jiwen Lu, Intelligent Vision Group <ul style="list-style-type: none">• Deep progressive reinforcement learning for skeleton-based action recognition• Egocentric hand segmentation and its facilitation for action recognition	
INDUSTRIAL EXPERIENCE	Amazon Robotics , Cambridge, MA, USA May. 2022 – Aug. 2022 Applied Scientist Intern, Manager: Paul Birkmeyer, Mentor: Yifan Hou <ul style="list-style-type: none">• NeRF-based training of dense descriptors for bin manipulation Amazon Search , Palo Alto, CA, USA Jun. 2021 – Aug. 2021 Applied Scientist Intern, Manager: Sujay Sanghavi, Mentor: Han Cheng <ul style="list-style-type: none">• Multi-task training of ranking models	
PUBLICATIONS & MANUSCRIPTS	Haochuan Li*, Jian Qian*, Yi Tian , Alexander Rakhlin, Ali Jadbabaie. Convex and Non-Convex Optimization under Generalized Smoothness. <i>37th Conference on Neural Information Processing Systems (NeurIPS)</i> , 2023. (Spotlight) Yi Tian , Kaiqing Zhang, Russ Tedrake, Suvrit Sra. Toward Understanding State Representation Learning in MuZero: A Case Study in Linear Quadratic Gaussian Control. <i>62nd IEEE Conference on Decision and Control (CDC)</i> , 2023. Yi Tian , Kaiqing Zhang, Russ Tedrake, Suvrit Sra. Can Direct Latent Model Learning Solve Linear Quadratic Gaussian Control? <i>5th Annual Learning for Dynamics & Control Conference (L4DC)</i> , 2023. (Oral) Ali Jadbabaie, Haochuan Li, Jian Qian, Yi Tian . Byzantine-Robust Federated Linear Bandits. <i>61st IEEE Conference on Decision and Control (CDC)</i> , 2022. Haochuan Li, Yi Tian , Jingzhao Zhang, Ali Jadbabaie. Complexity Lower Bounds for Nonconvex-Strongly-Concave Min-Max Optimization. <i>35th Conference on Neural Information Processing Systems (NeurIPS)</i> , 2021. Tiancheng Yu, Yi Tian , Jingzhao Zhang, Suvrit Sra. Provably Efficient Algorithms for Multi-Objective Competitive RL. <i>38th International Conference on Machine Learning (ICML)</i> , 2021. (Long talk) Yi Tian* , Yuanhao Wang*, Tiancheng Yu*, Suvrit Sra. Online Learning in Unknown Markov Games. <i>38th International Conference on Machine Learning (ICML)</i> , 2021.	

