Zixin Tang

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Education

M.Sc. in Control Science and Engineering

Sep 2020 ~ June 2023

- Location: National University of Defense Technology, Changsha, China
- Advisor: Prof. Dr. Xin Xu
- Thesis: Research on Deep Reinforcement Learning Methods of Grasp Planning of manipulator in Complex 3D Scenes Manipulator

B.Eng. in Computer Science and Technology

Sep 2016 ~ June 2020

- Location: Sichuan University, Sichuan, China
- GPA: 3.74 / 4.0; Rank: Top 5%
- Achievements: won scholarships, competition awards, and an exam-free postgraduate recommendation to National University of Defense Technology

Work Experience

Research Assistant

Start in July 2023

- Location: Shanghai AI Lab, Shanghai, China
- Focus on embodied intelligence and multi-robot collaboration via large language model (LLM)

Research Areas & Interests

Areas	Robotics, Computer Vision, Deep Reinforcement Learning
Interests	Embodied Intelligence with focuses on representation learning for multi-modal perception and long-horizon planning via LLM

Publications

2023 [J4] **CSGP: Closed-loop Safe Grasp Planning via Attention-based Deep Reinforcement Learning from Demonstrations**
Tang Z, Shi Y, Xu X
IEEE Robotics and Automation Letters (**RA-L**), vol.8, no. 6, pp. 3158-3165, Jun 2023

[J3] **A deep Koopman Operator-based Modelling Approach for Long-term Prediction of Dynamics with Pixel-level Measurements**
Xiao Y, **Tang Z,** Xu X, Zhang X, Shi Y
CAAI Transactions on Intelligence Technology, Feb 2023

[J2] **Efficient Reinforcement Learning with Least-squares Soft Bellman Residual for Robotic Grasping**
Lan Y, Ren J, Tang T, Xu X, Shi Y, **Tang Z**
Robotics and Autonomous Systems (**RAS**), vol. 164, 104385, Apr 2023

2022 [J1] **SymmetryGrasp: Symmetry-Aware Antipodal Grasp Detection From Single-View RGB-D Images**

Shi Y, **Tang Z**, Cai X, Zhang H, Hu D, Xu X
IEEE Robotics and Automation Letters (**RA-L**), vol. 7, no. 4, pp. 12235-12242, Oct 2022
- The contents of this paper were also selected by **ICRA** 2023 for oral presentation

2021 [C1] **Grasp Planning Based on Deep Reinforcement Learning: A Brief Survey**
Tang Z, Xu X, Shi Y
China Automation Congress (**CAC**), pp. 7293-7299, Oct 2021

Honors, Awards, & Fellowships

2020 Graduate Scholarship, National University of Defense Technology
2016~2019 Comprehensive & Individual Scholarship, Sichuan University
2017 Lenovo Intelligent Ecology University Innovation Competition Top 10 in SW China
2017 Outstanding Student, Sichuan University

Skills

Programming
Python, C/C++
Libraries
Pytorch, OpenCV, Open3D, etc.
Simulation Environments
CoppeliaSim (V-REP), Robosuite, Isaac, etc.
Real Robot Platform
Universal Robots (UR5), ROS (entry level)
Language
Chinese (native), English (conversational, CET6)