

EDUCATION**Southern University of Science and Technology, Shenzhen, China**

Sept. 2021 – Jun. 2025(expected)

Doctor of Philosophy (Robotics)

Supervisor: Prof. Hong Zhang

GPA: 3.79

National University of Singapore, Singapore

May 2024 – May 2025(expected)

Visiting Ph.D. Student

Supervisor: Prof. David Hsu

AdaComp Lab (School of Computing)

Georgia Institute of Technology, Atlanta, USA

Aug. 2018 – May. 2020

Master of Science (Electrical and Computer Engineering)

Supervisor: Prof. Patricio Vela

GPA: 3.90

Nanjing Tech University, Nanjing, China

Aug. 2014 – Jun. 2018

Bachelor of Engineering (Automation)

GPA: 3.80, Ranking: 1/123

RESEARCH INTERESTS

My research interests involve robotic **manipulation and grasping**, **mobile manipulation**, **human-robot interaction**, and **semantic reasoning** for robots. The ultimate goal is to develop autonomous agents that can perceive, understand, and interact with the physical world with the same level of intelligence as humans.

PUBLICATIONS

- ✧ **Chao Tang**, Dehao Huang, Wenlong Dong, Ruinian Xu, and Hong Zhang, "FoundationGrasp: Generalizable Task-Oriented Grasping with Foundation Models", under review by IEEE TASE.
- ✧ Wenqi Ge, **Chao Tang**, and Hong Zhang, "Commonsense Scene Graph-based Target Localization for Object Search", under review by IROS 2024.
- ✧ Dehao Huang, **Chao Tang**, and Hong Zhang, "*Efficient Object Rearrangement via Multi-view Fusion*", accepted to IEEE ICRA 2024.
- ✧ **Chao Tang**, Dehao Huang, Wenqi Ge, Weiyu Liu and Hong Zhang, "*GraspGPT: Leveraging Semantic Knowledge from a Large Language Model for Task-Oriented Grasping*", accepted to IEEE Robotics and Automation Letters.
- ✧ **Chao Tang**, Dehao Huang, Lingxiao Meng, Weiyu Liu and Hong Zhang, "*Task-Oriented Grasp Prediction with Visual-Language Inputs*", accepted to IEEE IROS/RSJ 2023.
- ✧ **Chao Tang**, Jingwen Yu, Weinan Chen, Bingyi Xia and Hong Zhang, "*Relationship Oriented Semantic Scene Understanding for Daily Manipulation Tasks*", accepted to IEEE IROS/RSJ 2022.
- ✧ Weinan Chen, Hanjing Ye, Changfei Fu, **Chao Tang**, Lei Zhu and Hong Zhang, "*Keyframe Selection with Information Occupancy Grid Model for Long-Term Data Association*", accepted to IEEE/RSJ IROS 2022.
- ✧ Yunzhi Lin, **Chao Tang**, Fu-Jen Chu, Ruinian Xu and Patricio A. Vela, "*Primitive Shape Recognition for Object Grasping*", under review.
- ✧ Fu-Jen Chu, Ruinian Xu, **Chao Tang** and Patricio A. Vela, "*Recognizing object affordance to support scene reasoning for manipulation tasks*", under review.
- ✧ Ruinian Xu, Fu-Jen Chu, **Chao Tang**, Weiyu Liu and Patricio A. Vela, "*An Affordance Keypoint Detection Network for Robot Manipulation*", accepted to IEEE Robotics and Automation Letters (RA-L) & ICRA 2021.
- ✧ Yunzhi Lin*, **Chao Tang***, Fu-Jen Chu and Patricio A. Vela, "*Using Synthetic Data and Deep Networks to Recognize Primitive Shapes for Object Grasping*", accepted to IEEE ICRA 2020. (*-equal contribution)
- ✧ **Chao Tang**, Yifei Fan and Anthony J. Yezzi, "*An Adaptive View of Adversarial Robustness from Test-time Smoothing Defense*", accepted to NeurIPS 2019 workshop.
- ✧ Cuimei Bo, Wei Gao, **Chao Tang**, Jun Li and Xiaohua Lu, "*Dynamic Control Design and Simulation of Biogas Pressurized Water Scrubbing*"

INTERNS

- ◇ Southern University of Science and Technology, Shenzhen, China Mar. 2021 – Aug. 2021
Research assistant at Shenzhen Key Laboratory of Robotics and Computer Vision supervised by Prof. Hong Zhang
 - ◇ Georgia Institute of Technology, Atlanta, USA May 2020 – Jan. 2021
Research assistant at Intelligent Vision and Automation Lab supervised by Prof. Patricio Vela
 - ◇ Fibrant Co. Ltd, Nanjing, China Jun. 2017 – Aug. 2017
Process control engineer with Mr. Li Liu
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HONORS AND AWARDS

- ◇ Outstanding Graduate Student (2023), SUSTech
 - ◇ President Scholarship (2015, 2018), Nanjing Tech University
 - ◇ 2nd Prize, NXP Intelligent Vehicle Contest (2017), National Level
 - ◇ 1st Prize, NXP Intelligent Vehicle Contest (2017), East China Level
 - ◇ 3rd Prize, Siemens Intelligent Manufacturing Contest Challenge (2017)
 - ◇ Outstanding Graduate Honer (2018), Nanjing Tech University
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ACTIVITIES & SERVICES

- ◇ IEEE Transactions on Industrial Informatics (TII) Reviewer
 - ◇ IEEE Robotics and Automation Letters (RA-L) Reviewer
 - ◇ IEEE ICRA Reviewer
 - ◇ IEEE/RSJ IROS Reviewer
 - ◇ WRC SARA Reviewer
 - ◇ IEEE ICRA 2021 Organizing Committee & Outstanding Volunteer
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TEACHING

- ◇ Graduate Teaching Assistant: EE 5058 - Introduction to Information Technology Spring 2024, Spring 2024.
 - ◇ Graduate Teaching Assistant: EE 101 - Electronic and Information Technology for Metaverse, Fall 2024.
 - ◇ Graduate Teaching Assistant: EE 5346 - Autonomous Robot Navigation, Spring 2023
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MENTORSHIP

- ◇ Zhen Gao, Undergraduate Student at SUSTech -> Master Student at SUSTech
- ◇ Chenhao Ma, Undergraduate Student at SUSTech -> Master Student at SUSTech