

## 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

- ✧ Wenlong Dong, Dehao Huang, Jiangshan Liu, **Chao Tang**, nad Hong Zhang, "RTAGrasp: Learning Task-Oriented Grasping from Human Videos via Retrieval, Transfer, and Alignment", under review by IEEE ICRA 2025.
- ✧ **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", accepted to IROS 2024.
- ✧ Dehao Huang, **Chao Tang**, and Hong Zhang, "Efficient Object Rearrangement vai 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 Patrxicio 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 Process", accepted to 10<sup>th</sup> IFAC Symposium on Advanced Control of Chemical Process ADCHEM 2018.
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## 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 Horner (2018), Nanjing Tech University
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## ACTIVITIES & SERVICES

- ✧ IEEE Transactions on Industrial Informatics (TII) Reviewer
- ✧ IEEE Transactions on Automation Science and Engineering (TASE) 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