

EDUCATION

KTH Royal Institute of Technology, Stockholm, Sweden

Sept. 2025 – Sept. 2027(expected)

Postdoctoral Researcher

Supervisor: Prof. Danica Kragic

Division of Robotics, Perception, and Learning

Southern University of Science and Technology, Shenzhen, China

Sept. 2021 – Jun. 2025

Doctor of Philosophy (Robotics)

Supervisor: Prof. Hong Zhang

GPA: 3.79

National University of Singapore, Singapore

May 2024 – May 2025

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**, Anxing Xiao, Yuhong Deng, Tianrun Hu, Wenlong Dong, Hanbo Zhang, David Hsu, and Hong Zhang, "MimicFunc: Imitating Tool Manipulation from a single Human Video via Functional Correspondence", accepted to CoRL 2025.
 - ✧ **Chao Tang**, Anxing Xiao, Yuhong Deng, Tianrun Hu, Wenlong Dong, Hanbo Zhang, David Hsu, and Hong Zhang, "FUNCTO: Function-Centric One-Shot Imitation Learning for Tool Manipulation", under review.
 - ✧ **Chao Tang**, Dehao Huang, Wenlong Dong, Ruinian Xu, and Hong Zhang, "FoundationGrasp: Generalizable Task-Oriented Grasping with Foundation Models", accepted to IEEE T-ASE.
 - ✧ **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.
 - ✧ 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.
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- ✧ Yuhong Deng, **Chao Tang**, Cunjun Yu, Linfeng Li, and David Hsu, "CLASP: General-Purpose Clothes Manipulation with Semantic Keypoints", under review.
 - ✧ Shan An, Ziyu Meng, **Chao Tang**, Yuning Zhou, Tengyu Liu, Fangqiang Ding, Shufang Zhang, Yao Mu, Ran Song, Wei Zhang, Zeng-Guang Hou,

and Hong Zhang, "Dexterous Manipulation through Imitation Learning: A Survey", accepted to IEEE T-ASE.

- ✧ Zijun Lin, **Chao Tang**, Hanjing Ye, and Hong Zhang, "FlowPlan: Zero-Shot Task Planning with LLM Flow Engineering for Robotic Instruction Following", accepted to IEEE/RSJ IROS 2025.
- ✧ Dehao Huang, Wenlong Dong, **Chao Tang**, and Hong Zhang, "HGDdiffuser: Efficient Task-Oriented Grasp Generation via Human-Guided Grasp Diffusion Models", accepted to IEEE/RSJ IROS 2025.
- ✧ Wenlong Dong, Dehao Huang, Jiangshan Liu, **Chao Tang**, and Hong Zhang, "RTAGrasp: Learning Task-Oriented Grasping from Human Videos via Retrieval, Transfer, and Alignment", accepted to IEEE ICRA 2025.
- ✧ Wenqi Ge, **Chao Tang**, and Hong Zhang, "Commonsense Scene Graph-based Target Localization for Object Search", (EDM workshop @ IROS 2024 Best Paper Finalist), accepted to IROS 2024.
- ✧ Dehao Huang, **Chao Tang**, and Hong Zhang, "Efficient Object Rearrangement via Multi-view Fusion", accepted to IEEE ICRA 2024.
- ✧ 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.
- ✧ Cuimei Bo, Wei Gao, **Chao Tang**, Jun Li and Xiaohua Lu, "Dynamic Control Design and Simulation of Biogas Pressurized Water Scrubbing Process", accepted to 10th IFAC Symposium on Advanced Control of Chemical Process ADCHEM 2018.

HONORS AND AWARDS

- ✧ Outstanding Graduate Honoree (2025), SUSTech
- ✧ 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 Honoree (2018), Nanjing Tech University

ACTIVITIES & SERVICES

- ✧ Editor Board: IROS 2026 (AE), JIRS (GE)
- ✧ Journal Reviewer: T-ASE, T-II, TIV, TCDS, RA-L, RAS, PR, RCIM, RL
- ✧ Conference Reviewer: CoRL, ICRA, IROS, WRC SARA, SII
- ✧ IEEE ICRA 2021 Organizing Committee