Bingjie Tang

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Research Interests

I am broadly interested in robotic manipulation, with a focus on learning sim-to-real transferable skills for contact-rich manipulation and developing tools for efficient and reliable sim-to-real transfer.

Education

- **University of Southern California** — *Aug. 2020 - Present*
  PhD in Computer Science, advised by Gaurav S. Sukhatme — Los Angeles, USA
- **Brown University** — *Aug. 2018 - May 2020*
  MS in Computer Science, advised by George D. Konidaris & Stefanie A. Tellex. — Providence, USA
- **Huazhong University of Science and Technology** — *Aug. 2014 - May 2018*
  BS in Computer Science — Wuhan, China

Patents and Publications

[1] Michael Noseworthy, **Bingjie Tang**, Bowen Wen, Ankur Handa, Nicholas Roy, Dieter Fox, Fabio Ramos, Yashraj Narang, Iretiayo Akinola. **Forge: Force-guided exploration for robust contact-rich manipulation under uncertainty.** Submitted to *IEEE Robotics and Automation Letters (RA-L)*.

[2] Yijie Guo, **Bingjie Tang**, Iretiayo Akinola, Dieter Fox, Abhishek Gupta, Yashraj Narang. **SRSA: Skill Retrieval and Adaptation for Robotic Assembly Tasks.** Submitted to *International Conference on Learning Representations (ICLR)*, 2025.

[3] Yian Wang, Iretiayo Akinola, Kaichun Mo, **Bingjie Tang**, Chuang Gan, Dieter Fox, Yashraj Narang. **MatchMaker: Automated Robotic Assembly Asset Generation for Policy Learning in Simulation.** Submitted to *International Conference on Robotics & Automation (ICRA)*, 2025.

[4] **Bingjie Tang**, Iretiayo Akinola, Jie Xu, Bowen Wen, Ankur Handa, Karl Van Wyk, Dieter Fox, Gaurav Sukhatme, Fabio Ramos, Yashraj Narang. **AutoMate: Specialist and Generalist Assembly Policies over Diverse Geometries.** *20th Robotics: Science and Systems (RSS)*, 2024.

[5] **Bingjie Tang**, Yashraj Narang, Dieter Fox, Fabio Ramos. **Techniques for training and implementing reinforcement learning policies for robot control.** *US Patent App. 18/489,789*, 2024.

[6] **Bingjie Tang***, Michael Lin*, Iretiayo Akinola, Ankur Handa, Gaurav Sukhatme, Fabio Ramos, Dieter Fox, Yashraj Narang. **IndustReal: Transferring Contact-Rich Assembly Tasks from Simulation to Reality.** *19th Robotics: Science and Systems (RSS)*, 2023.

[7] **Bingjie Tang**, Gaurav S. Sukhatme. **Selective Object Rearrangement in Clutter.** *6th Annual Conference on Robot Learning (CoRL)*, 2022.

[8] **Bingjie Tang**, Matthew Corsaro, Geroge Konidaris, Stefanos Nikolaidis, Stefanie Tellex. **Learning Collaborative Pushing and Grasping Policies in Dense Clutter.** *International Conference on Robotics & Automation (ICRA)*, 2021.

Working Experience

- **Seattle Robotics Lab, NVIDIA Corporation [🌐]** — *May 2022 - Present*
  Robotics Research Intern, advised by Yashraj Narang & Dieter Fox — Seattle, USA
- **Technology Engineering Group (TEG), Tencent** — *Jun. 2017 - Sept. 2017*
  Software Engineer Intern — Shenzhen, China

Teaching Experience

- **CSCI 1951-R: Introduction to Robotics** — *Brown University*
  Instructor: Stefanie Tellex — 2019 Fall
- **CSCI 566: Deep Learning and its Applications** — *University of Southern California*
  Instructor: Xiang Ren/Jesse Thomason/Yan Liu — 2022/2023 Spring, 2024 Fall
- **CSCI 455: Introduction to Robotics** — *University of Southern California*
  Instructor: Heather Culbertson — 2022 Fall
- **CSCI 677: Advanced Computer Vision** — *University of Southern California*
  Instructor: Yue Wang — 2023 Fall

Professional Service

- **Reviewer:** ICRA, IROS, CoRL, RA-L, T-RO.

Skills

- **Programming Languages:** Python, C, C++.
- **Deep Learning Libraries:** Pytorch, Tensorflow.
- **Robotics:** ROS, Pybullet, CoppeliaSim, IsaacGym, IsaacLab