

# Yunxi Tang

📍 2/F, AB1, CUHK    ✉ tangyunxi000@gmail.com    ☎ (852)67424405    🏠 Homepage

## EDUCATION

---

<b>The Multi-Scale Medical Robotics Center (MRC)</b> , Hong Kong SAR Postdoctoral Fellow in <i>Autonomous Robotic Surgery</i>	2025 – Now
<b>The Chinese University of Hong Kong (CUHK)</b> , Hong Kong SAR Doctor of Philosophy (Ph.D) in <i>Mechanical and Automation Engineering</i>	2021 – 2025
<b>The Chinese University of Hong Kong (CUHK)</b> , Hong Kong SAR Master of Philosophy (M.Phil) in <i>Mechanical and Automation Engineering</i>	2019 – 2021
<b>Harbin Institute of Technology (HIT)</b> , Harbin, China Bachelor of Engineering (B.Eng) in <i>Mechatronics Engineering</i>	2015 – 2019

## PUBLICATIONS

---

- Yunxi Tang**, T. Yang, J. Huang, X. Chu, and K. W. Samuel Au, “Hierarchical Deformation Planning and Neural Tracking for DLOs in Obstacle-Dense Environments,” *IEEE/ASME Transactions on Mechatronics (TMech)*, 2026. (*under-review*)
- Yunxi Tang**, T. Yang, X. Chu, and K. W. Samuel Au, “Generative 3D State Estimation for DLOs From Partial Observations,” *IEEE Robotics and Automation Letters (RAL)*, 2025. [PDF](#) [🔗](#)
- Yunxi Tang**, X. Chu, J. Huang, and K. W. Samuel Au, “Learning-based MPC With Safety Filter for Constrained Deformable Linear Object Manipulation,” *IEEE Robotics and Automation Letters (RAL)*, 2024. [PDF](#) [🔗](#)
- Jing Huang, **Yunxi Tang**, and K. W. Samuel Au, “Homotopic Path Set Planning for Robot Manipulation and Navigation”, *Robotics: Science and Systems (RSS)*, 2024. [PDF](#) [🔗](#)
- Xiangyu Chu<sup>†</sup>, **Yunxi Tang**<sup>†</sup>, L. Kwok, Y. Cai, and K. W. Samuel Au, “Bootstrapping Robotic Skill Learning with Intuitive Teleoperation: Initial Feasibility Study,” *International Symposium on Experimental Robotics (ISER)*, 2023. [PDF](#) [🔗](#). († Equal contribution)
- Yunxi Tang**, J. An, X. Chu, S. Wang, C. Y. Wong, and K. W. Samuel Au, “Towards Safe Landing of Falling Quadruped Robots Using a 3-DoF Morphable Inertial Tail,” *IEEE International Conference on Robotics and Automation (ICRA)*, 2022. [PDF](#) [🔗](#)
- Yunxi Tang**, Xiangyu Chu, and K. W. Samuel Au, “A Hybrid Differential Dynamic Programming Method for Constrained Trajectory Optimization,” *Dynamic Walking 2021*. [PDF](#) [🔗](#)

## EXPERIENCE

---

<b>Visiting Student</b> Seoul National University (SNU)	<i>Seoul, South Korea</i> <i>Jun. 2018 - Aug. 2018</i>
<ul style="list-style-type: none"><li>Designed a soft gripper utilizing shape memory alloy, enabling precise visual servoing for gripper deformation.</li><li>Publication: Wei Wang<sup>†</sup>, <b>Yunxi Tang</b><sup>†</sup>, Cong Li, “Controlling bending deformation of a shape memory alloy-based soft planar gripper to grip deformable objects,” <i>International Journal of Mechanical Sciences</i>, 2021. <a href="#">PDF</a> <a href="#">🔗</a> († Equal contribution)</li></ul>	

## PROFESSIONAL SERVICES

---

**Teach Assistance:** Advanced Robotics, Engineering Optimization, Fundamentals of Machine Intelligence, et al.  
**Reviewer:** RAL, ICRA, and IROS

## TECHNICAL SKILLS

---

**Programming:** Advanced in Python and MATLAB; Intermediate in C/C++; PyTorch and JAX/Flax;  
**Robot Simulation:** Experienced in MuJoCo and IsaacLab.  
**Technologies:** ROS2, LaTeX writing, SolidWorks, Blender.