

# Jing Huang

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Hong Kong Science Park, Hong Kong SAR

## EDUCATION


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**The Chinese University of Hong Kong**

2017 - 2022

Ph.D. in Robotics, Mechanical and Automation Engineering

Hong Kong

- Supervisor: Prof. Kwok Wai Samuel Au 
- Research Interests: robot manipulation, robot vision, motion and path planning

**Tsinghua University**

2013 - 2017

B.Eng. in Mechanical Engineering

Beijing

## PUBLICATION

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### Journal

1. Yunxi Tang, Xiangyu Chu, **Jing 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. [\[PDF\]](#) [\[Video\]](#)
2. **Jing Huang**, Xiangyu Chu, Xin Ma, and K. W. Samuel Au, “Deformable object manipulation with constraints using path set planning and tracking,” *IEEE Transactions on Robotics (TRO)*, 2023. [\[PDF\]](#) [\[Video\]](#)
3. **Jing Huang** and K. W. Samuel Au, “Task-oriented grasping position selection in deformable object manipulation,” *IEEE Robotics and Automation Letters (RAL)*, 2022. [\[PDF\]](#) [\[Video\]](#)
4. **Jing Huang**, Yuanpei Cai, Xiangyu Chu, Russell H. Taylor, and K. W. Samuel Au, “Non-fixed contact manipulation control framework for deformable objects with active contact adjustment,” *IEEE Robotics and Automation Letters (RAL)*, *ICRA option*, 2021. [\[PDF\]](#) [\[Video\]](#)

### Conference & Workshop

1. **Jing Huang**, Yunxi Tang, and K. W. Samuel Au, “Homotopic path set planning for robot manipulation and locomotion”, *arXiv*, 2024. [\[PDF\]](#) [\[Video\]](#)
2. Xiangyu Chu, Shengzhi Wang, Minjian Feng, Yuxuan Zhao, Jiayi Zheng, **Jing Huang**, and K. W. Samuel Au, “Model-free large-scale cloth spreading with mobile manipulation: Initial feasibility study,” *IEEE International Conference on Automation Science and Engineering (CASE)*, 2023. [\[PDF\]](#)
3. **Jing Huang**, Yuanpei Cai, Xiangyu Chu, and K. W. Samuel Au, “Task-oriented contact adjustment in deformable objects manipulation with non-fixed contact” , *Workshop on Managing Deformation: A Step Towards Higher Robot Autonomy, IEEE/RSJ International Conference on Intelligent Robotics and Systems (IROS)*, 2020. [\[PDF\]](#)
4. Ru Yang, **Jing Huang**, and Ping Guo, “Frequency dependence of levitation force in near-field acoustic levitation.” *International Symposium on Flexible Automation*, 2018. [\[PDF\]](#)

## TEACHING

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**Department of Mechanical and Automation Engineering, CUHK**

- MAEG4070 Engineering Optimization Spring, 2020
- ENGG1410C Linear Algebra and Vector Calculus for Engineers Spring, 2019
- MAEG3050 Introduction to Control Systems Fall, 2018

## CODING

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C++, MATLAB, Python, ROS