Yixuan Wang

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Objective

Ph.D. or Master positions in robotics, perception, manipulation and robot learning.

Education

Shanghai Jiao Tong University Minhang District, Shanghai
Bachelor of Mechanical Engineering at SJTU-UM Joint Institute July 2017 – August 2021
GPA: 3.86/4.00

University of Michigan Ann Arbor, Michigan
Bachelor of Computer Science at College of Engineering September 2019 – April 2021
GPA: 4.00/4.00

Computer Skills

Language: C++, Matlab, C, Python, ARM
Application: CATIA, Origin, SolidWorks, Arduino, LabVIEW, OpenCV, SmartFusion, PyTorch, Qt, ROS, Blender, PyTorch

Publication

Wang, Y., McConachie, D., Berenson, D., "Tracking Partially-Occluded Deformable Objects while Enforcing Geometric Constraints", *The 2021 International Conference on Robotics and Automation (ICRA 2021)*. [Under review]

Project

Design and Manufacturing II Minhang District, Shanghai
Vehicle based on transformable wheels and caterpillar bands May 2019 – August 2019
• Designed the structure of transformable wheels and the whole vehicle
• Wrote the code for controlling and auto turning based on Arduino

University of Michigan Compliant Systems Design Laboratory Ann Arbor, Michigan
Model-free control over soft robots' shape based on visual information September 2019 – present
• Segment soft robots in real time based on texture segmentation using Gabor filter and k-means clustering
• Keep track of the shape based on Bezier curve fitting and Ceres solver.
• Apply Deep Q-Learning to control soft robots' shape

University of Michigan Autonomous Robotic Manipulation Lab Ann Arbor, Michigan
Tracking Partially-Occluded Deformable Objects while Enforcing Geometric Constraints May 2020 – present
• Improve posterior constraints of GMM EM algorithm to handle obstacle interaction and self-intersection of deformable objects.
• Incorporate prediction model of deformable object to handle severe occlusion during the tracking.
• Validate ideas in simulation environment and real experiments.
• Write the paper targeting at International Conference on Robotics and Automation.

Experience

SJTU-UM Joint Institute Minhang District, Shanghai
Teaching Assistant of Honor Physics I May 2019 - August 2019
Teaching Assistant of Honor Calculus I September 2018 - December 2018
• Organized recitation class and office hour to promote students' understanding of course
• Graded the assignment and examination to judge level of students fairly

SJTU-UM Joint Institute Advising Center Minhang District, Shanghai
Advisor September 2018 - August 2019
• Solved problems of freshmen students about study problems and major choice
• Organized workshop about research opportunities, internship and program application for students

Honors

Yu Liming Scholarship Fall 2017
National Encouragement Scholarship Fall 2018
Bronze Medal in University Physics Competition Fall 2018
The John Wu & Jane Sun Sunshine Scholarship Fall 2018
SJTU Outstanding Student, Fall 2018
Undergraduate Excellent Scholarship (Grade 2) (Top 10%) Fall 2018, Fall 2019
Lums Scholarship Summer 2019