Yiyu Wang

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RESEARCH INTERESTS

Multi-Agent/Robot Systems, Heuristic Search, Motion Planning

EDUCATION

Shanghai Jiao Tong University

B.S. in Mechanical Engineering; GPA: 3.71/4.00

Shanghai, China Aug 2023 – Present

University of Michigan

B.S. in Computer Science

Ann Arbor, United States Second Bachelor's, Expected August 2025 – May 2027

SKILLS

OS:Windows, Linux(Ubuntu)

 $\textbf{Programming Languages:} C/C++, \ Python, \ MATLAB \\$

Technologies: Git, ROS, Elm, OR-Tools, SolidWorks, tmux

Languages: Chinese(native), English(fluent)

EXPERIENCE

RAP Lab Aug 2024 – Present

Research Intern, Shanghai, China

Supervised by Prof Zhongqiang Ren.

- Designed a heuristic search algorithm for Vehicle Routing Problem with capacity and time-windows constraint(CVRPTW) and compare it with baseline solvers.
- Research in autonomous muti-robot exploration. Implement a C++ solver for heterogeneous multi-robot path planning. Paper is being submitted to International Symposium on Multi-Robot and Multi-Agent Systems(MRS)

Publications

HEHA: Hierarchical Planning for Heterogeneous Multi-Robot Exploration of Unknown Environments Longrui Yang*, Yiyu Wang*, Jingfan Tang*

—Submitted to MRS 2025

• Main Contributions: Designed, implemented (C++), and evaluated global heuristic path planning algorithms within a hierarchical exploration system involving heterogeneous robots (drones, wheeled robots, and legged robots) for complex terrain traversal. Also co-authored the corresponding sections of the paper. Participated in real-world experiments involving collaborative exploration between unmanned ground vehicles and legged robots.

SERVICE

Teaching Assistant: ME2110J (Introduction to Solid Mechanics)

References

Prof. Zhongqiang Ren

Assistant Professor, Shanghai Jiao Tong University

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Department: University of Michigan - Shanghai Jiao Tong University Joint Institute, Automation

Dr. Shizhe Zhao

Postdoctoral, Shanghai Jiao Tong University

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Department: University of Michigan - Shanghai Jiao Tong University Joint Institute