

Zi-Yan Liu

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No. 1001, Daxue Rd., East District, Hsinchu City, 300
Graduate Degree Program of Robotics, EE622
National Yang Ming Chiao Tung University, Taiwan



Education

M.S. in Graduate Degree Program of Robotic

Assistive Robotics Group. Advised by Prof. Hsueh-Cheng Wan

National Yang Ming Chiao Tung University

Feb 2021 ~ Present, Hsinchu Taiwan

B.S. [Power Mechanical Engineering / Physics] in Interdisciplinary Program of Engineering(IPE)

National Tsing Hua University

Sep 2016 ~ Feb 2021, Hsinchu Taiwan

Research Interests

Robotics, Mapping and Path Navigation, Crowd Navigation, Field and Service Robots,
Assistive Technology, Automatic Control Systems, Computer Vision

Publication

JOURNAL

- **Assistive Navigation using Deep Reinforcement Learning Guiding Robot with UWB/Voice Beacons and Semantic Feedbacks for Blind and Visually Impaired People**
C.-L. Lu, Z.-Y. Liu, J.-T. Huang, C.-I. Huang, B.-H. Wang, Y. Chen, N.-H. Wu, H.-C. Wang, L. Giarré, P.-Y. Kuo.
(*Frontier in Robotics and AI*. 2021)
- **A Heterogeneous Unmanned Ground Vehicle and Blimp Robot Team for Search and Rescue using Data-driven Autonomy and Communication-aware Navigation**
C.-L. Lu*, J.-T. Huang*, C.-I. Huang, Z.-Y. Liu, C.-C. Hsu, Y.-Y. Huang, S.-C. Huang, P.-K. Chang, Z. L. Ewe, P.-J. Huang, P.-L. Li, B.-H. Wang, L.-S. Yim, S.-W. Huang, M.-S. Bai, H.-C. Wang,
(*Equal Contribution)
(*Field Robotics - Special Issue: Advancements and lessons learned during Phase I & II of the DARPA Subterranean Challenge*. 2021)

CONFERENCE

- **Sample Efficient Reinforcement Learning with Curriculum Learning for Environment Generalization and Multi-Robot Transfer of Goal Navigation (2021/08 ~)**

Skills

Programming Language: Python, MATLAB, C/C++

Software, Middleware, and Libraries: Robot Operating System (ROS), Communications,
Docker, OpenCV, PCL

Deep Learning Framework: PyTorch