Linghao Yang

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Education

Northeastern University (NEU) **Sep 2021 – June 2024**
MSc Eng in Control Science and Engineering *Shenyang, China*
Main Research Areas: Multi-sensor fusion SLAM and Scene semantic modelling

Northeastern University (NEU) **Sep 2016 – June 2020**
BSc Eng in Automation *Shenyang, China*
GPA: 4.0103/5 Ranking: 17/256

Publications

[1] **Yang L**, Zhang Y, Tian R, Liang S, Shen Y, Coleman S, Kerr D. Fast, Robust, Accurate, Multi-Body Motion Aware SLAM. IEEE Transactions on Intelligent Transportation Systems (T-ITS), 2023.
[PDF] [Poster]

[2] **Yang L**, Wu Y, Deng Y, Tian R, Hu X, Ma T. UniQuadric: A SLAM Backend for Unknown Rigid Object 3D Tracking and Light-Weight Modeling. IEEE Transactions on Intelligent Transportation Systems (T-ITS Under review), 2023.
[PDF] [Poster]

[3] Tian R, Zhang Y, **Yang L**, et al. DynaQuadric: Dynamic Quadric SLAM for Quadric Initialization, Mapping and Tracking. IEEE Transactions on Intelligent Transportation Systems (T-ITS), 2024.

[4] Wang T, Zhang Y, **Yang L**, et al. LV-MOTPO: Multi-object Tracking and Pose Optimization Using LiDAR and Camera. International Conference on Intelligent Robots and Systems (IROS), 2024.

[5] Tian R, Zhang Y, Cao Z, Jin Z, **Yang L**, Coleman S, Kerr D. Object SLAM With Robust Quadric Initialization and Mapping for Dynamic Outdoors. IEEE Transactions on Intelligent Transportation Systems (T-ITS), 2023.
[PDF]

[6] Liang S, Zhang Y, Tian R, Zhu D, **Yang L**, Cao Z. SemLoc: Accurate and Robust Visual Localization with Semantic and Structural Constraints from Prior Maps. International Conference on Robotics and Automation (ICRA), 2022.
[PDF]

[7] Tian R, Zhang Y, Feng Y, **Yang L**, Cao Z, Coleman S, Kerr D. Accurate and robust object SLAM with 3D quadric landmark reconstruction in outdoors. IEEE Robotics and Automation Letters (RA-L), 2021.
[PDF]

[8] Shen Y, Zhang Y, Wu Y, Wang Z, **Yang L**, Coleman S, Kerr D. BSH-Det3D: Improving 3D Object Detection with BEV Shape Heatmap. International Conference on Intelligent Robots and Systems (IROS), 2023.
[PDF]

Public Projects

- Off-road environment SLAM: Responsible for the development of a purely visual localization system based on a priori LiDAR point cloud maps. Sep 2020
- Park Autonomous Parking: Responsible for the development of multi-sensor fusion odometry and road-level semantic mapping system. Sep 2021 - Sep 2022

Work Experience

Xi'an Precision Machinery Research Institute Kunming Branch, China **July 2023 – Present**
Unmanned Underwater Vehicles Control & Navigation *Algorithm Engineer*

DJI **Jan 2022 – May 2022**
LVIO & 3D Reconstruction *Algorithm Intern*

Awards

Northeastern University President's Scholarship. Sep 2020
Northeastern University Graduate Student First Class Academic Scholarship Sep 2020 - Sep 2023
Northeastern University Outstanding Student Scholarship. Sep 2016 - Sep 2020

Self evaluation

- I am a good learner, listener and collaborator. I hold the belief that the journey of a thousand miles begins with a single step.