

# LINGHAO YANG

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## Education

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**Northeastern University (NEU)**

*Control Science and Engineering*

Main Areas: Multi-sensor fusion SLAM and Scene semantic modelling

**Northeastern University (NEU)**

*Automation*

GPA: 4.0167/5

**Sep. 2021 – June. 2024**

*Shenyang, China*

**Sep. 2016 – June. 2020**

*Shenyang, China*

Ranking: 17/256

## Publications

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- [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, 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.  
[\[PDF\]](#)
- [4] 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.  
[\[PDF\]](#)
- [5] 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 (RAL), 2021.  
[\[PDF\]](#)
- [6] 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

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

## Work Experience

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**Xi'an Precision Machinery Research Institute Kunming Branch, China**

*Unmanned Underwater Vehicles Control & Navigation*

**July. 2023 – June. 2024**

*Algorithm Engineer*

**DJI**

*LVIO & 3D Reconstruction*

**Mon. 2022 – May. 2022**

*Algorithm Intern*

## Awards

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Northeastern University President's Scholarship.

Seq 2020

Northeastern University Graduate Student First Class Academic Scholarship

Seq 2023 - Seq 2020

Northeastern University Outstanding Student Scholarship.

Seq 2016 - Seq 2020

## Self evaluation

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