

Xin Li

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Education

Peking University

Master in Electronics and Communication Engineering

Beijing, China

Sept. 2018 - Jul. 2021

Northeastern University(CN)

Bachelor in Measurement and Control Technology and Instruments

Qinhuangdao, China

Sept. 2014 - Jun. 2018

Experience

Singapore University of Technology and Design (SUTD)

Singapore

Visiting Research Fellow, supervisor: Prof. Chau Yuen, IEEE Fellow

Sep. 2021 - Present

- Research how to use multiple sensors (camera, IMU, lidar, etc.) in UGV to improve localization accuracy.

Microsoft Research Asia(MSRA)

Beijing, China

Research Intern, supervisor: Dr. Yang Liu & Dr. Yizhong Zhang

Sep. 2020 - Mar. 2021

- Research how to use IMU information in visual SfM system and integrate it with visual information. Design a multi-sensor vector reconstruction system, which can reconstruct a large supermarket using single camera and IMU of the mobile phone.

MEGVII

Beijing, China

Research Intern, supervisor: Dr. Yijia He

Feb. 2019 - Mar. 2020

- Studies the use of geometric features in visual SLAM. Studies the influence of different parameters of 3D point, line and plane features in slam system. Studies how to parameterize RPR (ray point ray) structure in space, and how to construct and optimize the projection error. Designed a tightly-coupled monocular VIO system that utilizes heterogeneous visual features, include points, lines, and planes, as well as their co-planarity constraints. The system can real-time generate semi-dense 3D mesh of the scene at the same time.

Publications

- **Xin Li***, Yanyan Li*, Evin Pinar Örneke, Jinlong Lin and Federico Tombari. "Co-Planar Parametrization for Stereo-SLAM and VIO", IEEE Robotics and Automation Letters (**IEEE RA-L**), 2020. (* equal contribution)
- **Xin Li***, Yijia He*, Jinlong Lin, Xiao Liu, "Leveraging Planar Regularities for Point Line Visual-Inertial Odometry", IEEE/RSJ international conference on intelligent robots and systems (**IROS**), 2020. (* equal contribution)

Academic Service

- Reviewer: IROS2021, TAROS 2021, IEEE TIM

Research Intersects

- SLAM (Simultaneous Localization and Mapping), 3D Reconstruction, and Scene Understanding.

Skills

- **Programming:** C++, Python.
- **Languages:** English(fluent), Chinese(native).