

# Zhuoye Ying

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## EDUCATION

### Shanghai Jiao Tong University

*Bachelor and Master of Engineering, Electronic Information*

Shanghai, China

Sep. 2017 – Current

### ENSTA Paris

*Master of Engineering, Information and Communication Technology*

Paris, France

Aug. 2020 – Aug. 2022

## EXPERIENCE

### Graduate Student Researcher

*SPEIT, supervised by Hao Li*

Sep. 2021 – Current

Shanghai, China

- Focused on Simultaneous Localization and Mapping with Moving Object Tracking.
  - Developed a SLAMMOT architecture based on IMM algorithm. Implemented IMM technique to enhance the Moving Object Tracking module's adaptability in complex real-world dynamic scenarios. Introduced a tightly coupled graph optimization module that aligns seamlessly with IMM algorithms, facilitating jointly optimization results of Odometry module and Moving Object Tracking module.
- The resulting paper was published at T-IV 2023.

### Graduate Student Researcher

*SATIE, supervised by Nicolas Lerne*

May 2022 – Aug. 2022

gif-sur-Yvette, France

- Focused on fresco reconstruction using CNN.
- Implemented and retrained SuperPoint network with generated fresco dataset. Proposed a fresco reconstruction architecture based on retrained SuperPoint feature extractor.

### Algorithme Engineer Intern

*2012 Lab. Huawei*

Jun. 2023 – Dec. 2023

Hangzhou, China

- Focused on 3D Reconstruction and Novel View Synthesis using NeRF-based method
- 3D Reconstruction: Enhanced MonoSDF precision by incorporating semantic clues. Applied the Manhattan-world assumption to achieve smoother surface reconstruction. Implemented hash encoding and a proposal network to optimize and expedite the training process.
- Novel View Synthesis: Implemented a 3D Gaussian Splatting based architecture. Introduced a pose optimization module for improved input camera poses. Applied masked training techniques to eliminate undesired elements in original images.

## JOURNAL PULIBICATIONS

- [J0] Zhuoye Ying and Hao Li. "IMM-SLAMMOT : Tightly-Coupled SLAM and IMM-based Multi-Object Tracking". In: *IEEE Transactions on Intelligent Vehicles* (2023), pp. 1–11. DOI: 10.1109/TIV.2023.3346040.

## SKILLS

**Language:** Native in Mandarin, Fluent in English and French

**Programming:** C/C++, C#, Python, Java, Linux Shell, ROS, Git, SQL, LaTeX, MATLAB, Unity3D

**Learning:** PyTorch.

**Miscellaneous:** Basketball, Badminton, Chinese calligraphy

## SELECTED HONORS AND AWARDS

Scholarship of China Scholarship Council

2020-2022

Scholarship of SJTU Paris Elite Institute of Technology for excellent studies

2019

The Second Prize of Jiao Tong Scholarship of Academic Excellence

2017-2018