

Yawen Li

Nationality: Chinese

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EDUCATION & HONORS

Southeast University (SEU), Nanjing, Jiangsu, China

School of Instrument Science & Engineering

Master of Instrument Science & Technology

Expected Jun. 2023

G.P.A. 3.88/4.8 Average Grade 88.97/100

➤ Postgraduate Academic Scholarship for three consecutive years

Oct. 2020-Present

Hefei University of Technology (HFUT), Hefei, Anhui, China

School of Instrument Science & Opto-electronics Engineering

Bachelor of Measurement, Control Technology & Instrumentation

Jun. 2020

G.P.A. 3.79/4.3 Rank 4/163

➤ Academic Scholarship for three consecutive years (top 5%)

Dec. 2017-Dec. 2019

➤ Instrument Scholarship

Dec. 2018

➤ Outstanding student for two consecutive years

Dec. 2018-Dec. 2019

➤ Outstanding graduate

Jun. 2020

PAPERS & PATENTS

- [1] **Yawen Li**, Guangming Song, et al. "Semantic stereo visual SLAM towards outdoor dynamic environment based on ORB-SLAM2", Industrial Robot (writing).
- [2] Fei Wang, Guangming Song, Juzheng Mao, **Yawen Li**, et al. "Internal Defect Detection of Overhead Aluminum Conductor Composite Core Transmission Lines with an Inspection Robot and Computer Vision", IEEE Transactions on Instrumentation and Measurement, 2022.7 (submitted).
- [3] Guangming Song, **Yawen Li**, et al. "Remote installation system and method of grout nipple for repairing crack of underwater tunnel", 2022.CN202210783503.5. **Tips: This is a patent in Chinese.**
- [4] Ruijun Li, **Yawen Li**, et al. "A three dimensional high sensitivity micro-dynamometer based on CMOS sensor", 2021.CN109827680B. **Tips: This is a patent in Chinese.**

AWARDS

- **Honorable Mention**, 2018 Interdisciplinary Contest in Modeling.
- **The Second Prize**, Fourteenth National Undergraduate NXP Cup Smart Car Competition in 2019.
- **The Second Prize**, 2018 National English Competition for College Students.
- **The Third Prize**, 2017 Mathematical Contest in Modeling in Anhui.
- **The Second Prize**, 2019 "Internet+" Innovation and Entrepreneurship Competition in HFUT.

RESEARCH EXPERIENCE

Master research in SEU

Key Laboratory of Remote Measurement and Control Technology in Jiangsu

- **Semantic SLAM towards Outdoor Dynamic Environment** *Apr. 2022-Present*
 - Used ORB-SLAM2 as the framework, run the algorithm under Ubuntu 18.04 and verified the effectiveness of the proposed algorithm with KITTI dataset and ZED2 self-collection dataset.

- Embedded the Deeplabv3+ semantic segmentation model into the stereo model of ORB-SLAM2 to guarantee recognition of dynamic objects.
 - Determined the dynamic hierarchy of objects in the scene based on the prior knowledge.
 - Proposed a dynamic model to judge the motion status of objects by comparing the pixel displacement.
 - Designed a feature selection strategy to discard the feature points of dynamic regions.
- **A Power Line Inspection Robot for the Non-destructive Testing of Overhead Aluminum Conductor Composite Core Wires** *Jun. 2020-Present*
 - Designed the robot remote control terminal with Qt, and completed the program writing with C++. The main functions of the robot remote control terminal are remote connection, parameter setting, real-time monitoring, wire defect identification, etc.

Undergraduate research in HFUT

- **A three dimensional micro Newton dynamometer** *Apr. 2018-Apr. 2019*
 - Completed the design of the internal optical circuit, the design of the signal amplification circuit, and the test of the dynamometer index.
- **Automatic License Plate Recognition based on LabVIEW** *Apr. 2017-Apr. 2018*
 - Recognized license plate number through the process of image pre-processing, license plate positioning, skeletonized extraction of license plate characters, segmentation of characters by vertical projection method, and OCR recognition.

PRACTICAL EXPERIENCE

Teaching Assistant for undergraduate Wireless Sensor Network	<i>Apr. 2022–Jun. 2022</i>
Minister in the graduate student union	<i>Jun. 2021–Jun. 2022</i>

SKILLS

Information technology: Microsoft Office: Excel, Word, PowerPoint, Visio, Adobe Illustrator, etc.

Programming: MATLAB, LabVIEW, C/C++, Python, Ubuntu, ROS, etc.

Language: TOEFL 87

Personal Website

<https://liyawen.netlify.app>