

# Ziren GONG

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## EDUCATION

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- Beihang University, China** (*Projects 985&211, World Class Univ.*) 2020.09 – 2023.01  
*Master of Engineering, Traffic Information Engineering (World Class Discipline)* Supervisor: Prof. Guizhen Yu
- GPA: 3.838/4.000(Average Score: 91.29/100) Rank: 18/126
  - My research interests are 3D object detection, multimodal activity understanding and computer vision.
- Wuhan University of Technology, China** (*Projects 211, World Class Univ.*) 2016.09 – 2020.06  
*Bachelor of Engineering, major in Traffic Engineering*
- GPA: 3.809/4.000(Average Score: 88/100) Rank: 7/59
  - Award: Excellent Graduate of WHUT, Scholarship of WHUT and etc.
  - Awarded Second Prize in 14<sup>th</sup> National College Student Transportation Technology Competition.
- Tohoku University, Sendai, Japan** (*World Class Univ.*) 2018.06 – 2018.08  
*Exchange students*
- Course: Transportation Design for Disaster Risk, comparative study and etc.
  - Award: JASSO scholarship.

## EXPERIENCE & INTERNSHIP

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- Laboratory Internship** 2022.07-Now  
*Laboratory of CoRe, Peking Univ., Beijing*
- Supervisor: Prof. Yixin Zhu Director: Prof. Yaqin Zhang
  - Working on Computer Vision Group to create a dataset to study activity understanding in BioLab and devise two challenging benchmarks, transparent solution tracking and multimodal action recognition.
- Laboratory Research**  
*Key Laboratory of Unmanned Transportation Technology, Beihang Univ., Beijing*
- Supervisor: Prof. Guizhen Yu.
  - Working on R&D Vision Science Group to develop a 3D object detection framework using roadside LiDAR to alleviate false alarms caused by complex backgrounds and multi-scale objects with limited features.
- Enterprise Internship** 2021.06-2022.06  
*Beijing Tage IDriver Technology Co., Ltd, Beijing*
- Working on R&D Environmental Perception Group to apply a high robust and real-time object detection framework using roadside LiDAR, which is installed in Yongshun Mine, Ordos.
  - Apply a LiDAR and GPS calibration method for road-vehicle fusion perception.

## PUBLICATIONS & PATENTS

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1. Jieming Cui\*, **Ziren Gong\***, et al. ProBio: A Protocol-guided Multimodal Dataset for Molecular Biology Lab[C], *Conference on Neural Information Processing Systems (NeurIPS)*, 2023 (*Co-first authors, Accepted*).
  2. **Ziren Gong**, Z Wang, et al. FecNet: A Feature Cascade and Enhancement Network for Real-time Roadside Object Detection[J]. *IEEE SENSORS JOURNAL*, 2023, DOI:10.1109/JSEN.2023.3304623.
  3. **Ziren Gong**, Z Wang, et al. Pedestrian Detection Method Based on Roadside Light Detection and Ranging[J]. *SAE International Journal of Connected and Automated Vehicles*, 2021, DOI: 4(12-04-04-0031).
  4. Zhangyu Wang, **Ziren Gong**, et al. "A method and device for calibration of LiDAR and GPS for road-vehicle fusion perception", *Chinese Patent Office, CN202210275064.7*, Beihang Univ., 2022 (*Student First Author*).
  5. Guizhen Yu, **Ziren Gong**, et al. "A Lane Change Control Strategy for Expanding Highway Work Zone", *Chinese Patent Office, CN202110054207.7*, Beihang Univ., 2021 (*Student First Author*).

## LANGUAGES/SKILLS/OTHERS

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- Computer skills** C++, Python, Pytorch, TensorRT, Matlab, etc.
- Languages** English (IELTS 6.5), Japanese (JLPT N2 level), Chinese (Native).
- Hobbies** Basketball, Violin, Swimming, Photography.
- Extra Activities** Played in the first violin in WHUT orchestra and won Province First Prize in 2017.

## Referees

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### **Guizhen Yu**

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