

# QI MING

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## Education

### Ghent University

Visiting Ph.D. in Faculty of Engineering and Architecture,

supervisor: Prof. Aleksandra Pizurica 🏠

Oct. 2022 – Oct.2023 (Expected)

Ghent, Belgium

### Beijing Institute of Technology

Ph.D. in Guidance, Navigation, and Control, supervisor: Prof. Lingjuan Miao 🏠

Sep. 2019 – Jul.2024 (Expected)

Beijing, China

GPA: 4.0/4.0

### Beijing Institute of Technology

M.Eng. in Guidance, Navigation, and Control, supervised: Prof. Lingjuan Miao 🏠

Sep. 2018 – Jul. 2019

Beijing, China

GPA: 3.8/4.0

### Beijing Institute of Technology

B.Eng. in Automation

Sep. 2014 – Jul. 2018

Beijing, China

GPA: 3.6/4.0

## Publications & Manuscripts

### Publications

- Dynamic Anchor Learning for Arbitrary-Oriented Object Detection  
**Q. Ming**, Z. Zhou, L. Miao, H. Zhang, L. Li,  
*Proceedings of the Thirty-Five AAAI Conference on Artificial Intelligence (AAAI)*, 2021. 📄 🌐 📄 📄
- CFC-Net:A Critical Feature Capturing Network for Arbitrary-Oriented Object Detection in Remote Sensing Images  
**Q. Ming**, L. Miao, Z. Zhou, Y. Dong,  
*IEEE Transactions on Geoscience and Remote Sensing (TGRS)* (SCI Q1 Top, IF=8.125) , 2021. 📄 🌐
- Sparse Label Assignment for Oriented Object Detection in Aerial Images  
**Q. Ming**, L. Miao, Z. Zhou, J. Song, X. Yang,  
*Remote Sensing (RS)* (SCI Q2, IF=5.349) , 2021. 📄 🌐
- Optimization for Arbitrary-Oriented Object Detection via Representation Invariance Loss  
**Q. Ming**, Z. Zhou, L. Miao, X. Yang, Y. Dong,  
*IEEE Geoscience and Remote Sensing Letters (GRSL)* (SCI Q2, IF=5.343) , 2021. 📄 🌐
- Fine-Grained Object Detection in Remote Sensing Images via Adaptive Label Assignment and Refined-Balanced Feature Pyramid Network  
J. Song, L. Miao, **Q. Ming**, Z. Zhou, Y. Dong, *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (JSTARS)* (SCI Q3, IF=4.715) , 2022. 📄
- Rethinking Rotated Object Detection with Gaussian Wasserstein Distance Loss  
X. Yang, J. Yan, **Q. Ming**, W. Wang, X. Zhang, Q. Tian  
*Proceedings of the Thirty-eighth International Conference on Machine Learning (ICML)*, 2021. 📄 🌐
- Learning High-Precision Bounding Box for Rotated Object Detection via Kullback-Leibler Divergence  
X. Yang, X. Yang, J. Yang, **Q. Ming**, W. Wang, Q. Tian, J. Yan. *Proceedings of the Thirty-fifth Annual Conference on Neural Information Processing Systems (NeurIPS)*, 2021. 📄 🌐

### Manuscripts

- Gradient Calibration Loss for Fast and Accurate Oriented Bounding Box Regression  
**Q. Ming**, L. Miao, Z. Zhou, J. Song, (*Under review*)
- Task Interleaving and Orientation Estimation for High-Precision Oriented Object Detection in Aerial Images  
**Q. Ming**, L. Miao, Z. Zhou, J. Song, Y. Dong, X. Yang, (*Under review*)
- Oriented Feature Alignment for Fine-grained Object Recognition in High-Resolution Satellite Imagery  
**Q. Ming**, J. Song. (*Technical report*) 📄

## Experience

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### Xlab in Second Research Academy of CASIC

Sep. 2022 – Nov. 2022

*Research intern*

*Beijing, China*

- Conducted research related to 3D object detection based on point cloud data. An IoU-based loss was designed to perform gradient correction.

### Institute of Navigation, Guidance and Control

Sep. 2018 – Present

*Ph.D. candidate*

*Beijing, China*

- Participated in 2022 RoboMaster University AI Challenge (RMUA) and won the **3rd** prize.
- Participated in 2022 iFLYTEC A.I. Developer Competition on remote sensing object extraction. **Rank:** 9/416 (top 2%)
- Participate in 2022 GaoFen Challenge on Automated High-Resolution Earth Observation Image Interpretation. **Rank:** winning team, 6/220

## Selected Awards

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- National Scholarship, 2022
- 3rd prize in ICRA University AI Challenge, 2022
- 6th place winning team (6/220, top 3%) in Gaofen Challenge on Automated High-Resolution Earth Observation Image Interpretation, 2021

## Service

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### *Journal Review*

IEEE Transactions on Geoscience and Remote Sensing (TGRS), IEEE Geoscience and Remote Sensing Letters (GRSL), International Journal of Digital Earth (IJDE), Journal of Visual Communication and Image Representation (JVCI)

### *Conference Review*

CVPR2022, ECCV2022, 3DV2022, CVPR2023