

QI MING

No. 5, South Street, Zhongguancun, Haidian District, Beijing

☎ +86 18811028738 ✉ chaser.ming@gmail.com 🏠 <https://ming71.github.io/> 🌐 github.com/ming71

Education

Ghent University

Oct. 2022 – Oct.2023

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

Ghent, Belgium

supervisor: Prof. Aleksandra Pizurica 🏠

Beijing Institute of Technology

Sep. 2019 – Jul.2024

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

Beijing, China

GPA: 4.0/4.0

Beijing Institute of Technology

Sep. 2018 – Jul. 2019

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

Beijing, China

GPA: 3.8/4.0

Beijing Institute of Technology

Sep. 2014 – Jul. 2018

B.Eng. in Automation

Beijing, China

GPA: 3.6/4.0

Publications & Manuscripts

Journal Papers

- 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, *ISPRS Journal of Photogrammetry and Remote Sensing (ISPRS&RS)* (SCI Q1 Top, IF=12.7, **ESI Highly Cited Paper**) , 2023. 📄 🌐
- 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=8.2, **ESI Highly Cited Paper**) , 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 Top, IF=5.0) , 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=4.8) , 2021. 📄 🌐
- Towards Accurate Medical Image Segmentation with Gradient-optimized Dice Loss
Q. Ming, X Xiao. *IEEE Signal Processing Letters (SPL)* (SCI Q2, IF=3.9) , 2023. 📄
- 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=5.5), 2022. 📄
- A Novel Object Detector Based on High-quality Rotation Proposal Generation and Adaptive Angle Optimization
Y. Qiao, L. Miao, Z. Zhou, **Q. Ming**, *IEEE Transactions on Geoscience and Remote Sensing (TGRS)*, 2023.(SCI Q1 Top, IF=8.2). 📄
- Optimized Point Set Representation for Oriented Object Detection in Remote Sensing Images
J. Song, L. Miao, Z. Zhou, **Q. Ming**, Y. Dong, *IEEE Geoscience and Remote Sensing Letters (GRSL)*, 2023. (SCI Q2 , IF=4.8). 📄

Conference Papers

- Deep Dive into Gradients: Better Optimization for 3D Object Detection with Gradient-Corrected IoU Supervision
Q. Ming, L. Miao, Z. Ma, L. Zhao, Z. Zhou, X. Huang, Y. Chen, Y. Guo
Proceedings of IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 2023. 📄 🌐 📄

- 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.



- 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.



Experience

GAIM group in University Gent

Oct. 2022 – Oct. 2023

Joint Ph.D student

Ghent, Belgium

- Conduct research on optimization methods for face verification based on artworks.
- Apply probabilistic graphical model and causal reasoning in the post-processing of object detection framework.
- Learn about Physics Informed Neural Network (PINN) and explore its promise on remote sensing topics.

Intelligent Science & Technology Academy of CASIC

Oct. 2023 – Jul. 2024

Research intern

Beijing, China

- Conduct research related to 3D object detection based on point cloud data.
- Conduct research on spiking neural networks and their application to object detection.

Institute of Navigation, Guidance, and Control

Sep. 2018 – Jul. 2024

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

- Outstanding Doctoral Research Project Fund of the Navigation, Guidance and Control Engineering Center of Beijing Institute of Technology, 2022
- National Scholarship, 2022
- CSC Scholarships, 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

Journal Review

IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), ISPRS Journal of Photogrammetry and Remote Sensing (P&RS), IEEE Transactions on Geoscience and Remote Sensing (TGRS), IEEE Transactions on Intelligent Vehicles (TIV), IEEE Transactions on Transactions on Artificial Intelligence (TAI), etc.

Conference Review

ICLR 2024, CVPR2024, ICML2024, CVPR 2023, ICCV 2023, NeurIPS 2023, CVPR 2022, ECCV 2022