

QI MING

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Education

Beijing Institute of Technology

Ph.D. in Guidance, Navigation, and Control

Sep. 2019 – Jul.2024 (Expected)

Beijing, China

GPA: 4.0/4.0

Beijing Institute of Technology

M.Eng. in Guidance, Navigation, and Control

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=5.60) , 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=4.85) , 2021. 📄 🌐
- Optimization for 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=3.96) , 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. 📄 🌐

Manuscripts

- Towards High-Precision Oriented Object Detection with Hierarchical Localization Guidance
Q. Ming, Z. Zhou, L. Miao, Y. Dong, X. Yang, Y. Lin. (*Under review*)
- AdaL: Adaptive Gradient Transformation Contributes to Convergences and Generalizations
H. Zhang, W. Zou, H. Zhao, **Q. Ming**, T. Yan, Y. Xia, W. Cao. (*Resubmitted after major revision*) 📄
- Progressive Orientation Approximating for Rotated Object Detection
Q. Ming, L. Miao, Z. Zhou, J. Song, X. Yang. (*To be submitted*)
- Gradient Harmonized Rotated IoU: Towards High-precision Bounding Box Learning for Oriented Object Detection
Q. Ming, L. Miao, Z. Zhou, J. Song, X. Yang. (*Working paper*)

Experience

Institute of Navigation, Guidance and Control

Ph.D. candidate

Sep. 2018 – Present

Beijing, China

- Led the team to participate in the challenge on remote sensing object extraction. **Rank:** 9/416 (top 2%)
- Developed a high-precision PCB defect detection system for the China Unicom-Beijing Institute of Technology Joint Laboratory, achieving the detection accuracy of up to 99%
- Led the team to participate in the GaoFen Challenge on Automated High-Resolution Earth Observation Image Interpretation (top 10%).

Service

Journal Review

- *IEEE Geoscience and Remote Sensing Letters (GRSL)*
- *International Journal of Digital Earth (IJDE)*
- *Journal of Visual Communication and Image Representation (JVCI)*