

Xin Qiao



1. Background

B.Eng., Dalian Maritime University, June 2018

M.Eng., Zhejiang University, June 2021

PhD., Memorial University, May 2025 (expected)

2. Thesis and Supervisors

Deep learning methods for hyperspectral image classification and ocean sensing using GNSS-R

• Supervisor: Dr. Weimin Huang

3. Publication

- 1) X. Qiao and W. Huang, “A hybrid CNN-transformer network for global ocean wind speed retrieval from GNSS-R data,” *MTS/IEEE Oceans*, Halifax, Canada, 2024.
- 2) X. Qiao and W. Huang, “An attention-aided convolutional neural network for global sea surface wind speed estimation from GNSS-R data,” *IEEE International Geoscience and Remote Sensing Symposium*, Athens, Greece, pp.5952-5955, 2024.
- 3) X. Qiao, and W. Huang, “Global significant wave height retrieval from spaceborne GNSS-R using transformers,” *MTS/IEEE Oceans*, Singapore, 2024. (Best Student Poster Competition Finalist)
- 4) X. Qiao and W. Huang, “WaveTransNet: A transformer-based network for global significant wave height retrieval from spaceborne GNSS-R data,” *IEEE Trans. Geosci. Remote Sens.*, vol. 62, article sequence 4208011, 2024.
- 5) X. Qiao, S.K.Roy and W. Huang, “3D Sharpened Cosine Similarity Operation for Hyperspectral Image Classification,” *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, vol. 17, pp. 1114-1125, 2024.
- 6) X. Qiao and W. Huang, “Hyperspectral Image Classification Using Multi-scale Neighborhood Attention Transformer,” *IEEE NECEC Conference*, St. John's, Canada, 2023.

- 7) X. Qiao and W. Huang, “[A dual frequency transformer network for hyperspectral image classification](#),” *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, vol. 16, pp. 10344-10358, 2023.
- 8) X. Qiao, S.K.Roy and W. Huang, “[Multi-scale Neighborhood Attention Transformer with Optimized Spatial Pattern for Hyperspectral Image Classification](#),” *IEEE Trans. Geosci. Remote Sens.*, vol. 61, article sequence 5523815, 2023.
- 9) X. Qiao, S. K. Roy, and W. Huang, “[Rotation is All You Need: Cross Dimensional Residual Interaction for Hyperspectral Image Classification](#),” *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, vol. 16, pp 5387-5404, 2023.
- 10) X. Qiao, S. K. Roy, and W. Huang, “[Hyperspectral image classification based on 3D sharpened cosine similarity operation](#),” in *Proc. IEEE Int. Geosci. Remote Sens. Symp.*, Pasadena, California, USA, 2023.
- 11) X. Qiao and W. Huang, “[Spectral-Spatial-Frequency Transformer Network for Hyperspectral Image Classification](#),” in *Proc. IEEE Sensors Appl. Symp.*, Ottawa, Canada, 2023.
- 12) X. Qiao and W. Huang, “[Sharpened Cosine Distance Convolutional Network for Hyperspectral Image Classification](#)”, *IEEE NECEC Conference*, St. John's, Canada, 2022.

4. Award

- The 2024 Chinese Government Award for Outstanding Self-financed Students Abroad, China Scholarship Council, 2024
- Graduate Student Award in Research Excellence, MUN, 2024
- Best Student Poster Competition Finalist, MTS/IEEE Oceans, Singapore, 2024
- Wally Read Best Student Paper Award, IEEE NECEC Conference, St. John's, Canada, 2022.