

# Zhiding Yang



## **1. Background**

*B.Eng.*, Wuhan University of Science and Technology, 2018

*M.Eng.* Memorial University, May, 2022

*PhD.* Memorial University, May, 2026 (expected)

## **2. Thesis and Supervisors**

*Wave parameters estimation from X-band marine radar data*

- Supervisor: Dr. Weimin Huang

## **3. Publication**

- 1) Z. Yang and W. Huang, “Effective segmentation of X-band marine radar images using SegFormer,” *MTS/IEEE Oceans*, Halifax, Canada, 2024.
- 2) Z. Yang, M. Haller, and W. Huang, “Wave height estimation from X-band marine radar data using SWHFormer method,” *IEEE International Symposium on Antennas and Propagation and ITNC-USNC-URSI Radio Science Meeting*, Florence, Italy, 2024.
- 3) Z. Yang and W. Huang, “A CNN-based hybrid dehazing and regression model for sea surface wind speed retrieval from rain-contaminated marine radar data,” *MTS/IEEE Oceans*, Singapore, 2024.
- 4) Z. Yang and W. Huang, “SWHFormer: a vision transformer for significant wave height estimation from nautical radar images,” *IEEE Trans. Geosci. Remote Sens.*, vol. 62, article sequence 5104213, 2024.
- 5) Z. Yang and W. Huang, “Enhanced estimation of significant wave height from rain-contaminated X-band radar image sequences,” *13th IEEE/OES CWTM*, Wanchese, USA, 2024.
- 6) Z. Yang and W. Huang, “Vision transformer-based rainfall detection from nautical X-band radar data,” *MTS/IEEE Oceans*, Gulf Coast, USA, 2023.

- 7) Z. Yang and W. Huang, “Wave Height Estimation From X-band Radar Data Using Variational Mode Decomposition,” *IEEE Geosci. Remote Sens. Lett.*, vol. 19, article sequence 1505405, 2022.
- 8) Z. Yang, W. Huang, and X. Chen, “Sea Surface Wave Height Estimation and Improvement From Rain-Contaminated X-Band Nautical Radar Data,” *IEEE International Geoscience and Remote Sensing Symposium*, Kuala Lumpur, Malaysia, 2022.
- 9) Z. Yang, W. Huang, and X. Chen, “Mitigation of Rain Effect on Wave Height Measurement Using X-band Radar Sensor,” *IEEE Sensors J.*, vol. 22, no. 6, pp. 5929-5938, 2022.
- 10) Z. Yang, W. Huang, and X. Chen, “A Temporal Convolutional Network for Wave Height Estimation from X-band Radar Data,” *IEEE/MTS Oceans*, Chennai, India, 2022.
- 11) Z. Yang, W. Huang, and X. Chen, “Application of Temporal Convolutional Network for Wave Height Estimation from X-band Radar Images,” *IEEE NECEC Conference*, St. John's, Canada, 2021.
- 12) W. Huang, Z. Yang, and X. Chen, “Wave height estimation from X-band nautical radar images using temporal convolutional network,” *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, vol. 14, pp. 11395-11405, 2021.
- 13) Z. Yang, W. Huang, and X. Chen, “Evaluation and Mitigation of Rain Effect on Wave Direction and Period Estimation from X-band Marine Radar Images,” *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, vol. 14, pp. 5207-5219, 2021.
- 14) Z. Yang, W. Huang, and X. Chen, “Evaluation and mitigation of rain effect on wave direction estimation from X-band marine radar data,” *IEEE International Geoscience and Remote Sensing Symposium*, Brussels, Belgium, pp. 7509-7512, 2021.
- 15) Z. Yang, W. Huang, and X. Chen, “The rainfall intensity classification of X-band marine radar images based on random forest method,” *IEEE NECEC Conference*, St. John's, Canada, 2020.

#### 4. **Award**

- Finalist of Student Poster Competition, MTS/IEEE Oceans, Gulf Coast/USA, 2023
- 2<sup>nd</sup> Prize of Student Poster Competition, MTS/IEEE Oceans, Chennai/India, 2022
- Fellow of School of Graduate Studies, Memorial University, 2021