Mr. Xinwei Chen

1. _**Background**_

   B.Eng., South China University of Technology, 2017
   PhD., Memorial University, Oct. 2021

2. _**Thesis and Supervisors**_

   Sea Surface Wind and Wave Parameters Estimation From X-Band Marine Radar Images with Rain Detection and Mitigation
   • Supervisor: Dr. Weimin Huang

3. _**Publication**_

1) X. Chen and W. Huang, "Spatial-Temporal Convolutional Gated Recurrent Unit Network for Significant Wave Height Estimation from Shipborne Marine Radar Data," *IEEE Trans. Geosci. Remote Sens.*, 2022. (in press, DOI: 10.1109/TGRS.2021.3074075)

2) 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.

3) X. Chen, W. Huang, and M. Haller, "A Novel Scheme for Sea Surface Wind Measurements from Rain-contaminated X-band Marine Radar Images," *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, vol. 14, pp. 5220-5234, 2021.

4) 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.

5) X. Chen, W. Huang, M. Haller and R. Pittman, "Rain-contaminated Region Segmentation of X-band Marine Radar Images with an Ensemble of SegNets," *IEEE J. Sel. Topics Appl. Earth Observ. Remote Sens.*, vol. 14, pp. 141-154, 2021.

6) X. Chen and W. Huang, "Texture Features and Unsupervised Learning-Incorporated Rain-Contaminated Region Identification from X-band Marine Radar Images," *Mar. Technol. Soc. J.*, vol. 54, no. 4, pp. 59-67, 2020. (invited paper)

7) X. Chen and W. Huang, "Identification of rain and low-backscatter regions in X-band marine radar images: an unsupervised approach," *IEEE Trans. Geosci. Remote Sens.*, vol. 58, no. 6, pp. 4225-4236, 2020.

8) X. Chen and W. Huang, "An Algorithm for Sea Surface Wind DirectionEstimation Using Rain-contaminated Marine Radar Data," *IEEE NECEC Conference*, Newfoundland, Canada, 2020.

9) X. Chen and W. Huang, "A method to mitigate the influence of rain on wind direction estimation from X-band marine radar images," *MTS/IEEE Oceans*, Singapore/USA, 2020. (Best Student Poster Competition Finalist)

10) X. Chen and W. Huang, "Rain detection from X-band marine radar images: a support vector machine-based approach," *IEEE Trans. Geosci. Remote Sens.*, vol. 58, no. 3, pp. 2115-2123, 2020.

11) X. Chen and W. Huang, "Rain-contaminated pixels detection from X-band nautical radar images," *IEEE NECEC Conference*, Newfoundland, Canada, 2019.

12) X. Chen and W. Huang, "Automatic Identification of Rain-contaminated Regions in X-band Marine Radar Images," *MTS/IEEE Oceans*, Seattle, USA, 2019. (Best Student Poster Competition Finalist)

13) X. Chen and W. Huang, "Rain Detection from X-Band Marine Radar Images," *IEEE RadarCon,* Boston, USA, 2019.

14) X. Chen and W. Huang, "Wind Speed Determination From X-Band Nautical Radar Images Using Gaussian Process Regression," *IEEE NECEC Conference*, Newfoundland, Canada, 2018.

15) X. Chen, W. Huang, and G. Yao, "Wind speed estimation from X-band marine radar images using support vector regression method," *IEEE Geosci. Remote Sens. Lett.*, vol. 15, no. 9, pp. 1312-1316, 2018.

16) X. Chen and W. Huang, "Gaussian Process Regression for Estimating Wind Speed From X-band Marine Radar Images," *MTS/IEEE Oceans*, Charleston, USA, 2018. (Best Student Poster Competition Finalist)

17) X. Chen and W. Huang, "Musical Instrument Recognition Based on Vocal Structure Features and Human Hearing Characteristics," *IEEE NECEC Conference*, Newfoundland, Canada, 2017.

4. *Award*
- The 2021 Chinese Government Award for Outstanding Self-financed Students Abroad, China Scholarship Council, 2021
- IEEE Graduate Student Award, IEEE NL Section, 2021

- Kenneth Hickey Award in Ocean Remote Sensing, MUN, 2021
- Best Young Professional Paper Award, IEEE NECEC, 2018
- Best Student Poster Competition Finalist, MTS/IEEE Oceans, San Diego/Porto, Global, 2021
- Best Student Poster Competition Finalist, MTS/IEEE Oceans, Singapore/USA, 2020
- Best Student Poster Competition Finalist, MTS/IEEE Oceans, Seattle, USA, 2019
- Best Student Poster Competition Finalist, MTS/IEEE Oceans, Charleston, USA, 2018
- Fellow of School of Graduate Studies, 2021