

Weikai Tan

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Research Interests

- Remote sensing image analysis with SAR, optical and LiDAR sensors
- Deep learning algorithms for image processing

Experience

Geomatics Engineer, A.U.G. Signals Ltd., Toronto, ON

May 2017 to May 2019

- Research Engineer, in “Novel early season crop type classifier by improved utilization of multi-frequency PolSAR and electro-optical data”
- Research Engineer, in “Novel Utilization of RADARSAT Constellation Mission Compact Polarimetry Data for Forest Fire Risk Monitoring (CSA – EOADP – 9F013-150992/007/MTB)”
- Research Engineer, in “Crop growth stage estimation for crop management/disease risk assessment using Earth Observation data (AAFC –AIP – P376)”

Software Developer, BrainVision Market Analytics Inc, Toronto, ON

April 2015 to September 2016

- Developed a location-based shopping app that helps user find deals and promotions. Application available on iTunes App Store since January 4th, 2016

Teaching Assistant, University of Waterloo, ON

September 2014 to April 2015

- Course: Principles of GIScience. Instructed on map design and map analysis using ArcGIS
- Course: Earth/Space Remote Sensing. Instructed on satellite image processing using PCI Geomatica

Education

Master of Science, Geomatics, University of Waterloo

September 2014 to January 2017

Thesis: Sea ice monitoring in Labrador coast with Sentinel-1 synthetic aperture radar

Bachelor of Environmental Studies, University of Waterloo

September 2012 to June 2014

Honours Geomatics, Computer Science minor, Diploma of Excellence in GIS

Graduated from Faculty of Environment on Dean’s Honour’s List

Thesis: Urban population growth estimation using high spatial resolution imagery

Bachelor of Science, Nanjing University, China

September 2010 to June 2014

Honors Geographic Information Systems

Journal Publications

McNairn, H., Jiao, X., Pacheco, A., Sinha, A., **Tan, W.** and Li, Y., 2018. Estimating canola phenology using synthetic aperture radar. *Remote Sensing of Environment*, 219, pp.196-205.

Tan, W., Li, J., Xu, L. and Chapman, M.A., 2018. Semiautomated Segmentation of Sentinel-1 SAR Imagery for Mapping Sea Ice in Labrador Coast. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 11(5), pp.1419-1432.

Conference Publications

McNairn, H., Merzouki, A., Li, Y., Lampropoulos, G., **Tan, W.**, Powers, J. and Friesen, M., 2018, July. Retrieval of Field-Scale Soil Moisture Using Compact Polarimetry: Preparing for the Radarsat-Constellation. In *IGARSS 2018-2018 IEEE International Geoscience and Remote Sensing Symposium*(pp. 6135-6138). IEEE.

- Sinha, A., **Tan, W.**, Li, Y., McNairn, H., Jiao, X. and Hosseini, M., 2017, November. Applying a particle filtering technique for canola crop growth stage estimation in Canada. In *Remote Sensing for Agriculture, Ecosystems, and Hydrology XIX* (Vol. 10421, p. 104211F). International Society for Optics and Photonics.
- Tan, W.**, Liao, R., Du, Y., Lu, J. and Li, J., 2015, July. Improving urban impervious surface classification by combining Landsat and PolSAR images: A case study in Kitchener-Waterloo, Ontario, Canada. In *Geoscience and Remote Sensing Symposium (IGARSS), 2015 IEEE International* (pp. 1917-1920). IEEE.