Leihan **Chen**

Research Scientist

300 Interchange Way, Vaughan, ON, Canada, L4K 5Z8

(+1) 647-691-6289 | chenleihan1992816@gmail.com | https://www.leihan-chen.me

Education

Wuhan University — *Wuhan, China*

B.Eng. Remote Sensing and Photogrammetry — *Sep. 2010 - Jun. 2014*

- GPA: 3.7 Rank: 3/108

University of New South Wales — *Sydney, Australia*

Doctor of Philosophy. Civil and Environmental Engineering — *Mar. 2015 - Jul. 2015*

- Withdraw the program after the first term

York University — *Toronto, Canada*

M.Sc. Earth and Space Science — *Oct. 2015 - Jun. 2018*

- Master Thesis: Multi-Scale Hierarchical Conditional Random Field for Railway Electrification Scene Classification Using Mobile Laser Scanning Data

Research Experience

Railway Detection and Scene Understanding of Mobile LiDAR Data using CRF — *York University, Canada*

Department of Earth and Space Science and Engineering — *Oct. 2015 - Jul. 2017*

- Implemented a CRF based algorithm to segment large-scale mobile laser scanning data.

3D Indoor Scene Understanding Based on Convolutional Neural Network — *York University, Canada*

Department of Earth and Space Science and Engineering — *Feb. 2017 - Jul. 2017*

- Implemented a Fully Convolutional Network for indoor point cloud semantic segmentation

Titane Team, INRIA — *Nice, France*

Research Intern — *Jul. 2017 - Nov. 2017*

- Object recognition from fire map using consumer-graded camera

Research Interests

Classical Chinese Poetry	poetry in the period of Division; poetry in late Tang; poetry criticism in Late Imperial
Marxism & Socialism	Marxism & Christianity, Chinese Socialism, Cultural Revolution
Chinese Modern Literature	Chinese Transition in Republican Era

Professional Experience

School of Remote Sensing and Information Engineering, Wuhan University — *Wuhan, China*

Research Assistant — *Jul. 2014 - Feb. 2015*

- The development of Android based cadastral survey software

Teledyne Optech — *Toronto, Canada*

Research Intern — *Mar. 2018 - Jun.2018*

- Noise filtering from high-volume airborne lidar data with a combination of machine learning based algorithms

Teledyne Optech — *Toronto, Canada*

Research Scientist — *Mar. 2019 - Present*

- Noise filtering from high-volume airborne lidar data using a variety of deep learning technologies
- 1D waveform processing and noise filtering with bathymetry lidar data

Extracurricular Activity

Department Soccer Team — *Wuhan University, China*
Vice Capital — *Sep. 2012 - Sep. 2013*

Chunyin Chinese Ancient Poetry Society — *Wuhan University, China*
Member — *Sep. 2010 - Jun. 2013*

Honors & Awards

2017	Mitacs GlobalLink Research Award	*Toronto, Canada*
2015	IPRS scholarship	*Sydney, Australia*
2014	First-honor graduate	*Wuhan, China*
2012	Microsoft Scholarship for Chinese Remote Sensing Student	*Wuhan, China*
2011	Chinese National Scholarship	*Wuhan, China*

Skills

Programming Python, MatLab, C/C++, JAVA, JavaScript
Office Microsoft Office, LaTeX
Languages Chinese (Native), English (Professional proficiency),French (Limited proficiency), Japanese (very limited proficiency)

Publications

[1] Jung, J., **Chen, L.**, Sohn, G., Luo, C. and Won, J.U., 2016. Multi-Range Conditional Random Field for Classifying Railway Electrification System Objects Using Mobile Laser Scanning Data. *Remote Sensing*, 8(12), p.1008 **(Co-first author)**.

[2] Babacan, K., **Chen, L.**, and Sohn, G., 2017. SEMANTIC SEGMENTATION OF INDOOR POINT CLOUDS USING CONVOLUTIONAL NEURAL NETWORK, *ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci.*, IV-4/W4, pp. 101-108, https://doi.org/10.5194/isprs-annals-IV-4-W4-101-2017.

[3] **Chen, L.**, Jung, J. and Sohn, G., 2019. Multi-Scale Hierarchical CRF for Railway Electrification Asset Classification From Mobile Laser Scanning Data. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 12(8), pp.3131-3148.

[4] Jameela, M., **Chen, L.**, Sit, A., Yoo, J., Verheggen, C. and Sohn, G., 2020. SIMULATION-BASED DATA AUGMENTATION USING PHYSICAL PRIORS FOR NOISE FILTERING DEEP NEURAL NETWORK. *The International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, 43, pp.247-254.