

Mingke Erin Li

Department of Geomatics Engineering

Schulich School of Engineering, University of Calgary

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mingke.li@ucalgary.ca +1 (506) 998-9751**Education**

Present Ph.D., GIScience and Land Tenure, Department of Geomatics Engineering, University of Calgary, Canada

2019 MSc, Forestry, Faculty of Forestry and Environmental Management, University of New Brunswick, Canada

2016 BSc, GIScience, Faculty of Forestry, Nanjing Forestry University, Nanjing, China

Research Interests

Discrete Global Grid Systems
Geographic Information Science
Spatial Analysis
Forest Ecology

Peer-reviewed Publications

- 2021 **Li, M.**; McGrath, H.; Stefanakis, E. Integration of Heterogeneous Terrain Data into Discrete Global Grid Systems. *Cartography and Geographic Information Science*. 48(6), 546-564.
- 2020 **Li, M.**; Stefanakis, E. Geospatial Operations of Discrete Global Grid Systems – A Comparison with Traditional GIS. *Journal of Geovisualization and Spatial Analysis* 4(2), 26.
- 2020 **Li, M.**; Stefanakis, E. Geo-feature Modeling Uncertainties in Discrete Global Grids: A Case Study of Downtown Calgary, Canada. *Geomatica* 74, 175-195.
- 2020 **Li, M.**; MacLean, D.A.; Hennigar, C.R.; Ogilvie, J. Previous Year Outbreak Conditions and Spring Climate Predict Spruce Budworm Population Changes in the Following Year. *Forest Ecology and Management* 458, 117737.
- 2019 **Li, M.**; MacLean, D.A.; Hennigar, C.R.; Ogilvie, J. Spatial-Temporal Patterns of Spruce Budworm Defoliation within Plots in Québec. *Forests* 10, 232.

Conference Presentations

- 2021 **Li, M.**; McGrath, H.; Stefanakis, E. Integration of multi-source terrain data on Discrete Global Grids in Canada. 2021 Canadian Cartographic Association Conference, Online.
- 2020 **Li, M.**; Stefanakis, E.; McGrath, H. National terrain data management on Discrete Global Grids in Canada. AutoCarto 2020, Online.

- 2018 **Li, M.**; MacLean, D.A.; Hennigar, C.R.; Ogilvie, J. Spatial-temporal patterns of spruce budworm defoliation within measured plots in Québec. The 9th Bi-Annual Eastern Canada - USA Forest Science Conference, Fredericton, Canada.
- 2018 **Li, M.**; MacLean, D.A. GIS analyses of factors influencing spruce budworm outbreak initiation in northern New Brunswick. SERG International Workshop, Edmonton, Canada.

Other Invited Presentations

- 2022 **Li, M.** Quantization, Analysis, and Application of Terrain Data Modeled in Discrete Global Grid Systems. Presented at the International Society for Photogrammetry and Remote Sensing Work Group IV/7 (Geo-Data Management) Webinar, Online.
- 2021 **Li, M.** Integration Platform for Canadian Terrain Data: A DGGS Perspective. Presented at the Natural Resources Canada, Online.

Work Experience

- 2021 *University of Calgary*
Research assistant. Responsible for automating geospatial data extraction, integration, and analysis.
- 2020 *University of Calgary*
Teaching assistant. Introduction to Geospatial Information Systems.
- 2018 *University of New Brunswick*
Teaching assistant. Management of Natural Systems.
- 2017 *University of New Brunswick*
Teaching assistant. Introduction to GIS with Applications in Forestry and Environmental Management.
Teaching assistant. GIS Training for Natural Resource Professionals Workshop.

Honors, Awards & Activities

- 2021 CRSNG-CREATE DOTS program scholarship, Canada
- 2021 Esri Canada Centre of Excellence App Challenge – Runner Up, Calgary, Canada
- 2020&2021 Geomatics Engineering Department FGS Award, Calgary, Canada
- 2018 SERG International Graduate Student Award, Edmonton, Canada

Professional Skills

Python, R, Jupyter Notebook, SQL, Linux
ESRI Products, ArcGIS Online, QGIS, ENVI
ArcPy, GDAL, LAStools, FUSION
PostgreSQL, Microsoft SQL Server, MongoDB, Neo4j