

**Mingke Erin Li**

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**Education**

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- 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**

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Discrete Global Grid Systems  
Geographic Information Science  
Spatial Analysis  
Forest Ecology

**Peer-reviewed Publications**

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- 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**

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- 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 9<sup>th</sup> 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.

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**Other Invited Presentations**

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- 2021 **Li, M.** Integration Platform for Canadian Terrain Data: A DGGS Perspective. Presented at the Natural Resources Canada, Online.

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**Work Experience**

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- 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.

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**Honors, Awards & Activities**

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- 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

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**Professional Skills**

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