

MSc in Applied Science Thesis Defense

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Modelling Shade-Intolerant Tree Responses to Forest Edges

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Amidst growing global forest fragmentation, understanding the impacts of edges on forest ecosystems has become increasingly important for researchers and conservationists. However, the expanding scope of edge creation highlights the limitations of field studies. Models offer an accessible means to simulate edge effects in a time and cost-effective manner. This thesis explores the potential of ordinary differential equation (ODE) models to describe simulated vegetation responses of shade-intolerant trees following the establishment of a clear-cut edge in a boreal ecosystem. Through time-dependent parameters, I developed a suite of nested models capturing observable population trends in seedlings, saplings, and adult shade-intolerant trees. Sensitivity analyses were conducted to assess model robustness and predictive capability. This research will contribute to future implementations of edge vegetation response models, aiming to enhance our understanding of the long-term effects of edge creation.

Thursday, September 14 @ 2:00 pm
SB 159

Or via MS Teams

Contact mathcs@smu.ca for connection details