

PHD POSITION IN FOREST ECOLOGY & MANAGEMENT

Research project: Risk mitigation of insect outbreaks

Program: Ph.D. in biology

Institution: Université du Québec à Montréal (UQAM)

Start date: Summer-Fall 2022.

Stipend: 22,000\$/year for 3 years

Supervisors: Dr. Elise Filotas (Université du Québec) & Dr. Mathieu Bouchard (Université Laval),

We are seeking an excellent candidate to undertake a Ph.D. research project on forest management that focus on reducing risks related with insect outbreaks.

Project summary: Forests are important levers in the fight against climate change because of their ability to store carbon. However, forest natural disturbances, such as fires and insect outbreaks, can reduce forest carbon stocks through combustion and decomposition. In Quebec (Canada), a major challenge for forest management is therefore the design of strategies able to limit the impacts of natural disturbances on forest productivity. The goal of this research project is to quantify and optimize the efficiency of insect outbreak suppression activities, in particular that of the spruce budworm.

As part of this project, the candidate will employ various techniques, including the analyses of spatial data and remote sensing images, to characterize and understand how the efficiency of suppression activities vary across the landscape. The student will present his/her results at international conferences and will interact with researchers from governmental agencies, including the Canadian Forest Service, Quebec's Ministry of Forests, Wildlife and Parks, and the Forest Protection Society Against Insects and Diseases, to better understand the methods and constraints relative to suppression activities.

Expertise/ Profile required

- M.Sc. in biology, forest science, geography or related discipline
- Strong quantitative or mathematical background
- GIS skills an asset.
- Programming skills (*R* or *python*), an asset.
- Independent, rigorous and excellent organizational skills
- Fluency in written and spoken English and/or French

To apply, please send a cover letter describing your research background, interests, and qualifications; a copy of your most recent transcript; plus, a complete curriculum vitae and contact information for at least two references to elise.filotas@teluq.ca and Mathieu.Bouchard@sbf.ulaval.ca.

Applications will be considered until the position is filled.

Only short-listed candidates will be notified.
