PhD position in forest disturbance ecology at the University of Toronto

The James Lab (www.jameslab.ca) at the Institute of Forestry and Conservation at the University of Toronto is looking for an independent, enthusiastic, and creative graduate student to explore disturbance interactions and ecosystem resilience in the boreal forest. The specific project will examine how forest insect outbreaks affect stand and landscape level heterogeneity and what these changes mean for wildfire activity. The project will place specific emphasis on the effects of jack-pine budworm defoliation on fuel succession, fire activity, and ecosystem function in north-western Ontario. The successful candidate will work with historical defoliation and fire data, as well as lead field collection of novel stand structure and fuel information using a Terrestrial Laser Scanning (TLS; LiDAR) system.

The project is part of a large NSERC-supported Strategic Network Grant focussing on improving wildfire science in Canada (www.canadawildfire.org/nsercnetwork). The successful candidate will have the opportunity to interact with university and government researchers, as well as students from across Canada who are also examining questions related to fire ecology, fire behaviour, and fire / forest management.

Applicants require a background (e.g., MSc) in ecology or forestry, and should have a strong interest in landscape ecology, insect outbreaks, and fire behaviour. Desirable qualifications include technical experience with data manipulation, R, GIS, and statistics. In addition, preference will be given to those with experience in field work or camping in remote areas.

Funding is available for four years. The ideal candidate should be able to take up the position of research assistant for the upcoming field season (Summer 2022).

To apply, first refer to the guidelines for admission to graduate studies in Forestry at the University of Toronto: http://forestry.utoronto.ca/mscf-and-phd/. Then, send a short letter of motivation outlining how you meet the qualifications above, your CV, recent transcripts, and the names of two references to Dr. Patrick James: patrick.james@utoronto.ca by February 11, 2022.