Several projects for graduate students and postdocs
Resilient Urban Forests for Canadians
Adapting to Climate Change for Enhanced Tree-Related Benefits

Urban forests (UF) are associated with important ecosystem services (ES), such as heat reduction, improved air quality, and carbon storage, which benefit both environmental and human health. Yet it remains unclear how CC will impact the ability of our UF to provide these ES, how our UF will adapt, and how it could be better managed to maximize the generated benefits. Moreover, Canada, being a member of the *United Nations Framework Convention on Climate Change*, must produce a complete inventory of the GHG sources and sinks annually, including urban forests, and assure its scientific rigor. Currently available inventories do not accurately describe the UF, limiting our ability to estimate and model the different ES these forests provide. Current estimates in Canada contain significant sources of error and uncertainty which need to be addressed. We have secured significant funding from NSERC to better characterize UF with richer data, and to identify best practices for developing resilient UF that will support ES now and in the future.

To do so, we are seeking excellent candidates, at all levels (MSc, PhD or postdoc) to work, more specifically, on the following research questions:
- Improve our ability to evaluate growth, carbon stocks and total leaf area in the urban forest in order to increase the accuracy of ecosystem service assessments
- Measure the effects of climate change on urban forests using :
  - Coring and dendrochronology to investigate the effects of past climatic events, such as drought, on growth
  - Hydraulics and evapotranspiration, and then scaling up using remote-sensing data

The contribution of the selected candidates will be integrated into a larger, interdisciplinary project framework which will involve the participation of remote sensing and human health specialists from both academic and governmental backgrounds.

Prospective students should contact us with the following information: letter of interest (1 page), CV, unofficial transcripts, and the contact information for three references. Informal inquiries are welcome. Positions are based at UQAM in Montreal, Québec, Canada, a busy and lively multicultural city. UQAM is a French speaking university, but knowledge of the French language is not mandatory and Montreal is a friendly place for those hoping to learn a new language. A guaranteed compensation is being offered.

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