Postdoctoral position

Development of generalized airborne lidar methods for tree species identification transferable across Canadian forest sites.

AWARE (Assessment of Wood Attributes from Remote Sensing) is an NSERC Collaborative Research and Development (CRD) project spanning eight universities, federal and provincial governments and seven industrial partners that seeks to use remote sensing to enhance Canada's forest inventory and to improve the modelling of forested ecosystems (see aware.forestry.ubc.ca).

Within this framework, we are seeking applicants for a postdoctoral fellowship to join AWARE researchers, other postdoctoral fellows and graduate students who are actively conducting research on a variety of themes related to the project's overall objectives. The selected postdoctoral fellow will be mentored by Prof. Benoît St-Onge, Ph.D. (Department of Geography, University of Quebec at Montreal) and will work collaboratively with other project members locally, and across Canada.

Description of duties

The goal of this postdoctoral project is to integrate and further develop methods for the identification of tree species over different sites across Canada. More specifically, the goal is to elaborate a general approach which will be robust to changes in tree morphology between eco-regions and latitudinal gradients, and through variations in the characteristics of the remote sensing data (e.g. lidar point density). Of particular importance is the sampling approach for developing a set of training data, which will be usable across Canadian sites. The remote sensing data is mainly comprised of airborne lidar data (single channel discrete return, full waveform, or multispectral lidar), but can also include high resolution imagery. The selected individual will be expected to lead these tasks, present results to other AWARE project members, including industrial partners, and write and submit papers to peer-reviewed journals.

Required qualifications

• Candidates must have earned their Ph.D. by 01/06/2017.
• Demonstrated experience in lidar remote sensing and statistics.

Desired qualifications

• Candidates should exhibit a strong ability to collaborate with an interdisciplinary team, as well as strong organizational and communication skills (both oral and written).
• Prior experience with airborne lidar data, high resolution imagery, and field data in forest related projects.
• Good knowledge of geomatics software (e.g. ArcGIS, QGIS), image processing software (e.g. ENVI, PCI), and statistical software (preferably R).
• Programming skills in either Python or C/C++.
• A proven and productive publication record in peer-reviewed scientific journals.

Place of work: Montreal, Canada (Department of Geography, www.geo.uqam.ca).

Work language: French or English.

Annual salary: approx. $60 000.
The initial appointment will start in September 2017, for a period of one year and a half, with a possibility of extension.

**Application**

Persons interested in this position should send a statement of interest outlining relevant research qualifications (maximum of two pages), a CV (showing the actual or planned Ph.D. defence date), and up to three relevant publications and contact information for three references. At the end of the selection process, a copy of the PhD diploma will be required.

**Deadline for applications**: 16 January 2017

Please submit your application, or any request for further information, to:

Prof. Benoît St-Onge  
Phone: +1 (514) 987-3000 ext. 0280  
email: st-onge.benoit@uqam.ca