**Post-Doctoral Fellow, PhD and MSc Students Wanted**

**University of British Columbia.**
**Faculty of Forestry. Integrated Remote Sensing Studio (IRSS)**

**Position Descriptions:**

Northwest North America is home to the world's remaining grizzly bears (*Ursus arctos*). Grizzly bears are considered a threatened species in Alberta, Canada and as a result a considerable amount of research has taken place on conservation strategies to inform policy makers and management activities in the region. A diverse research team has recently received 3 years funding to examine how changing landscape conditions are impacting grizzly bear populations within the Yellowhead region. Projects will focus on using geo-spatial data from a wide variety of data sources to understand how changes in landscape conditions are changing the habitat selection, health and mortality of grizzly bears in the region. We are seeking a team of highly motivated PDF, PhD and MSc students who will research the integration of airborne LiDAR, terrain and Landsat imagery to produce landscape level estimates of habitat conditions.

1). We are seeking a PDF who will lead the geospatial data processing and collection, focusing on Landsat and RapidEye data to map and monitor disturbance events across the region and provide data to all research and industrial partners. The PDF will also be responsible for developing delineations of ecoregions within the region as well as lead research on mapping and utilization of roads across the region.

2). We seek a PhD student who will monitor snow depth and cover, using a network of snow sensors around key den sites. These point measurements of snow depth and meteorology will be used for model development and verification. Snow and green-up products developed from MODIS and Landsat will be fused to examine spatial and temporal environmental conditions at the time of den emergence for individual collared bear

3). A second PhD student will link detailed vegetation phenology data with LIDAR information on forest structure, stand shading, edge, open patches and land cover, to map both historical and current spatial distributions of habitat enabling hypothesis testing on how changes in the spatial and temporal dynamics of habitat impact bear movement and survival. The PhD student will install and maintain a network of phenological cameras throughout the study area to monitor phenological state of key understorey resources.

4). A MSc student will develop methods for assessing patterns in forest structure, with emphasis on gaps, clearings and edges, using LiDAR data and compare this fine-scale patterning to changes in movement and survival. These fine scale forest structural patterns will also be linked to scenarios of future forest change.

The study will be partly funded by the Natural Sciences and Engineering Research Council of Canada (NSERC). The students will be supervised by Prof. Nicholas Coops University of British Columbia (http://www.forestry.ubc.ca) and in some cases co-supervised by other Canadian and international researchers working on the project.

Eligible Candidates:
Canadian and International students are encouraged to apply, however preference will be given to Canadian students holding NSERC awards. The applicants should have successfully completed a MSc or PHD (if relevant) and have a strong background in remote sensing, programming or scripting, data processing with interest in biodiversity, forestry and data fusion and analysis.

It is critical the applicant has a background in either biology, forestry or geography and some ability to program computer code to facilitate data analysis, model development and implementation. An annual Graduate Research Assistant Stipend or PDF salary will be available. The current scholarship rate for MSc students is $CDN 25,000 or $CDN 28,000 for a PhD. student. If the candidate does not have NSERC or similar funding they will be expected to be proactive in applying for awards if necessary.

Interested applicants should send a cover letter, CV, a copy of academic transcripts (including TOEFL score if international student) and the names/contact information for three references by email. Review of applications will begin on May 1$^{st}$ 2016 and will continue until the positions are filled. The anticipated starting date will be as soon as possible assuming UBC entrance requirements are met.

For more information please contact Nicholas Coops (email preferred):

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