

Funded Ph.D. or post-doc position for working on the use of polarimetric SAR images for fuel moisture mapping

We are seeking to appoint one Ph.D. scholar to work on a newly funded Natural Sciences and Engineering Research Council of Canada (NSERC) project exploring advanced features of state-of-the-art radar remote sensing satellites. The Ph.D. student will be working with Prof. Brigitte Leblon (University of New Brunswick, Canada), Prof. Joseph Buckley (Royal Military College, Canada), Dr. Thomas Jagdhuber (DLR, Germany), Dr. Laura Bourgeau-Chavez (Michigan Tech Research Institute, USA) and Dr. Renaud Mathieu (CSIR, South Africa). Thereby, the hired student will be invited to travel among the various laboratories during his Ph.D. thesis.

Satellite synthetic aperture radar (SAR) remote sensing has been increasingly used to measure soil surface moisture. The aims of the project are to develop advanced methods to further enhance SAR through exploiting polarimetric SAR data. In particular, the calibration of a physics-based model will be done to map the drought code of the Canadian Fire Weather Index from polarimetric SAR images. The model follows the method of Jagdhuber et al. 2011. (Proc. 5th Int. Workshop PolInSAR 2011, Frascati, Italy). The model will be calibrated with data acquired over Canadian/South African natural grasslands, Alaska boreal forests and Canadian tundras.

The expected outcomes are a suite of innovative methods that aim to transform SAR into a robust, cost-effective, large coverage and fully remote sensing technology capable of frequently monitoring drought codes.

Eligible Candidates:

- * Preference will be given to Canadian, US or European students because the candidate will be invited to do some thesis work at DLR (Germany) and MTRI (USA), but international students can also apply.

- * Applicants should have successfully completed a research/thesis-based M.Sc. and have a strong background in geomatics, strong interest in computer coding, with interest in fire sciences.

- * It is critical the applicant has some ability to program computer code to facilitate data analysis, model development and implementation as well as good writing and oral skills.

Interested applicants should send a cover letter, CV, a copy of academic transcripts (including TOEFL score if international applicants), list of publications and the names/contact information for three references by email.

Uncompleted applications will not be considered. Review of applications will begin in May and will continue until the position is filled. We thank all the applicants, but only the short-listed candidates will be contacted.

For more information or application, please contact:

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