

THE SOILED PROFILE



NEWSLETTER DEPARTMENT OF SOIL SCIENCE UNIVERSITY OF MANITOBA “bringing you the latest dirt”



UNIVERSITY
OF MANITOBA

For general inquiries or if you have material to include in the newsletter:

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Past issues of the Soiled Profile are now on our
webpage: [umanitoba.ca/afs/soil science/](http://umanitoba.ca/afs/soil%20science/)

24 March 2016

Upcoming:

Wednesday, March 30, 1:00 p.m. – Soil Science M.Sc. Thesis Defense, Room 346 Ellis Building. Ashley Soloway. “A comparison of gap-filling methods for a long-term eddy covariance dataset from a northern old-growth black spruce forest”.

Monday, April 4, 8:30 a.m., Room 375 Ellis Building – The weekly technician meetings will return to 8:30 a.m. Tim, Rob and Bo Pan are all at these meetings each week. This is the time and location to approach them with requests for help. The 2016 season is expected to be just as busy, if not more so, than last year. Our department technicians try to coordinate activities to make the most efficient use of their time. “Walk-up requests” often cannot be accommodated. If you need assistance from any of them, make sure you attend or send someone to the meetings.

Wednesday, April 6, 12:30 p.m., Room 346 Ellis Building – Soil Science seminar series. Dr. Don Flaten, Department of Soil Science. Title: TBA.

Wednesday, April 13, 12:30 p.m., Room 346 Ellis Building – Soil Science seminar series. Dr. Tee Boon Goh, Department of Soil Science. Title: TBA.

Tuesday, May 3, Room 346 Ellis Building – Soil Science spring orientation. More details to follow.

Wednesday, May 11, 10:00 a.m. – Soil Science M.Sc. Thesis Defense, Room 346 Ellis Building. Ahmed Lasisi. “Investigation of the mechanisms by which perennial grasses prevent nitrate leaching from solid and liquid pig manures”.

Department Staff Away:

Lynda Closson	Mar 21-24, 28 (vacation)
Jennifer Henderson	Mar 30 (vacation)
Bo Pan	Mar 21-24, 28 (vacation)
Paul Bullock	Apr 11-24 (vacation)
Mario Tenuta	Apr 16-27 (China)
Wole Akinremi	Apr 20-Jun 4 (vacation, CSSS, Ghana)

News:

Abolfazl Hajihassani has won a major nematology award

Abolfazl has been selected as the John M. Webster Outstanding Student from the Society of Nematologists in the USA. The award is available to students in the last year of their PhD that have shown excellence in academics, publishing and outreach. Only one award is available per year and it is not always awarded each year. The prize is a \$700.00 travel award and Abolfazl will be expected to make a 30-minute special presentation at this year's Society of Nematologists annual meeting (July 17-21, 2016) in Montreal. Congratulations Abolfazl!

Francis Zvomuya's promotion has been approved

Dr. Francis Zvomuya is being promoted from Associate Professor to Professor effective March 30. Congratulations Francis!

Graduate Students must register for Summer 2016

Commencing Summer Term 2016, all continuing Faculty of Graduate Studies students will be required to register in Summer Term in order to maintain continuous registration. Students in Faculty of Graduate Studies programs are required to maintain continuous registration throughout their period of study and until completion of the degree. Exceptions are permitted for students who have been granted an exceptional or a parental leave of absence. Students who have been granted a regular leave of absence must maintain continuous registration. Registration for Summer Term will open the week of March 21, 2016 – specific registration times will be visible in Aurora in early March. The deadline to register for Summer Term is April 27, 2016. As is the case in Fall and Winter Terms, students who fail to register may be subject to discontinuance from their program.

In past years, students have been required to register in each Fall and Winter Term, with Winter Term registration considered to extend through to the end of Summer. Formal registration in Summer Term has not been required. However, problems have been identified with respect to this past practice, including: modification of the tax credit program to provide 12 months of credit with only 8 months of registration; and liability issues with respect to unregistered students participating in laboratory and field work activities. To address these concerns, all Faculty of Graduate Studies students who are continuing in their programs beyond Winter Term 2016 will be required to register in Summer Term. Those students who are not enrolled in course work will be required to register in the applicable Masters or PhD courses: Thesis, Comprehensive or Candidacy Exam, Studio, Re-Registration, Practicum, etc. This change does not affect the three weeks of vacation over a 12 month period to which students are entitled. Students will be referred to their academic unit for direction as to which course(s) to enroll in.

Students will not be assessed Program Fees or Continuing Fees in Summer Term. Applicable student organization and ancillary fees will be assessed. Students will be advised to contact their department or

academic unit for further information regarding registration procedures in Summer Term. You will register for: Master's Thesis - 30609 - GRAD 7000 - A01 and Master's Re-registration - 30611 - GRAD 7020 - A01 OR Doctoral Thesis - 30614 - GRAD 8000 - A01 and Doctoral Re-registration - 30616 - GRAD 8020 - A01 OR If you started your graduate program May 2015 or later, just register for the appropriate thesis course, not re-registration.

Frequently Asked Questions:

http://umanitoba.ca/faculties/graduate_studies/registration/summerregFAQ.html.

Opportunities:

University of Manitoba Graduate Fellowship, M.Sc. Competition, Department of Soil Science

New applicants and current M.Sc. students are encouraged to apply for the 2016 Department of Soil Science University of Manitoba Graduate Fellowship M.Sc. Competition. The award value is \$14,000 per year for a maximum of 2 years; additional funding is provided by the student's advisor to ensure a minimum assistantship of \$17,500 per year. Note that students may only hold the award for the first 24 months of their program; students who are currently enrolled must be less than 12 months into their program as of September 1, 2016; new students must become enrolled in 2016 or January 2017. Students must have a minimum GPA of 3.75 (above B+) at a recognized university based on their last 60 credit hours or equivalent. All students regardless of citizenship are eligible to apply but Canadian citizens and permanent residents must have applied for the 2016 NSERC scholarship to be eligible.

Students must submit the following electronically to Martha Blouw, Graduate Academic Advisor, Telephone: 204-474-8223; email: Martha.Blouw@umanitoba.ca, University of Manitoba, Winnipeg Manitoba, Canada, R3T 2N2 by **May 2, 2016**, 400pm:

- Official Transcript of grades from all university programs; University of Manitoba students send student history from the Registrar's office (free) directly to Martha Blouw; Current students can provide copies of their original transcripts used for initial admission;
- Letter of Intent describing your educational goals, notional thesis topic area, the name of your thesis advisor, and the date when your program will start;
- A resumé indicating exceptional achievements and demonstration of leadership and experience;
- A 300- to 500-word description of your intended research.
- Letters of reference from two professional referees sent directly from the referee.

ICAN-WISE Scholarship Program

The ICAN-WISE scholarship program was established for the Prairie Region of Canada in 2014. The purpose of the ICAN-WISE Scholarship is to facilitate women mentee-mentor academic research collaborations in natural sciences and engineering fields. This is an initiative of Dr. Annemieke Farenhorst, Prairie NSERC Chair for Women in Science and Engineering. Three ICAN-WISE scholarships will be available in 2016, which are to be awarded to undergraduate students that are enrolled at:

- The University of Manitoba (one \$6,000 award available); and
- The University of Saskatchewan (one \$6,000 award available); and
- Any one of the following universities (one \$6,000 award available)
 - University of Manitoba
 - University of Calgary
 - University of Winnipeg

- University of Alberta
- Brandon University
- Grant MacEwan University
- University College of the North
- Mount Royal University
- University of Saskatchewan
- University of Lethbridge
- University of Regina
- Burman University
- First Nations University of Canada

The funding is the student's stipend while working with their mentor on a research project in the summer of 2016. Female undergraduate students are encouraged to apply for the Award and potential female mentors who are assistant, associate or full professors are also encouraged forward this information to suitable candidates. Students need to submit their application by **April 8, 2016**, midnight to Lena.Yusim@umanitoba.ca. Each applicant will be informed on April 15, 2016 whether or not her application was successful.

Biomimicry Global Design Challenge

The Biomimicry Institute and the Ray C. Anderson Foundation launched the 2016 round of the Biomimicry Global Design Challenge, open to both students and professionals worldwide. We are challenging people to use biomimicry – an approach to innovation that taps into nature's time-tested designs and processes in order to solve human-scale problems – to design a better, healthier food system.

We have just partnered with the Land Institute to offer a subprize focused on a specific soil-focused design problem - how to replace perennial crops without disrupting the soil and food web, and without releasing significant amounts of carbon dioxide.

Students and professionals that submit a solution addressing The Land Institute's design brief will be eligible for all Biomimicry Global Design Challenge cash prizes, including the Ray C. Anderson Foundation \$100,000 "Ray of Hope" Prize.

For more details: <http://challenge.biomimicry.org/en/blog/announcing-the-land-institute-sub-challenge>. More information on the entire design challenge can be found at: <http://challenge.biomimicry.org>.

IPNI Scholar Award

The International Plant Nutrition Scholar Awards are open to applicants who are graduate students attending a degree-granting institution located in any country with an IPNI program. Priority is given to the relevance of the proposed research in support of IPNI's mission. Students in the disciplines of soil and plant sciences including agronomy, horticulture, ecology, soil fertility, soil chemistry, crop physiology, and other areas related to plant nutrition are encouraged to apply. Candidates for either the M.S. or Ph.D. degrees, who are enrolled in a program of graduate study as of the application deadline, are eligible. Applicants who have already completed their degrees are ineligible. In the case of Ph.D. candidates, preference will be given to students who have a minimum of one year remaining before completion of their studies. Winners are not eligible for reappointment; the awards are for one time only.

Award value: \$2,000 (US). To apply: <http://www.ipni.net/awards>. Deadline: **April 29, 2016**.

Events:

Project in Agroecology (AGEC 4550), Final Oral Presentations, Friday April 1, 2016, starting 230pm, Ellis Building Room 344

Time	Topic	Speaker	Advisor
230pm	General Introduction		
235pm	Recycled Wallboard Gypsum as a Sulphur Nutrient Source for Canola	Angie Cerilli	Dr. Don Flaten, Soil Science
255pm	Phosphorus Sorption Capacities as Affected by Cropping System and Manure Application	Colin Durand	Dr. Wole Akinremi, Soil Science
315pm	Sediment Fingerprinting in the Lower Little Bow River Watershed using Cs-137	Melody Caron	Dr. David Lobb, Soil Science
335 pm	Effects of Three Herbicides and their Mixtures on Soil Microbial Taxa	Jonathan Rosset	Dr. Rob Gulden, Plant Science
355pm	Predicting Nitrogen Mineralization from Manured Soils	Jeff Seward	Dr. Don Flaten, Soil Science
415pm	Wrap-up and refreshments		

Each talk is a maximum of 15 minutes, followed by a 5-minute question period.

Pizza and Refreshments following the seminars.

Everyone Welcome!

Seminar, Measurements of soil moisture, snow and vegetation with GPS Interferometric Reflectometry

SPEAKER: Valery Zavorotny, Ph.D. , Earth System Research Laboratory of the National Oceanic and Atmospheric Administration (NOAA), Boulder, CO, USA

DATE & TIME: **Tuesday, 29th March, 10 am**

LOCATION: 5th Floor CEOS Theatre, Centre for Earth Observation Science, 535 Wallace Building , University of Manitoba (Ft. Garry Campus)

HOSTS: Centre for Earth Observation Science (CEOS), IEEE Geoscience and Remote Sensing (GRS) and Aerospace and Electronics System (AES) Winnipeg Chapter

Summary: It is shown that the dielectric properties and height of the snow and soil change the phase of the scattered GPS signal, and thus the phase of the interferometric oscillation GPS. Dr. Zavorotny introduces a technique that exploits this interference of direct and reflected GPS signals, observed via the signal-to-noise ratio (SNR) data measured by the GPS. The retrieval error of the bare soil moisture utilizing this technique has been reported at a 3-4% level. This talk will present the overview of this technique, and will discuss some recent results.