



PRESIDENT'S MESSAGE

Wow! It's March already. With Spring in the air I would like to welcome all new and returning members to the first issue of our newsletter for 2023. The Spring is a time of new beginnings and changes to council. A warm welcome to Dr Adrian Unc (Eastern Councillor; Memorial University), Blake Weiseth (Student Representative; University of Saskatchewan) and welcome back to Dr Rich Farrell (President-Elect; University of Saskatchewan). Gratitude is extended to Dr Louis-Pierre Comeau, Erika Young, and Dr Angela Bedard-Haughn for their service to council over the last several years. I also must extend gratitude and thanks to Nancy Zubriski in the business office and all of our members who continue to champion our soils and the society itself. It truly is an honour and a privilege to have the opportunity to lead the society this year.

As the Senate Committee on Agriculture and Forestry continues to dig in soil health and soil conditions in Canada, our society is working toward the establishment of a Soil Health Committee to promote communication and leadership to the public and governments, nationally and internationally. This idea was brought forth by Dr Derek MacKenzie at the society meeting in Edmonton and Dr David Lobb is leading the proposal to establish this committee. A group, led by Dr Maja Krzic, is currently working towards an assessment of soil health in soil education in higher education in Canada. There are two sessions specifically focused on soil health at our upcoming annual meeting this year in Truro, Nova Scotia, where Senator Rob Black, a champion of soil health, will be a keynote speaker.

In addition to the excellent scientific program, there will also be active discussion around the Regional Assessment of Soil Changes in North America for the 2025 Status of the World's Soil Resources Report and the 24th World Congress of Soil Science. It is certainly an exciting time to be a soil scientist in Canada and there are many ways to be involved with these efforts and others. I would also like to highlight that the Communications Committee was officially established earlier this year, as was the World Congress Committee. The Pedology Committee is working diligently towards the 4th Edition of the Canadian System of Soil Classification. There are so many initiatives to celebrate this year!



CSSS Council

President
Amanda Diochon
Lakehead University
Ph: 807 343-8010 wxt. 8444
adiochon@lakeheadu.ca

Past-President
Asim Biswas
University of Guelph
Ph: 519 824-4120 ext. 54249
biswas@uoguelph.ca

President-Elect
Richard Farrell
University of Saskatchewan
Ph: 306 966-2772
r.farrell@usask.ca

Secretary
Lee-Ann Bauman
Terralogix Solutions Inc.
Ph: 780 461-7726 ext. 232
baumanL15@gmail.com

Treasurer
J. Diane Knight
University of Saskatchewan
Ph: 306 966-2703
diane.knight@usask.ca

Eastern Councillor
Adrian Unc
Memorial University
Ph: 709-637-7153
aunc@grenfell.mun.ca

Western Councillor
Henry Chau
Lincoln University
henry.chau@lincoln.ac.nz

Graduate Student Representative
Blake Weiseth
University of Saskatchewan
blake.weiseth@gmail.com

Editor In Chief CJSS
M. Anne Naeth
Department of Renewable Resources
University of Alberta
Ph: 780 492-9539
Email: anne.naeth@ualberta.ca

President's Message (Con't.)

Truro is very close to home for me, and I am excited to reconnect with colleagues who have become friends, expand my own network, and interact with the student members of our society who are doing outstanding work. Engaging with our students and thinking of new ways to engage youth across the country is top of mind for me and I look forward to implementing strategies during my term to help boost undergraduate student involvement in the society over the coming years.

Wishing each and every one of you a healthy and productive Spring.

All my best,

Amanda Diochon
CSSS President

CSSS 2023 Annual Meeting

The Canadian Society of Soil Science (CSSS) 2023 Annual meeting is nearing. This year we'll meet in Truro, NS, hosted by Dalhousie University's Centre for Sustainable Soil Management within the Faculty of Agriculture. Abstracts are still accepted until March 31st, 2023. Visit [CSSS 2023 Annual Meeting](#) for more information.

Life as a Soil Science Professional

Please participate in our Life as a Soil Scientist profiles!

Our GroundedInSoils blog has a section to encourage students to pursue a career in soil science. We need your help to let them know what it's like to be a professional! Be like Maren Oelberman, Grace Gowera, and Amanda Diochon - and follow the instructions below. View Grace's profile here: <https://groundedinsoils.wordpress.com/2022/06/12/grace-gowera-life-as-a-soil-scientist/>

Here are the questions to answer, about 50 words each, please:
When did you first learn about soil science?
What interests you most about soil?
What was your path to becoming a soil scientist?
What is your favorite thing about soil?

Student Photo Contest

Are you a student interested in visually projecting your research? Do you have interesting and memorable research photos you would like to share? Then look no further as the CSSS is accepting submissions for the Canadian Journal of Soil Science (CJSS) student photo contest.

The CJSS is a quarterly journal and one photo will be selected for each issue.

Deadlines for submission are January 25, April 25, July 25, and October 25.

All submissions must meet the following specifications:

- Image should focus on some aspect of soil science to reflect CJSS content.
- Image size and resolution must be at least 8.5" x 11" at 300 dpi or higher.
- Cell phone photographs are acceptable as long as they meet the above criteria.
- No collages; one single image only.
- Image in focus and not blurry.
- Image must not include people.
- No manipulation or heavy editing of image required.
- Acceptable image formats are jpg, png, or tif.

Students may submit more than one image per competition and may enter more than one competition.

All entries should be sent to:

M. Anne Naeth (anaeth@ualberta.ca) and Erika H. Young (ehyoung@grenfell.mun.ca).

The next deadline for submission is April 25, 2023.

The top submission will receive a \$125 cash prize and the winning photograph will be featured on the cover of the Canadian Journal of Soil Science and on the CSSS website.

CJSS Photo Submissions

If you are interested in submitting photos for consideration by the CJSS as an issue cover or as advertising material but not as part of the student photo contest please send directly to M. Anne Naeth (anaeth@ualberta.ca). Any interested party can submit images provided that the images meet the criteria outlined for the student competition.

Ivarson Soil Science Scholarships Call for Applications Open until March 20, 2023

2 Ivarson Soil Science Scholarships of \$3,000 are now available to graduate students studying soil science.

Candidates who meet the following eligibility criteria are welcome to apply:

- Candidates must hold Canadian citizenship or Permanent Resident status in Canada.
- Candidates must be registered full-time in a masters or doctorate program in the area of soil science (agriculture, agro-ecology, resource management, environment, geology or other related disciplines) at a recognized Canadian university.
- Candidates must be in their second or subsequent years of graduate studies in soil science (agriculture, agro-ecology, resource management, environment, geology or other related disciplines).
- Previous recipients of this scholarship are not eligible for subsequent awards.

Application Guidelines and Forms available at www.CFFAE.ca

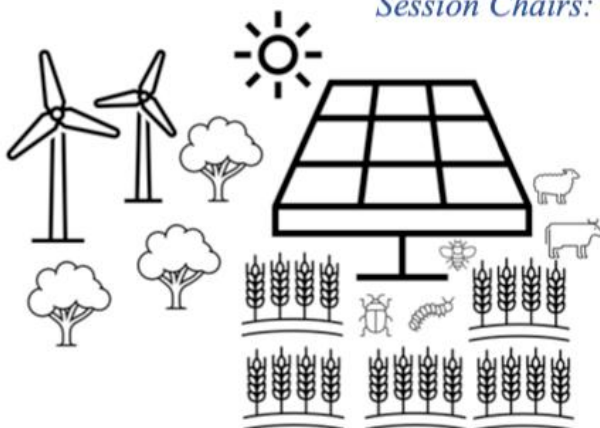
Application Deadline: March 20, 2023

Abstract Submissions - CSSS 2023

2023 Canadian Society of Soil Science Annual Meeting Truro, Nova Scotia - June 26-29

*Session: Renewable Energy in Canadian Agriculture Systems: Potentials, Impacts,
Current and Future Prospects*

Session Chairs: Sandra Yanni & Henry Chau



SUBMIT AN ABSTRACT BY March 31 [Abstract \(csss2023.ca\)](http://Abstract(csss2023.ca))

With rising energy costs and commitments to reduce emissions in agriculture, renewable energy resources are needed; solar, wind and hydro power among other green resources.

This session invites all topics on energy in agriculture with special focus on solar and Agrivoltaics (APV).

We invite stakeholders to discuss research needs, results, prospects and efforts being conducted across Canada on all renewable energy that can be incorporated in on-farm processes such as irrigation, incorporated in livestock and dairy production, and post-harvest processing and storage.

CSSS Pedology Committee News

Dear Pedology and Digital Soil Mapping Aficionados,

A few pieces of exciting news to announce from the Pedology Committee:

1. Canadian Journal of Soil Science – Special Collection: Advances in Soil Survey & Classification in Canada

We are pleased to promote this Special Collection, which is nearly complete ([here](#)). The Collection includes a series of 18 articles, of which 10 articles highlight the advances in soil classification and 8 articles highlight the advances in soil survey. The Guest Editors (Brandon Heung, Daniel Saurette, Chuck Bulmer, Angela Bedard-Haughn) would like to thank all the contributors to this Collection, as well as Anne Naeth, for supporting this initiative.

2. 4th Edition of the Canadian System of Soil Classification

The Pedology Committee invites interested soil scientists from across Canada to join the Soil Classification Working Group (SCWG) and participate in the development of the 4th edition of the Canadian System of Soil Classification (CSSC). Between January and July 2023, the SCWG will meet monthly to review, discuss, and debate proposed revisions to the CSSC on the third Friday of every month, with a kick-off session January 6th. These meetings will focus primarily on the 10 research articles related to soil taxonomy published in the Special Collection of the Canadian Journal of Soil Science: Advances in Soil Survey & Classification in Canada (<https://cdnsciencepub.com/topic/cjss-soil-survey>). In addition to these major proposals, we will explore other aspects of creating a revised CSSC manual, including organizing working groups to tackle larger issues, hearing about the Education Committee's experience with self-publication, discussing updates to artwork, diagrams, and photos, and reviewing minor changes submitted through the [online form](#).

The 10 manuscripts are being made available to the SCWG for the purposes of revising the CSSC in this [Google Drive](#) folder. Some are still in "online first" format and will be updated once finalized on the CJSS website. Please refrain from sharing these manuscripts, except for those that are Open Access.

The Pedology Committee has created an email account to be used for all communications: csss.pedology@gmail.com. If participants are unable to attend a meeting due to a scheduling conflict, they are encouraged to submit their questions, concerns, and/or arguments for or against a specific taxonomic proposal by email ahead of the scheduled meeting. For this reason, meetings will not skip ahead on the topics. Please note that changes to the CSSC outside the manuscripts in the CJSS can still be submitted using the [online form](#); please have submissions in by the end of May 2023.

CSSS Pedology Committee News (Con't.)

We look forward to seeing many of you online in the new year for these important discussions. The agenda may be accessed [here](#).

3. Canadian Society of Soil Science Annual Meeting – June 26 to June 29, 2023

The CSSS Annual Meeting will be held in Truro, Nova Scotia—Dalhousie University and its Centre for Sustainable Soil Management are pleased to host the meeting this year.

This year, we have several exciting sessions that would be relevant to this community.

1. **Advances in Digital Soil Mapping:** While technological advances have transformed our methods for mapping, modelling, and visualization of soils over multiple spatial and temporal scales, there is the increasing demand for digital soil data repositories to support the developments in predictive modelling — especially in the era of Big Data. This session explores two themes: (1) the development of digital soil data repositories; and (2) the advancement of predictive soil modelling throughout Canada. The first theme may include topics such as soil database development, structuring, and management; data harmonization, curation, and quality control; and data security, communication, and sharing. The second theme may include topics such as the development and assessment of spatial sampling techniques to support predictive modelling; the acquisition of soil-environmental data layers; the application of remote and proximal sensing techniques; the applications of machine-learning; predictive digital soil mapping; the use of predictive modelling to perform soil assessments; and other related topics.
2. **Digital Soil Morphometrics:** While the traditional description of soil morphology is still widely practiced, and is fundamental to our current soil classification systems, the information is frequently of limited utility for rigorous numeric interpretations of soil and landscape processes. This session will address advances in the diverse technologies and techniques used for the quantification of soil morphological attributes, related data processing strategies, as well as evolving applications. The research presented will contemplate both in situ and ex situ approaches, at scales of observation ranging from the microscopic to landscape element level. Applications will consider both natural and managed environments, as well as engineered systems, such as anthroposols.

Hydrogeophysics to Support Precision Agriculture: Conversion of natural systems into agricultural lands and agricultural intensification together with increased agricultural inputs have resulted negative environmental impacts. In addition, increased agricultural inputs and activities have increased cost of production and carbon footprint. As a solution, precision agriculture (PA) has become an emerging approach for increasing agricultural productivity while minimizing negative environmental impacts as well as the cost of production. In PA, agricultural management zones are delineated and required amount of agricultural inputs will be applied in correct time at correct place. Knowledge of the spatial and temporal variability of physical (bulk density/compaction, porosity, structure, etc...) and hydraulic (soil water content, plant available water, hydraulic conductivity, groundwater table etc) properties of soil within the agricultural landscape is needed for delineation of management zones to support PA.

CSSS Pedology Committee News (Con't.)

1. The field of hydrogeophysics explores the potential use of near surface geophysical methods for characterization of subsurface hydrological processes and soil properties. Compared with traditional methods, near surface geophysical methods are time saving because a large volume of data can be collected quickly, low cost, non-destructive and repeated measurements can be made at the same location. In this session, we expect papers in mapping spatial variability of soil physical and hydraulic properties and application of geophysical techniques in obtaining these properties in support of precision agriculture.
2. Preparing the Next Generation of Canadian Pedologists (Special Session): In recent decades there has been a shift in soil science education that has resulted in a gradual erosion of the number of trained pedologists in Canada. In this session we will explore current and potential professional accreditations available in North America and review the postgraduate and graduate programs offered across the country. Finally, we will examine the needs of the private and public sector and how we might move forward to ensure that Canada maintains and grows the number of trained pedologists.

[ABSTRACT SUBMISSION DEADLINE: MARCH 31, 2023](#)

4. Annual Workshop on Digital Soil Mapping (Post-CSSS Conference)

This will be technical workshop that will focus on a range of topics related to digital soil mapping, including theory and hands-on exercises for preparation of environmental data, sample plan design, and the use of machine learning models for continuous and categorical soil variables. Here, attendees will be provided with resource materials and data, as well as R scripts that may be adapted for their own needs. The workshop will consist of five modules to be delivered over the course of two days and no existing background in digital soil mapping is required. The workshop will be hosted by Brandon Heung (Dalhousie University) & Daniel Saurette (Ontario Ministry of Agriculture, Food and Rural Affairs & Guelph University).

Further details on the workshop will be provided to registrants; however, the module topics are as follows:

- Module 1: Digital Soil Mapping Theory
- Module 2: Introduction to R for Digital Soil Mapping
- Module 3: Exploration of Environmental Data using GIS
- Module 4: Sample Selection
- Module 5: Applications of Machine Learning in Digital Soil Mapping

This workshop will largely focus on introductory contents, similar to previous offerings of the workshop. However, if there are suggestions for specific topics, we would be happy to hear them and possible have them included (given available preparation time)

Workshop Organizers

Brandon Heung (Brandon.Heung@dal.ca)

Daniel Saurette (Daniel.Saurette@ontario.ca)

Positions / Opportunities



THE UNIVERSITY OF BRITISH COLUMBIA

Assistant or Associate Professor in Land Use and Soil Hydrology

The Faculty of Land and Food Systems at the University of British Columbia, Vancouver, Canada (<https://www.landfood.ubc.ca>) is seeking an outstanding candidate for a full-time, tenure stream position at the rank of Assistant or Associate Professor within the Applied Biology Program. The anticipated start date is January 1, 2024, although an alternate start date can be negotiated. Applicants must have a Ph.D. in soil science, hydrology or a closely related field, supplemented with postdoctoral or equivalent experience. Candidates must demonstrate potential for outstanding research with relevance to soil hydrological processes and sustainable water management in natural and/or agricultural systems, with an emphasis on how those processes can mitigate the impacts of climate change on ecosystems. Areas of interest can include applied soil physics, irrigation and water management, soil and water conservation, watershed management, hydrogeology, and applied hydrogeophysics. Applicants must demonstrate strong potential for excellence in creating an equitable, inclusive and diverse research team, and excellence in teaching undergraduate and graduate soil science courses.

As described in its Action Plan, the Faculty of Land and Food Systems prioritizes EDI and uses student-centered learning to educate new generations of scientists equipped to solve the most fundamental issues faced by society (<https://www.landfood.ubc.ca/action-plan/>). The successful candidate will be expected to (a) develop an independent, externally funded, and internationally recognized research program; (b) foster active collaborations in research and teaching within the Faculty of Land and Food Systems; and (c) teach courses related to soil science at the graduate and undergraduate level in the Faculty of Land and Food Systems.

Applications must be made through the University of British Columbia's Human Resources online careers page (<https://ubc.wd10.myworkdayjobs.com/ubcfacultyjobs>). Applicants should submit one combined PDF file including: (1) cover letter; (2) curriculum vitae; (3) contact information of three references; (4) statement describing a five-year research plan (1-2 pages); (5) statement of teaching philosophy with evidence of potential for effective teaching (1-2 pages); and (6) statement identifying a commitment to equity, diversity and inclusion (up to 1 page). To ensure full consideration, applications must be received by May 1, 2023; however, this position will remain open until a suitable candidate is identified. If you have specific questions about the application process, please contact the Chair of the Selection Committee c/o melanie.train@ubc.ca.

Applicants are also asked to complete an equity survey. The survey information will not be used to determine eligibility for employment, but will be collated to provide data that can assist us in understanding the diversity of our applicant pool, identify potential barriers to the employment of designated equity group members, and comply with our hiring practices. Your participation in the survey is voluntary and confidential. Data collected through this survey will be held by the Dean's office and will only be shared at the aggregate level with the hiring committee.
https://ubc.ca1.qualtrics.com/jfe/form/SV_bqoylYrLVBOHrRc

Positions / Opportunities (Con't.)

Assistant or Associate Professor in Land Use and Soil Hydrology (Con't.)

Equity and diversity are essential to academic excellence. An open and diverse community fosters the inclusion of voices that have been underrepresented or discouraged. We encourage applications from members of groups that have been marginalized on any grounds enumerated under the B.C. Human Rights Code, including sex, sexual orientation, gender identity or expression, racialization, disability, political belief, religion, marital or family status, age, and/or status as a First Nation, Metis, Inuit, or Indigenous person. All qualified candidates are encouraged to apply; however, Canadians and permanent residents of Canada will be given priority.

MSc Opportunity, Department of Soil Science

Quantifying carbon sequestration and nitrogen transfer from decomposed field crop residues using stable isotope tracing - University of Saskatchewan, Canada

Drs. Bobbi Helgason and Melissa Arcand are seeking a MSc student to conduct research that will examine residue quality characteristics on the fate of carbon and nitrogen during decomposition of residues of important field crops in an effort to optimize C sequestration and predict N transfer credit in prairie cropping systems. The student's project will involve a combination of field and laboratory research, learning and employing techniques in stable isotope tracing, soil organic matter characterization, and soil microbiology. The Department of Soil Science is home to a newly updated state of the art Stable Isotope Facility. Candidates interested in learning about plant-soil relationships on soil fertility and carbon sequestration are encouraged to apply.

Interested students should have the following qualifications:

- Undergraduate degree in soil science, environmental science, microbiology, crop science, agronomy, or related discipline
- Strong communication skills
- Ability to work independently and in teams
- Experience doing agricultural field work is considered an asset
- Experience in a laboratory work environment is considered an asset

Students will be paid a stipend of \$26,000 per year for 2.5 years. Additional scholarship opportunities are available.

Interested candidates should submit a CV, a one page statement of research interest, and unofficial transcripts to bobbi.helgason@usask.ca.

Start date: May 2023 or no later than September 2023.

Positions / Opportunities (Con't.)

Assistant Professor

Posting Number: FAESM02-23

Posting Date: Friday, February 17, 2023 to Thursday, March 30, 2023

Department: Department of Ecosystem Science and Management

Employer: UNBC

Job Type: Tenure-Track

Location: Prince George Campus

More Information: [FAESM02-23 Assistant Professor, TT](#)

Description

The University of Northern British Columbia (UNBC) invites applications for a tenure-track position in the Department of Ecosystem Science and Management at the rank of Assistant Professor, with a proposed starting date of July 1, 2023. As an institution committed to the fostering of an inclusive and transformative learning environment, UNBC values high quality and growth in both teaching and scholarship.

UNBC's Dept of Ecosystem Science & Management oversees BSc. undergraduate degrees in: Biology; Conservation Science & Practice; Forest Ecology & Management; Wildlife & Fisheries, and a BA. degree in Nature and Resource-based Management. Faculty supervise graduate students (Masters and Doctoral) within the Natural Resources & Environmental Studies (NRES) Graduate Program. The program resides within the Faculty of Environment, alongside the Department of Geography, Earth & Environmental Sciences and the School of Planning & Sustainability. UNBC is well equipped with modern research facilities, three field research stations, including two research forests.

We seek candidates who will develop a vigorous, externally funded long-term research program in one or more aspects of soils of forested landscapes. Relevant research interests could include: fundamental ecological functions of forest soils, application of soil science to Indigenous land management, natural resource management in forested landscapes, and/or the genesis and landscape patterns of soils in forested environments. We are particularly interested in candidates with background and/or interest in boreal and temperate regions.

For more information including application instructions, please see below link to the job posting.

Document: [FAESM02-23 Assistant Professor, TT](#)

Positions / Opportunities (Con't.)



Community Liaison/Education Coordinator Position

Project Title: Development of eco-restoration practices through a co-production process on Indigenous traditional territories in boreal Saskatchewan

Project Summary:

Restoration practitioners and Indigenous communities have a vested interest in understanding how to promote healthy resilience ecosystems following anthropogenic disturbance. Working in partnership with Denison Mines, Indigenous-owned and operated Northwest Communities Environmental Services (NWCES) and the communities of Beauval, Ile-a-la Crosse, Patuanak (English River First Nation), and Pinehouse our goal is to develop effective eco-restoration practices on Indigenous territories through a co-production process. Reconciliation requires new ways of conducting natural science and the rigorous application of both Indigenous knowledge and Western science is needed to support decision making. Through knowledge co-production we aim to address knowledge gaps and improve restoration practices. Specifically, we propose to develop site-specific restoration techniques through furthering our understanding of the recovery early-stage soil nutrient inputs in disturbed upland boreal forests.

Duties will include:

- Work with the partners to establish a 5-member Indigenous Project Advisory Board with members from Beauval, Ile-a-la Crosse, Patuanak (English River First Nation), and Pinehouse
- Provide logistical support for board meetings and communicate outcomes to all project members and target communities
- Develop and support youth education initiatives in the above communities
- Assist with hiring local youth as summer research assistants
- Support graduate students leading community engagement, community-based research, and on-site restoration activities
- Travel regularly to the four communities above, as well as the Denison site near Key Lake, SK
- Report regularly and professionally to academic project leaders

Positions / Opportunities (Con't.)



UNIVERSITY OF SASKATCHEWAN
College of Agriculture
and Bioresources
DEPARTMENT OF SOIL SCIENCE
AGBIO.USASK.CA



UNIVERSITY OF SASKATCHEWAN
School of Environment
and Sustainability
SENS.USASK.CA

Community Liaison/Education Coordinator Position (Con't.)

Expected competencies include:

- Demonstrated experience and expertise working with Indigenous communities
- Experience working in education and youth programming in Indigenous communities
- A working knowledge of ecological restoration and/or land management
- Team player with strong initiative who can work with minimal supervision and anticipate team needs
- Demonstrated track record of carrying out the necessary management tasks to convene and catalyze teams to deliver timely, high-quality products
- Knowledge of curriculum development and implementation strategies
- Workshop or conference organization experience
- Excellent written and verbal communication skills, with a strong track record in research dissemination for various audiences
- Ability and willingness to travel and work evenings and weekends to coordinate aspects of project work
- Valid driver's license

The expected starting date for this 2.5-year project will be April 2023.

The stipend for this part-time position is \$50,000 including benefits per year.

Interested candidates should submit a cover letter outlining your interest and experience, a CV and three references to Dr. Katherine Stewart at University of Saskatchewan (katherine.stewart@usask.ca) by March 24, 2023. For more information, please contact Dr. Stewart.

Positions / Opportunities (Con't.)

PhD Position: Modelling Greenhouse Gas Emissions from Cropping Systems

We are seeking candidates for a PhD project focussed on scaling up large datasets on greenhouse gas emissions and soil health processes to identify climate-smart soil management practices. Research will involve use of data from long-term micrometeorological CO₂ and N₂O flux and chamber based N₂O measurements designed to identify practices that reduce net greenhouse gas emissions, while also considering soil health indicators. These data will be used to calibrate and validate biogeochemical models (e.g., DNDC) followed by simulation scenarios aimed at assessing the impact of climate-smart soil practices on carbon sequestration and greenhouse gas emissions for Saskatchewan.

The student will be co-supervised by Dr. Kate Congreves (Department Plant Sciences, University of Saskatchewan) and Dr. Claudia Wagner-Riddle (School of Environmental Sciences, University of Guelph). The project is a part of a larger pan-Canadian Project led by Dr. Nandita Basu (University of Waterloo) called Solutionscapes: Designing Climate and Water Smart Agricultural Solutions in Complex Working Landscapes that aims to develop spatially explicit solution portfolios for agricultural landscapes that will move Canada towards a net-zero GHG future, while also prioritizing water quality and other ecosystem services.

Applicants are expected to hold a MSc degree in a related field. Previous experience in soil science and greenhouse gas dynamics is desired. We embrace equity, diversity and inclusion and seek lab members who can contribute to a welcoming, engaging environment for students and researchers of all genders, races, abilities, and backgrounds. Position will remain open until filled.

The position is fully funded for a four-year term and based at USask. The successful candidate will have additional opportunities to apply for scholarships and teaching-assistant positions.

For further information and to apply, please email Dr. Kate Congreves (kate.congreves@usask.ca) the following material:

- Statement of interest (1 page max)
- Academic CV
- Copy of academic transcripts
- Contact information for three referees

Positions / Opportunities (Con't.)

PhD Position Available to work on Carbon Sequestration in Pasture Soils

Description:

A graduate student position (PhD) is available for a motivated candidate to work in the area of regenerative agriculture. Specifically, the candidate will assess soil organic matter quality in pasture soils under contrasting grazing management systems. The position(s) will be based in the Department of Plant Agriculture at the University of Guelph and supervised by Dr. Kim Schneider, with co-supervision from faculty in the School of Environmental Sciences (Dr. Adam Gillespie). A start date of September 2022 would be ideal, but may be negotiable (May 2023 may still be possible for domestic candidates). Post-doctoral fellows with experience in NMR spectroscopy may be considered if a suitable PhD candidate is not identified.

Position Summary:

The selected student will assess soil organic carbon stocks and soil organic carbon stability under rotational versus continuous grazing treatments from pasture soils at the University of Guelph's Beef Research Centre (Elora, Ontario). The student will also use other soil health methods and advanced analytical techniques including but not limited to NMR spectroscopy and potentially programmed pyrolysis to assess soil organic matter quality. Additional soils previously collected from 10 beef pastures in southwestern Ontario will also be included in the student's project. The student will have the opportunity to participate in interdisciplinary work with partners in other University of Guelph departments including Animal biosciences and School of Environmental Sciences.

Qualifications:

Candidates should have an interest in regenerative agriculture, carbon sequestration, grazing and forage crop management, and soil science and have completed a bachelor's degree and MSc degree in agronomy, crop science, soil science, environmental chemistry, or a related discipline. Related laboratory (including NMR spectroscopy) and or field experience is a desirable asset.

Application:

Interested candidates send a brief statement of their research interests and related past experience, as well as a copy of their current CV, academic transcripts, and names of three references to Dr. Kim Schneider at kschne01@uoguelph.ca. by March 27th 2023.

Positions / Opportunities (Con't.)

MSc Graduate Student Opportunities

The Cropping System Research Group led by Dr. Linda Gorim in the Department of Agricultural, Food and Nutritional Science at the University of Alberta invites applications for highly motivated graduate students (MSc). The project involves the identification of information required to reduce risks associated with post-drought fertilizer applications using AFFIRM.

Stipend: \$25,000/year (MSc)

Start Date: May or September 2023

More information on this opportunity is available by clicking the link below:

https://mcusercontent.com/ca7fd4410b9dab34e3ef8b381/files/ef0f85a0-4f34-b702-71d5-101048d7cf18/Student_advert.pdf

People News

Help us celebrate the successes of our colleagues across the country. Please let us know about life achievements, received awards and recognitions, notices of retirements and professional advancements. Send notices to Nancy at nzubriski@gmail.com by June 1, 2023.

Thesis Defences

Graduation is a time of excitement and celebration. Let's introduce our news soil scientists to the members of the society. Please notify us about an impending or recent defenses of MSc and PhD students; include the date of the defense, affiliation at graduation and the title of the thesis. For a forthcoming defense you may include location, if the defense has a public component. Send notices to Nancy at nzubriski@gmail.com by June 1, 2023.

Links to Soil Newsletters

Below are links to additional newsletters which may be of interest.

- [European Soil Data Centre Newsletter No.151 \(March 2023\)](#).
- [Subscribe to British Society of Soil Science Newsletter](#)

In Memoriam



Dr. Constantine Alberga Campbell

Dr. Constantine Alberga Campbell, affectionately known as Conny and Con, passed away peacefully at home Nov. 27, 2022, in Ottawa, Canada. An internationally-acclaimed soil scientist, his passion was science, but his love was his wonderful spouse of 61 years, Cecille, his daughter Constance Campbell-Reid, her husband Colin Reid and his grand-daughter Allegra Reid.

Born Jan 18, 1934, in Montego Bay, Jamaica, Con graduated from Cornwall College, Jamaica and then obtained his BSA and MSA in soil science from Ontario Agricultural College, University of Toronto, Guelph campus, ON (OAC60). He earned his Ph.D. at the University of Saskatchewan where he demonstrated for the first time that carbon isotope dating could be used to trace soil carbon changes.

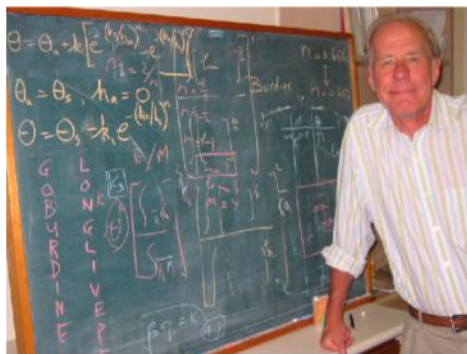
Con joined the Swift Current Research and Development Centre in 1965, where he creatively and industriously built a multi-disciplinary team to elucidate carbon and nitrogen cycling in cropping systems. He helped unlock the secrets of soil fertility and soil organic matter decline. Soil degradation, he found, could be reversed using continuous cropping, minimum tillage and direct seeding. His curiosity and ingenuity extended to cropping economics, water conservation, boron toxicity and optimizing fertilizer rates. These results made dryland farming more productive and sustainable across the Prairies. Con's citations in 'Plant Science and Agronomy' rank #5 in Canada and #207 in the world (<https://research.com/>, 2022).

In 1998, as ultimate recognition for his accomplishments Con was awarded the Order of Canada and the Saskatchewan Order of Merit. His influence was widely recognized with numerous other prestigious awards, including the Saskatchewan Agricultural Hall of Fame, Agronomy Merit Award from Western Co-operative Fertilizers, Saskatchewan Institute of Agrologists' Distinguished Agrologist Award, Outstanding Research Award from the Canadian Society of Agronomy, and Fellow of: the Canadian Society of Soil Science, the Agricultural Institute of Canada, the Soil Science Society of America, and the American Society of Agronomy.

Con's legacy lingers and flourishes through his insights now embedded in farmlands everywhere, next generation of scientists, publications, and in exemplary attributes of humility, passion, and kindness he taught us.

Prepared by
Ron DePauw
Don Flaten
Henry Janzen

In Memoriam (Con't.)



Vale Professor Emeritus Pieter Hendrik Groenevelt: 8 Aug 1937 – 10 Feb 2023

Pieter was born shortly before the outbreak of World War 2 on the island of Java in Dutch Indonesia to parents who emigrated from Holland (his father was an agricultural engineering consultant). Pieter had a very happy childhood on Java until the Japanese entered the war in December 1941. His father was sent to a labour camp in Japan (never seen again), and the women and children were interned on Java in concentration camps. The years of cruel incarceration, starvation, death and disease shaped and influenced Pieter for the rest of his life (later in life he wrote an account of his experiences as a prisoner). His mother took him and his three sisters back to Holland by boat in 1946, where they lived in a depressed post-War Europe with his grandparents until his mother remarried.

Pieter worked hard to catch up academically (he loved science and mathematics) and graduated at the top of his high school class. He went to the University of Wageningen where he first completed a Bachelor of Science in Tropical Land and Water Management (1961), then a Master of Science in Irrigation and Drainage (1963), then a PhD in Soil Physics (1969) under the mentorship of Gerry H Bolt (Pieter was his first student). His thesis (available through the University of Wageningen's online library) was on "Coupling phenomena in soil transport processes", which resulted in his first publication ([https://doi.org/10.1016/0022-1694\(69\)90092-4](https://doi.org/10.1016/0022-1694(69)90092-4)).

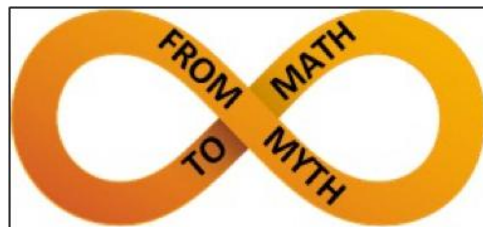
On the strength of his early research, Pieter was awarded a CSIRO Postdoctoral Fellowship to work in the Pye Lab in Canberra, Australia (CSIRO Division of Environmental Mechanics) under the direction of the infamous John R Philip ("Never explain, never apologize!"). These were happy days with his wife, Anke, and their two young daughters, Hester and Marjolein, and they made lifelong friendships with the families of colleagues, John Knight, Calvin Rose, Tjaard Talsma, Yves Parlange and David Smiles. During this period, Pieter continued to push theoretical advances in non-equilibrium thermodynamics, despite resistance from John Philip who did not appreciate the subject. Fatefully, Pieter was invited by Gerry Bolt to co-author a paper with him for a special issue of Soil Science to commemorate the "Father of Soil Physics", LA Richards. When Pieter's manuscript, on "Water Retention in Soil" <https://doi.org/10.1097/00010694-197204000-00003>, crossed the desk of John R Philip (Editor of the special issue), he was fired on the spot for a) not asking Philip's permission to write the paper and b) refusing to withdraw it from the Special Issue. At this point, Pieter became a "scientific refugee" (Philip arranged for his temporary Australian visa to be revoked), wherein he had to quickly leave the country to find alternative employment to support his young family.

Colleagues in Guelph (David Elrick and Ken King) learned of Pieter's predicament and immediately offered him a job at the University of Guelph, Canada, where he and his family moved in May 1973. Here, while taking on increasing responsibility for undergraduate and postgraduate teaching, he applied his love of fundamental thermodynamics to new problems in frozen soils alongside David Elrick and Bev Kay, who were well-versed in thermodynamics, and encouraged his work.

In Memoriam (Con't.)

Vale Professor Emeritus Pieter Hendrik Groenevelt: 8 Aug 1937 – 10 Feb 2023 (Con't.)

With Jack Ketcheson (an early member of ISTRO) and Bev Kay's guidance, Pieter became interested in the physics of soil tillage. He chaired the 10th ISTRO Conference in Guelph, where he impressed upon delegates the need to bring greater mathematical rigour into tillage research. To this end (and in his inimitable fashion), he created a logo to describe the 'infinite' cyclical relationship between humans and soil tillage. The logo inscribed the words "From Myth To Math" within a lemniscate. He also became Editor-in-Chief of the organization's journal Soil and Tillage Research for several years.



Pieter was a great research student supervisor and became famous for (patiently) asking people to explain their ideas, and if they got muddled up along the way, he would patiently lead them to the chalkboard (later whiteboard) and say: "Let's start from first principles". This would invariably lead to development of a rigorous mathematical expression that could be checked for correct dimensions and units.

In the lead-up to (and following) his obligatory retirement in 2002. Pieter returned as Professor Emeritus and focussed on his original work on clays and soil-hydraulic properties. This involved re-establishing collaborations in Australia, where his previous student, Cameron Grant (University of Adelaide) welcomed him enthusiastically. This collaboration resulted in several key papers, including one in 2002 where Pieter had the final word over his dismissive CSIRO boss, John R Philip (<https://doi.org/10.1029/129GM10>).

Pieter loved to play soccer and he organized an annual departmental soccer match between Staff and Students at University of Guelph, for which the winning team received a special old soccer boot. He enjoyed cross-country skiing and hosted an annual winter skiing event starting from his home in Rockwood, Ontario. He loved to travel and teach (in Australia, Ethiopia, Indonesia, Jamaica, Mexico, Nigeria, Ivory Coast, and China), to garden, and to listen to (and play) classical music. He played darts, collected stamps, and loved a good pint of beer or a fine glass of wine. He particularly enjoyed hosting his family and friends at his cottage on the Trent-Severn waterway of southern Ontario. He wanted to make the world a better place for others, and he felt deeply for people living in poverty, or struggling with mental health or other hardships, which he had experienced himself. He was an empathetic listener and many found in him a generous, faithful and lifelong friend. We extend our sympathies to Pieter's family, which is establishing a perpetual annual bursary at the University of Guelph in his name to assist postgraduate students of Soil Science in financial need <https://alumni.uoguelph.ca/give-to-guelph/how-to-give>. He and his family also gave generously to the World Central Kitchen (<https://www.worldcentralkitchen.org>), an international not-for-profit NGO devoted to providing meals in the wake of natural disasters.

Dr Cameron D Grant CPSS, Visiting Research Fellow, University of Adelaide, South Australia.



CANADIAN SOCIETY OF SOIL SCIENCE
SOCIÉTÉ CANADIENNE DE SCIENCE DU SOL

CSSS - Business Office

Contact: Nancy Zubriski
PO Box 637
Pinawa, Manitoba, Canada,
R0E 1L0

Telephone: (204) 299-2327
Email: nzubriski@gmail.com
Website: www.csss.ca