



Season's Greetings to my fellow soil enthusiasts!

While 2021 ended up weirder than we probably all hoped it would be with ongoing COVID-related challenges, we have made it through yet another “year like no other”. We thrived through our first-ever virtual conference, celebrated a wonderful slate of CSSS Fellows (one of whom went on to be named a 2021 fellow of SSSA – congrats Bing Si!), and published our first-ever introductory textbook: [Digging into Canadian Soils](#). The e-text's release blew up a very prestigious segment of Twitter and will be a tremendous asset to all of us working to inspire the next generation of soils enthusiasts. Thank you to everyone (and there were a lot of you!) who contributed to making this project a success!

There's plenty to look forward to in 2022, too.

If any of you were feeling bad about missing your opportunity to submit to the [CJSS Special Issue on Advances in Soil Survey and Classification in Canada](#), I have a special holiday gift just for you: the submission deadline has been extended to February 28, 2022. Hooray! Still plenty of time to get your ideas together and submitted! Definitely some gratitude from my team for that extension...

If your New Year's Resolutions include attending an in-person conference, be sure to check out the [CSSS-ASSW 2022 Conference](#) in Edmonton in May. Abstract submission is now open, so please take the time to submit an abstract and enjoy the opportunity to gather once again. Hope to see many of you there, including our past president Nate Basiliko and our next president, Asim Biswas. Nate – don't forget to pack the CSSS Presidential gavel! I'd like to hold it, however briefly, before passing it along to Asim (maybe a photo op to share with our Twitter fans).

Speaking of CSSS leadership, I'm delighted to announce that we have two new members joining CSSS Council in 2022: Amanda Diochon is our new president-elect and Henry Chau will be joining us as western councilor. Congrats to both!

Finally, all indications suggest that 2022 is going to be a banner year for soil scientists as the federal government's [next policy framework](#) will be focusing heavily on sustainable development, climate change and environment. The [focus areas](#) explicitly highlight “improving carbon sequestration” and “protecting and regenerating soil, water and air quality” – this is our time to shine, folks!

So rest up over the holidays, sharpen your shovels, and get ready for an exciting year ahead!

All the best,

Angela

(your soon-to-be-past-president)



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Canadian Society of Soil Science Anti-Racism Statement

We acknowledge that our community is not exempt from the systemic racism, violence, and discrimination that Black, Indigenous, and people of colour (BIPOC) face. In particular, we must continue to call attention to the institutionalized racism in academia and the Canadian research community and how these biases affect the Canadian Society of Soil Science (CSSS) and its members. As a national science organization, our responsibility includes advocating for racial equity within academia and society as a whole.

CSSS commits to forming an anti-racism task group by the end of 2020 to develop a strategy to understand and address systemic racism and other forms of discrimination within our organization. This strategy will include actionable items and resources for integrating anti-racist and anti-oppressive policies and practices into our society operations.

This statement, the committee, and the future anti-racism strategy will be used as a launching point and as a means of holding ourselves accountable to change. We are committed to the ongoing process of unlearning racism and other forms of discrimination and using our actions to counter the systemic racism that exists in Canada and Science, Technology, Engineering, and Mathematics (STEM) fields. If you wish to participate or offer feedback to the anti-racism task group please contact Nathan Basiliko: nbasiliko@laurentian.ca

New Soil Science Teaching Book

Digging into Canadian Soils An Introduction to Soil Science

Author: Canadian Society of Soil Science

Written entirely by members of the Canadian Society of Soil Science, "Digging into Canadian Soils: An Introduction to Soil Science" provides an introduction to the core disciplines of soil science, and introduces the concepts and vocabulary needed by students just beginning their soil science journey. The textbook provides supplementary materials that are specific to regions in Canada, or may be of specific interest beyond what might be considered introductory soil science material. Importantly, the textbook also is intended to introduce students to the Canadian System of Soil Classification by providing examples from across the length and breadth of the world's second largest country, and to the Canadian Society of Soil Science, whose members share a common passion for soil science and are keen to share and instill this passion with students across Canada. <https://openpress.usask.ca/soilscience/>

CSSS New President-Elect



Amanda Diochon
Lakehead University

Amanda is an associate professor in the Department of Geology at Lakehead University, where she is also the coordinator of the Water Resource Science program, the director of Lakehead University's Environmental Laboratory, and lead on the soon to be established Centre for Healthy Ecosystems and Environmentally Conscious Economic Development. I completed my BSc in Biology and Aquatic Resources at St Francis Xavier University, MS in Geography at Northern Illinois University, PhD in Earth Science at Dalhousie University, and a post-doc at Agriculture and Agri-Food Canada in Ottawa before heading to Thunder Bay. I am passionate about soil organic matter and understanding how environmental change impacts the cycling of this important resource in agricultural and forested systems. My group incorporates a variety of techniques to track changes in the soil organic matter pool that can be difficult to detect measuring stocks alone. Recently we've been investigating approaches for the conversion of forest to farmland that minimize soil organic matter losses, as well as the diversion of papermill residuals for land application in forests and agricultural fields. Another passion of mine is soil science education and outreach. This passion has been nurtured through my involvement with the CSSS and the Education Committee. As a group we have been examining trends in soil science education in Canada and best practises, and recently published the CSSS led Canadian e-textbook for learners. I am excited to work with members of the CSSS to expand our reach and inspire the next generation of soil scientists to meet the challenges of managing soils in a changing climate.

CSSS New Western Councillor Henry Wai Chau



Henry Wai Chau
Faculty of Agriculture and Life Science
Lincoln University, New Zealand

I am a Senior Lecturer in Soil and Environmental Physics in the Department of Soil and Physical Sciences, Faculty of Agriculture and Life Science at Lincoln University, New Zealand. Born and raised in Alix, a small farming community in central Alberta, I became interested in soil science while studying at the University of Alberta for my B.Sc. in biological sciences (Microbiology). Courses in soil sciences and soil microbiology shifted my focus to utilize my microbiology experience in agricultural and environmental contexts to solve global problems. The importance of research and science to the public resonated with me while on a Field Day visit hosted at Agriculture and Agri-Food (AAFC) Canada. I decided to pursue postgraduate studies at the Department of Soil Science at the University of Saskatchewan, where I received my PhD in Soil Physics. My research was aimed at understanding how soil water repellency and fungal hydrophobicity could alter the soil water dynamics in Brunisolic soils. I continued my academic journey to the opposite end of the world when I moved to Lincoln University, in 2014. My current research focus is to advance the understanding of the impacts of land use and management on soil physical and hydraulic properties, processes and related ecosystem functions that are essential for addressing global societal challenges of water and food security, sustainable land management, economic development, weather uncertainty and climate adaptation. I have been a member of CSSS since 2008, and an Associate Editor of the CJSS since 2021. I have regularly attended the annual meeting every year, to keep involved in soil matters in Canada, and to connect the Australasian soil science community to their Canadian counterparts. I am elated to give back to the soil science society by serving as the Western Councillor and look forward to working with the society to meet the needs of the community.

Fall 2021 Photo Contest Winner



Yihan Zhao
University of Alberta
Twitter handle: @YZ58044270



Plant and soil from an underground perspective. Cross-section of sandy soil with *Fructus Hippophae L.* root systems at a reclamation research site on a former underground coal mine in China.

"I took this photo at a post-mining research site in the transitional zone between the Mu Us desert and the Loess Plateau in northern China. Although challenging, the sandy soil shown in the photo is actively supplying nutrients and water to the plants growing on it. Heavy metals are being ameliorated with the help of soil amendments. In my PhD research on this site, I investigated cost-effective soil amendments to improve soil health. The combined application of coal waste derived humic substances (including nano humus in China) and arbuscular mycorrhizal fungi improved soil properties for crop growth, with greater total organic carbon, nutrients, and cation exchange capacity, and reduced heavy metal concentrations. The photo captures the plant response to healthier soil, as exhibited by the longer roots. These strong root systems are particularly important in sandy soil regions as greater root length means more efficient utilization of resources via plant-soil contact. The photo tells us that healthy soil is the key to healthy crops as soil is the foundation of life."

Yihan Zhao is a PhD student at the University of Alberta, working with Dr. M. Anne Naeth. She is working on an international project assessing the potential of a coal-derived humic material as a soil amendment in coal mine reclamation. She very much enjoys the multidisciplinary nature of land reclamation.

Congratulations to Bing Si on Being Named Fellow of the Soil Science Society of America



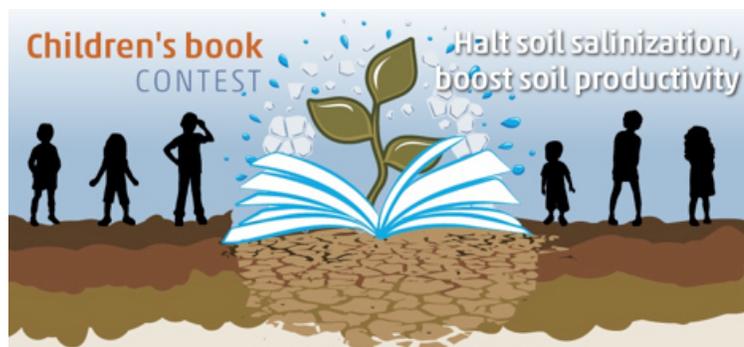
Bing Si
University of Saskatchewan

Dr. Si obtained his B.Sc and M.Sc in China, and in 1998 he earned his Ph.D from the University of Guelph. He started his academic career at the University of Saskatchewan as Assistant Professor in 2000 and was promoted to Associate Professor in 2005 and Professor in 2009. Over the past 21 years, Dr. Si made a significant and measurable impact in serving soil science.

Congratulations World Soil Day Booklet Contest

Congratulations to Teresa Porter, Franco López Campomane, and Lewis Fausak from the Faculty of Land and Food Systems at the University of British Columbia who placed first in the Food and Agricultural Organization's (FAO) World Soil Day Booklet Contest. Their entry "The Beetle: A Salty Soil Journey" follows the adventures of Beetle who visits his cousin and tries to help him with his soils that have become salinized. It includes a storybook and several activity pages including a song, a maze, at home experiment, and a colouring page. For more information or to download a copy of the booklet, go to the FAO Children's Book Contest website.

<https://www.fao.org/world-soil-day/booklet-contest/en/>



International Soil Labs Assessment's Launch

Soils: if you cannot measure it, you cannot manage it

The Global Soil Laboratory Network (GLOSOLAN) was established in 2017 to build and strengthen the capacity of laboratories in soil analysis and to respond to the need for harmonizing soil analytical data. Harmonization of methods, units, data and information is critical to (1) provide reliable and comparable information between countries and projects; (2) allow the generation of new harmonized soil data sets; and (3) support evidence-based decision making for sustainable soil management.

The work of GLOSOLAN supports the implementation of the Sustainable Development Goals, the Agenda 2030 for Sustainable Development and the mandate of FAO on food security and nutrition. For more information contact Lucrezia.Caon@fao.org

<https://www.fao.org/global-soil-partnership/glosolan/en/>



Photo credit FAO Global Soil Laboratory Network

Asim Biswas Royal Society of Canada College of New Scholars



Asim Biswas
School of Environmental Sciences
University of Guelph

Asim Biswas is recognized internationally for integrating technology and data with soil knowledge to increase productivity and resilience of agricultural and other land-based production systems. His pioneering research on soil spatial variability quantification is important to precisely manage production inputs for agricultural, environmental, and economic sustainability. Beyond the farm, the ability to digitally and inexpensively map soil composition has numerous applications for policy development and natural resource management.

Asim Biswas est reconnu sur le plan international pour l'intégration de la technologie et des données dans la connaissance des sols en vue d'accroître la productivité et la résilience des systèmes de production agricoles et de source terrestre. Ses recherches pionnières sur la quantification de la variabilité spatiale des sols sont importantes pour gérer avec précision les intrants de production en vue d'une durabilité agricole, environnementale et économique. Au-delà de l'exploitation agricole, la cartographie numérique à moindre coût de la composition des sols permet de nombreuses applications pour l'élaboration de politiques et la gestion des ressources naturelles.

Graduate Student Photo Contest

Are you a graduate student interested in visually projecting your research? Do you have interesting and memorable research photos you are willing to share? Then look no further as the CSSS is accepting submissions for the Canadian Journal of Soil Science (CJSS) graduate student photo contest. CJSS is a quarterly journal, and one photo will be selected for each issue.

Submission deadlines are:

- January 25th (for the March issue)
- April 25th (for the June issue)
- July 25th (for the September issue)
- October 25th (for the December issue).

All submissions must meet the following specifications:

- Image should focus on some aspect of soil science to reflect CJSS content.
- Image size and resolution: at least 8.5" x 11" at 300 dpi or better.
- 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.

All entries should be sent to:

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

The next deadline for submission – for the March 2022 issue – is January 25, 2022.

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.

The CSSS is now on Twitter

The CSSS is now on Twitter, Facebook and LinkedIn, so please contact our Social Media Manager, Susan Fisk, to highlight the great research being done by soil scientists in Canada.

<https://groundedinsoils.wordpress.com/>



Upcoming Conferences

EGU22 Update: hybrid meeting still planned!

EGU still intends for the General Assembly in April to be a hybrid event. For updates check the EGU website or the conference website, <https://www.egu.eu/news/881/update-on-egu22-hybrid-meeting-still-planned/>

Taking place on 3-8 April, the EGU General Assembly 2022 will bring together geoscientists from all over the world for a hybrid meeting covering all disciplines in the Earth, planetary, and space sciences. EGU aims to provide a safe, welcoming, and inclusive forum where scientists, especially early career scientists, can present their work and discuss their ideas with experts in all fields of geoscience.

We announced in October that EGU22 will be taking place as a hybrid meeting happening both in-person in Vienna and online. However, given the rapidly changing situation in Europe and around the world, the EGU Programme Committee and Executive leadership wanted to provide our attendees with an update.

At present the EGU22 General Assembly is still intended to be a hybrid meeting, with options for online and in-person presentation in vPICO sessions, in-person only presentation for posters and orals, and online interactive display pre-uploads available for every participant. We will be following all guidance from the Austrian authorities, including having a dedicated hygiene plan in place to ensure the safety and well-being of all attendees. However, we want to reassure all our attendees that, should the situation change, alternative plans are already in place and we will inform attendees of any changes as soon as possible should this become necessary.

Registration for EGU22 will open in mid-January and our next official update will be provided on 3 January, before the closing of abstract submissions on 12 January 2022 at 13.00CET.

If you have questions or concerns regarding EGU22, please visit www.egu22.eu or email: egu22@copernicus.org.

We look forward to seeing you in April!

Peter van der Beek, EGU Programme Committee Chair

Helen Glaves, EGU President



Upcoming Conferences (Con't.)

People & Soil - Global soil governance: Status and future perspectives

Online workshop 25 August 2021

One of the core mandates of the Global Soil Partnership (GSP) of the Food and Agriculture Organization of the United Nations (FAO) is to improve soil governance at all levels, providing support for countries in strengthening normative and regulatory frameworks with an impact on soil management. As such, FAO's GSP organized the webinar "Global soil governance: Status and future perspectives" within the framework of the EUROSIL 2021 conference, which took place on 25th August 2021 in a virtual mode.

Soil governance involves policies, strategies, and the processes of decision-making by nation states and local governments on how the soil is utilized. Governing the soil requires international, national and local collaboration between governments, local authorities, industries and citizens. This is to ensure the implementation of coherent policies that encourage practices and methodologies that regulate the usage of the soil resource to avoid degradation and conflict between users.

The webinar had many eminent speakers with experience on soil governance at different levels. They addressed what was happening at the present time in terms of global and regional soil governance and proposed actions to ensure that sustainable soil management could be successfully promoted and adopted.

<https://www.fao.org/global-soil-partnership/resources/highlights/detail/en/c/1459432/>



2022 CSSS Annual Meeting

Soil Science for Sustainable Development May 23 – 27, 2022.

<https://csss-assw2022.ca/>

The 2022 CSSS Annual meeting will be jointly held with the Alberta Soil Science Workshop (ASSW) in Edmonton, on the University of Alberta campus. The meeting dates are May 23-27.

We are planning this conference to be an in-person event. If the pandemic causes a significant number of meeting participants unable to travel to attend this in-person conference, we will consider to organize a virtual component (e.g., a hybrid conference). The decision has to be finalized depending on how the pandemic situation changes.

Please check out this website for more information about the conference. More information about the conference will be posted on as they become available.

Should you have any questions about this conference, please feel free to contact the Conference Co-Chairs, Drs. Scott Chang Scott.Chang@ualberta.ca and Symon Mezbahuddin Symon.Mezbahuddin@gov.ab.ca.



Upcoming Conferences (Con't.)

22nd World Congress of Soil Science

Soil Science – Crossing Boundaries, Changing Society 31 July – ...

The 22nd Congress is being organised by the British Society of Soil Science on behalf of the International Union of Soil Sciences.

The Congress theme, 'Soil Science – crossing boundaries, changing society' focuses on the link between soil and society, with sessions covering soil systems, soil processes, soil management and how we interact with and use soils around the world.

There will be opportunities for specialist workshops and discussion sessions across a wide range of soil disciplines. The core programme is supported by tours and a cultural and arts programme for delegates and the wider public to explore our diverse environment and culture.

At a time of global concern for our planet and its growing population, managing our soils sustainably has never been as important. 90% of our food comes from soil, as does all of our timber and other fibre. Soil, and the ecosystems it supports, have a huge role in mitigating against climate change, is a vast reservoir of biodiversity, plays a significant role in flood management and contains key evidence of past civilisations.

Our understanding of the importance of these functions is developing rapidly and the Congress provides the ideal setting to discover the international state of the art in these critical global issues and an opportunity to connect across all who work with and rely on soils.

<https://22wcoss.org/>



New Editorial Scope for CJSS

Check out the new scope for the Canadian Journal of Soil Science:

<https://cdnsiencepub.com/journal/cjss/about>

“Established in 1921, this quarterly journal is international in scope, publishing fundamental and applied research from all areas of soil science around the world. These areas include traditional soil biology, physics, and chemistry; pedology; use, management, and development; soil and environment interactions; land reclamation and contaminant remediation. It draws from and interfaces with numerous fields such as agriculture, agrometeorology, ecology, engineering, environmental science, environmental stewardship, forestry, geography, geology, hydrology, land rehabilitation, landscape processes, mapping and evaluation, microbiology, soil-plant interactions, and urban uses.

The journal welcomes interdisciplinary works, particularly those linking soil with climate change, food security, and sustainable development goals. The journal publishes regular research articles, reviews (and mini-reviews), letters to the editor, discussions (comments and replies), short communications, special issues on important topics in the field of soil science, and occasionally conference proceedings and book reviews.”

2. Special Issues for CJSS

- Stay tuned for the upcoming Special Issue on [Soil Health Evaluation: Methods and Directions](#). Submissions are now closed for this Special.
- Submissions still open for this Special Issue on [Advances in Soil Survey & Classification in Canada](#). Deadline extended to February 28, 2022.

3. Support not-for-profit publishers

Why should researchers, universities, and research funders look beyond the journal impact factor? Read the December blog post from CSP's Chief Executive Officer Elaine Stott: <https://blog.cdnsiencepub.com/are-not-for-profit-publishers-able-to-change-the-world-of-scholarly-scientific-communications/>

Canadian Science Publishing is:

- Is a not-for-profit publisher
- Provides open access discounts for authors within the Canadian Research Knowledge Network
- Publishes accepted papers within 5 days of acceptance
- Is an international publisher

Retirement of Dr. William Bruce “Bill” McGill - June 30, 2021

After a very productive 50-year career, Dr. Bill McGill retired on June 30, 2021, from the University of Northern British Columbia (UNBC). Bill was professor at the University of Alberta (UA) from 1971-2001, then joined UNBC as professor and Dean of the College of Science and Management (CSAM) for 10 years. Afterwards, he remained as professor in CSAM (part-time) until his retirement. Bill had numerous other university roles. At UA, Bill served as Chair of the Department of Soil Science (1979-1989) and was Associate Dean of the Faculty of Graduate Studies (1991-1993). At UNBC, he served as Interim Head Librarian, Acting Director of Special Projects, Acting Dean of Graduate Programs, and Manager of UNBC’s Central Equipment Analytical Laboratory.

His teaching and research focused on soil microbiology, biogeochemical cycling with emphasis on C and N, simulation modelling and associated greenhouse gas dynamics. In addition, he studied value-added uses for waste materials, as well as the fate and dynamics of contaminants, including remediation strategies for contaminated soils. Bill published over 120 journal articles and over 140 additional professional papers, reports or symposia proceedings. At least three of his journal articles have been cited over 400 times. Bill’s 1981 *Geoderma* article (with CV Cole) entitled “Comparative cycling of C, N, S and P” is one of the most cited articles in the 55-year history of that journal. Bill supervised 21 MSc and 14 PhD students while at the University of Alberta. Although Bill did not formally supervise graduate students at UNBC, he mentored many MSc and PhD students as a member of their supervisory committees, and was active in community education and outreach. His career teaching spanned 19 courses ranging from Soil Microbiology through Geochemistry and Reclamation of Disturbed Lands, to Society, Policy & Administration



Bill has been Associate Editor and Guest Editor for the *Canadian Journal of Soil Science*, was President of the Canadian Society of Soil Science (1992-1993) and, currently, is Deputy Editor of the journal *Climatic Change*. In addition, he has served on numerous provincial and community boards. Throughout his career, his academic and professional contributions have been widely recognized. He is a Fellow of the American Academy for the Advancement of Science (2012), the Canadian Society of Soil Science (1995), the Soil Science Society of America (2002) and the Agricultural Institute of Canada (2001). In 1996, Bill received the Distinguished Agrologist Award from the Alberta Institute of Agrologists.

Bill and his wife Alice live in Prince George, BC. They have a 160-acre hay farm north of Prince George where Bill is just as comfortable talking to local farmers and ranchers about ways to improve soil health and forage quality as he is presenting the nuances of a greenhouse gas model to a group of climate change scientists. We wish Bill and Alice all the best as they start this exciting new chapter in their lives.



CANADIAN SOCIETY OF SOIL SCIENCE
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