



## PRESIDENT'S MESSAGE

As winter arrives and snow blankets the land, we should reflect on the year's accomplishments and thank all our members for their ongoing support and participation in our society. We could not achieve our mission – to promote the wise use of soil for the benefit of society – without your contributions to research, teaching, information and technology exchange. The CSSS continues to support Canadian soil science by providing professional opportunities for students preparing for a career in soil science and for anyone working in the field to connect with other soil scientists in the private, public and university sectors.

CSSS is a non-profit society that relies on volunteers to organize major activities such as our annual meeting, and we salute those who have devoted precious time and energy to support the society. Our highly successful 2017 CSSS annual meeting was organized by a dynamic team of volunteers who deserve our deepest appreciation for their exceptional commitment and efforts, namely Catherine Eimers (conference co-chair and lead local organizer), Mehdi Sharifi (conference co-chair and organizer), Julian Aherne and Shaun Watmough (local arrangements), Marney Isaac (conference sessions and program), Cheryl McKenna Neuman (website), Carolyn Reid (program booklet), Amanda Diochon (sponsorship), and Peter Doris, Daniel Saurette and Adam Gillespie from OMAFRA (field trip).

Planning continues for the 2018 CSSS annual meeting, which will be held jointly with the Canadian Geophysical Union in Niagara Falls, Ontario from June 10-14, 2018. Other groups participating in the conference are the Computational Infrastructure for Geodynamics, Canadian Society for Agricultural and Forest Meteorology and the Eastern Section of the American Seismological Association. The theme for the joint meeting is Discovery and Scientific Progress Together. The meeting promises to be an excellent opportunity to network with our colleagues in these allied societies. A call for session proposals was circulated, so please think about CSSS and joint sessions that you would like to attend and send your ideas to [niagara2018JM@gmail.com](mailto:niagara2018JM@gmail.com). Any other requests, such as workshops, business meetings, courses and other Joint Meeting-related events, should be sent to [niagara2018JM@gmail.com](mailto:niagara2018JM@gmail.com) so they can be considered for inclusion in the conference schedule.

Elections were held for CSSS Council positions and it is a great pleasure for me to welcome our newest Council members: President-Elect Fran Walley, Western Councillor Richard Farrell and Treasurer Edith Olson. Congratulations and we look forward to working with you beginning on January 1, 2018! A big thank you to our outgoing members: Maja Krzic (Past-President), Wole Akinremi (Western Councillor) and Kent Watson (Treasurer) for their dedicated service and contributions to the society.

Earlier this year, Steve Sheppard informed me that he and Barbara Sanipelli would be retiring from their duties in the CSSS Business Office by June 2018. For as long as I remember, Steve has managed the Business Office and been a cornerstone of our society. I will greatly miss Steve and Barb's continuous support and professionalism, in dealing with registration, financial and administrative tasks in the Business Office. Please join me in sending them our sincere appreciation for many years of exemplary service, and our best wishes for the future.

We celebrated World Soil Day on December 5th, an event that was initiated by the International Union of Soil Sciences in Bangkok in 2002, in honor of the birthday of the late king of Thailand, His Excellency King Bhumibol Adulyadej. On this day, IUSS President Rattan Lal asked us to promote the concept that "Soil must never be taken for granted" and the Global Soil Partnership of the FAO dedicated World Soil Day 2017 to the theme "Caring for the Planet starts from the Ground". It is hard to think of any aspect of our daily lives that are not affected by soil, since our livelihood and indeed our survival on Earth depends on healthy, sustainable soils. We must not take soil for granted. Let us keep promoting the wise use of soil for the benefit of humankind throughout the coming year. I wish all CSSS members a very happy Holiday season, with good health and prosperity in the New Year.

*Joann Whalen*  
CSSS President



## CSSS Council 2016

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## Make Pedology Great Again

Officially initiated during this year CSSS's annual meeting in Peterborough, I am proud to announce that the Pedology Summer School (PSS) Initiative is now alive and kicking!

This project stemmed from a discussion the CSSS's pedology and educational subcommittees had during the 2015 meeting in Montréal. Concerns about the erosion of the expertise in pedology within Canadian soil scientists were raised. From Sea to Sea, trained pedologists were (and are still) retiring, and with them years of experience are being lost. Hence, we suggested creation of a Pedology Summer School that would bring together pedologists, eager students as well as professionals, in order to keep Canadian knowledge in pedology alive.

The official project was presented to the Canadian soil community during the 2017 CSSS meeting. The PSS committee finally had its kick-off meeting on October 31st 2017. I am proud to say that the committee is currently composed of 18 members from BC to Newfoundland. Those members come from either academia, government or the private sector. I consider this diversity of locations and professions as a great richness that will insure that a multiplicity of points of view will be considered during the creation of the summer school. I was happily surprised how such a school was perceived as being long-needed in Canada and more importantly how the needs greatly varied from training for non-pedologist to an official certification in pedology. One comment that is consistently coming up, is how such a school is seen as an essential tool to make sure that we, as a country, still have skilled specialists in pedology that are not only able to describe a soil profile, design soil maps, but also understand a soil landscape and make recommendations about its sustainable management.

The needs and challenges for this school are huge and this is a great opportunity for anyone to get involved in a project that will ensure ongoing training in pedology in Canada. We are still open for volunteers, especially from postdocs, graduate students or newly hired professors/consultants, etc. If you are interested in this initiative, don't hesitate to contact us!

*Jacynthe Masse*

## Suggested Reading

### CSSS has a Wikipedia page:

With help of Wikipedia experts from UBC's Center for Teaching, Learning and Technology, **Maja Krzic** create the page.

Link: [https://en.wikipedia.org/wiki/Canadian\\_Society\\_of\\_Soil\\_Science](https://en.wikipedia.org/wiki/Canadian_Society_of_Soil_Science)

“Characterizing sites, soils and substrates in Ontario”, the School of Environmental Sciences, University of Guelph :

Link: <https://www.uoguelph.ca/ses/news/2017/09/just-published-2017-publication-%E2%80%9C9Ccharacterizing-sites-soils-substrates-ontario-%E2%80%93-volume>

### A new BSSS (British Society of Soil science) Group Post called Add your question to the '4 per mil' debate! :

Link: <http://www.soils.org.uk/add-your-question-4-mil-debate>

### European Sustainable Phosphorus Platform (ESPP), scope newsletters and more

Link: [www.phosphorusplatform.eu](http://www.phosphorusplatform.eu)

### World soil day

Link: <http://www.fao.org/world-soil-day/en/>

### World soil day 2017 celebration in New-York

Link: <http://www.fao.org/global-soil-partnership/pillars-action/4-information-and-data/global-soil-organic-carbon-gsoc-map/en/>

### Launch of the Global soil organic carbon map (GSOC)

Link: <http://www.fao.org/global-soil-partnership/pillars-action/4-information-and-data/global-soil-organic-carbon-gsoc-map/en/>

### Soil experiments for children:

Link: <http://www.fao.org/3/a-i7957e.pdf>

### European achievements in soil remediation and brownfield redevelopment:

Success stories of remediation of contaminated soils in various contexts and different European countries.

Link: <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC102681/kj0217891enn.pdf>



## NEWEST CSSS COUNCIL MEMBERS

### FRAN WALLEY, PRESIDENT-ELECT

Fran Walley, P.Ag., is the Associate Dean (Academic) in the College of Agriculture and Bioresources, and a Professor in the Department of Soil Science at the University of Saskatchewan. Fran also served as head of the Department of Soil Science (2004-2011) and Acting Associate Dean Research and Graduate Studies (2013) in the College of AgBio, U of S. She holds a Ph.D. in soil microbiology from the U of S and maintains an active research program in the area of soil nitrogen dynamics. One aspect of this research deals with the impact of cropping systems on bioavailable N-pools, which ties into her work in the area of soil N testing for improved fertilizer N recommendations. A second focus is pulse crop fertility, with an emphasis on nitrogen fixation and the development of effective inoculation strategies, including the application and use of arbuscular mycorrhizal and biocontrol inoculants in pulse crop systems. Fran served as co-chair of the organizing committee for the CSSS meeting in 2010. Fran is author or co-author of 65+ peer reviewed journal articles and book chapters, and has supervised/co-supervised 30+ graduate students and post docs. Fran has long been involved in teaching introductory soil science, and is particularly committed to sharing her love of soil science with her students. I've never met a soil I didn't like!



### RICH FARRELL, WESTERN DIRECTOR

I am a native Rhode Islander (a state roughly 200-times smaller than Saskatchewan) and was educated at the University of Rhode Island (B.Sc.) and Iowa State University (M.Sc. & Ph.D.). Though I grew up in the city, I have been interested in soil science since I was 13 and a friend of mine jokingly suggested doing a science project on soils because “there’s nothing alive in soils” . . . oh, was he wrong! So, I did my project on “Soils and Soil Conservation”, and managed to win 2nd prize in the local science fair—though one of the judges said that the study of soils wasn’t real science . . . oh, was he wrong! So, here I am many years later—an Associate Professor in the Department of Soil Science at the University of Saskatchewan and a Saskatchewan Ministry of Agriculture (SMA) Research Chair in Soils & Environment—still studying what I love at one of the best Soil Science Departments in North America. My research focus is on environmental agronomy—including the effects of agricultural practices on soil quality and greenhouse gas production/mitigation in agroecosystems. I am also co-director of the Prairie Environmental Agronomy Laboratory (PEARL), which supports research aimed at developing strategies that enhance or maintain agro-ecosystem capacity and integrity and establish the low GHG footprint of prairie cropping systems. Together with my students, I have published 80 peer-reviewed papers and 9 book chapters. I’ve been a member of the CSSS since coming to Saskatchewan, have organized several sessions for CSSS annual meetings highlighting the role of agricultural soils in GHG production/mitigation and was a member of the local organizing committee (LOC) for the 2010 CSSS meetings in Saskatoon. I am currently a member of the LOC and chair of the communications committee for Rhizosphere 5—the fifth in a series of international conferences devoted to the study of the rhizosphere that will take place in Saskatoon in July 2019—and a member of the LOC for the 2019 CSSS meetings in Saskatoon. I was responsible for the design and maintenance of the website for the 2010 CSSS meeting and am currently overseeing the website for Rhizosphere 5. Maintaining the strength of the CSSS depends on timely dissemination of information via the society’s webpage and, as Western Councilor, I am excited to take on the responsibility for overseeing the CSSS webpage and liaising with the webmaster. The CSSS is an important part of my professional life, and that of my students, and I look forward to working with the CSSS Council and the membership as I continue my journey in soil science.



### EDITH OLSON, TREASURER

Edith Olson P.Ag. grew up in Scotland (love those Podzols!). While a kid playing with the soil and water in the backyard of her home her mother commented that she would never make a living playing with the dirt. Well, Edith did. She graduated with an honours degree in Soil Science from the University of Aberdeen, Scotland in 1982. While an undergraduate, she spent two summers as a summer student at the University of Saskatchewan and fell in love with Canada and a Canadian. She now lives in Lethbridge with her husband, three adult children and one grandchild. After staying home with the kids for a while, Edith worked with Agriculture and Agri-Food Canada as a technician and research associate from 1993 to 2001 before completing a Ph.D. at the University of Alberta in Water and Land Resources in 2004. Since 2002 she has been at Lethbridge College first as an instructor in Environmental Sciences, then Chair of Agriculture Sciences, then as interim Dean for the Centre of Applied Arts and Sciences. Knowing that her heart is in the classroom, lab, and field with students she has recently returned to an instructional position in Environmental Sciences, teaching Soil Resources, Environmental Physics and Statistics. She is looking forward to engaging in an NSERC funded project in Aquaculture, where her role is to perform the data analysis. Edith’s passions are soil, water and teaching. She has her name on some published papers and has won several teaching awards from the University of Alberta and Lethbridge College. Yes mum, you can make a living playing with the dirt-SOIL!



# 2018 Joint Meeting of CSSS, CGU, CIG, ES-SSA and CSAFM

## *Discovery and Scientific Progress Together* Scotiabank Convention Centre, Niagara Falls, Ontario June 10-14, 2018

Mark your calendars for the 2018 Joint Meeting of CSSS, CGU, CIG, ES-SSA,, CSAFM!

There will be a lot going on at the Niagara Falls Convention Centre this June! This modern, spacious facility will host a joint meeting that has grown to include:

- Canadian Society of Soil Science
- Canadian Geophysical Union
- Computational Infrastructure for Geodynamics
- Canadian Society for Agricultural and Forest Meteorology
- Eastern Section of the Seismological Society of America



**Niagara Falls Convention Centre**  
Recently built, state-of-the-art conference facilities  
5 minute walk to the Falls and nearby hotels



Along with great opportunities for interaction with our professional colleagues, the meeting venue is in the heart of a unique combination of geology, soils, climate and history that have made it a top destination for tourists from around the world. If the Falls and the night life aren't your "cup of tea", we will be just up the road from vineyards and tender fruit growing areas, and your choice from dozens of world class wineries!

The call for session proposals is open now, and the call for abstracts will be coming soon so keep your eyes open. See you all in Niagara!

## **CALL FOR SESSION PROPOSALS**

The 2018 Joint Meeting of the CGU (Canadian Geophysical Union), CSSS (Canadian Soil Science Society), CIG (Computational Infrastructure in Geodynamics), ES-SSA (Eastern Section of the Seismological Society of America) and CSAFM (Canadian Society for Agricultural and Forest Meteorology) will be held in Niagara Falls, Ontario, June 10-14, 2018. More detailed information will be posted as it becomes available on the Joint Meeting website at <https://meeting2018.cgu-ugc.ca>.

The theme of the Joint Meeting, which reflects a range of scientific interests, is *Discovery and Scientific Progress Together*, and scientific sessions are being invited for all areas of interest encompassed by the partner organizations. At this time, we are inviting interested members of all societies to propose and to take the lead on organizing scientific sessions. We also encourage the proposal of sessions covering subjects that may attract interest across two or more partner societies. To plan a session for the 2018 Joint Meeting, please submit your proposal, using the attached template, to [niagara2018JM@gmail.com](mailto:niagara2018JM@gmail.com). The proposal should include the concise session title, contact information and affiliation of the proposed session conveners or co-conveners, a short paragraph of up to 200 words describing the scientific content of the session, and the intended partner organization(s) audience. **All session proposals should be received by January 15, 2018 by 11:59 pm eastern time.** Notifications of accepted session proposals will be made by late January 2018. On-line abstract submissions will be due in early March 2018.

For session organizer/chair duties, we would anticipate that you would then encourage your contacts to submit abstracts for that session, would lead decisions on acceptance and scheduling of abstracts as oral and/or poster platform presentations, and would chair or co-chair the running of that session at the Joint Meeting. Sessions will be organized into 1 1/2-hour blocks of six 15-minute presentations (abstracts), or organizers may allot 30-minutes for an invited lead speaker and four 15-minute presentations. Poster sessions will also be part of the scientific program. Final decisions on whether an oral session will be convened and the total number of oral and poster sessions on a particular topic will be a function of the number of abstracts submitted to the session. Note that the Joint Meeting does not cover travel expenses for invited speakers associated with proposed sessions.

Scientific and plenary sessions of the Joint Meeting will take place from **Monday, June 11 through Thursday, June 14 2018**. Any particular demand in terms of workshops, business meetings, courses and other Joint Meeting-related events may be accommodated but are dependent on available space. For such requests, please contact the Local Organizing Committee at [niagara2018JM@gmail.com](mailto:niagara2018JM@gmail.com).

We look forward to receiving your submissions.

*Joann Whalen*  
CSSS President  
Member, Scientific Program Committee

## CJSS Editors Report for 2017 CSSS Newsletter

We thank members of the Canadian Journal of Soil Science (CJSS) Editorial Board that retired at the end of 2016 for their dedicated service to the journal: Dr. Xueming Yang (Editor-in-Chief), Dr. Angela Bedard-Haughn (Associate Editor, AE), Dr. Paul Sanborn (AE) and Dr. Bernie Zebarth (AE). The full current Editorial Board is presented below. We acknowledge the work by the Guest AEs that work with Dr. Scott Chang, the Special Issues Editor, on special issues and sections that highlight emerging and hot topics of interest to our readers. The support, professionalism and expertise provided by Laurie Scott at Canadian Science Publishing (CSP) are highly appreciated. We gratefully acknowledge the peer reviewers and thank them for their valuable contribution to the publications of CJSS. Our congratulations go to the Outstanding AEs for 2016: Drs. Claudia Goyer, Tusheng Ren, Joann Whalen and Noura Ziadi, and the Outstanding Reviewers: Mr. Bernard Gagnon and Dr. Mervin St. Luce.

### **Editorial Board for 2016**

Editor-in-Chief: Newton Lupwayi (2017-2018)  
Editor: M. Anne Naeth (2017-2018)  
Special Issues Editor: Scott Chang (2015-2017)

### **Associate Editors:**

Nathan Basiliko	Wei Zhang	Jean-Philippe Bellenger
Asim Biswas	David Burton	Woo-Jung Choi
Miles Dyck	Claudia Goyer	Richard Heck (up to June, 2017)
Bobbi Helgason	Aimé Jean Messiga	Judith Nyiraneza
Yong Sik Ok (up to July, 2017)	David Pelster	Lori Phillips
Tusheng Ren	Xudong Zhang	Mehdi Sharifi
Andrew VanderZaag	Valérie Viaud	Noura Ziadi

### **Journal Impact Factor**

The 2-year impact factor rose from 2012 (0.912) to 2014 (1.382), but dropped slightly in 2015 (1.210). The 5-year impact factor has been increasing since 2012: from 1.059 (2012) to 1.427 (2015). The journal had a very high immediacy index (number of citations for papers published in the same year) in 2013 (0.400) and 2014 (0.481), but dipped to 0.071 in 2015. The rank among peer-reviewed journals in soil science ranged from 18 of 34 in 2014 to 23 of 33 in 2012 and 2013.

### **Special Issues and Sections**

One Special Issue was published in 2016:

Soil interfaces for sustainable development. Guest Editors: Drs. J.P. Bellenger and J.K. Whalen

Special issues (and reviews) are very important for a journal because they contribute significantly to improvements in impact factor.

### **Journal Statistics for 2016**

There were 167 submissions to CJSS in 2016 (January 1 to December 31 2016), including 117 regular articles, 4 reviews, 7 short communications and 34 special issue manuscripts. The distribution of published papers by journal section shows that the majority (13 of 49) were in management for agricultural, forestry and urban uses. Only one paper was published in agrometeorology; in 2015, there was none.

A total of 149 editorial decisions were delivered, of which 75 (50%) were accepted and 74 (50%) were rejected. Of these 149 manuscripts, 67 were from Canada, 27 from China, 13 from the United States, and the other 42 were from 18 different countries (Algeria, Brazil, Denmark, Egypt, Ethiopia, Germany, India, Iran, Japan, Jordan, Malaysia, Nigeria, Pakistan, Slovakia, South Africa, South Korea, Tunisia, Turkey). The proportion of manuscripts submitted from outside Canada has been steadily increasing, with China as the major contributor. In 2016, 26% of the manuscripts from China were accepted, compared to only 6% in 2015. By comparison, 76% of the manuscripts from Canada were accepted in 2016.

No manuscript was accepted from 13 of the 18 other countries mentioned above. Many of them were rejected by Editors without review, mainly because there were obvious flaws in the experimental design, or the presented data were insufficient to support conclusions. Of the papers sent to the review process, the main reasons for rejection by AEs were lack of novelty or insufficient improvement of a manuscript based on peer-review comments.

Associate Editors (regular AEs and guest AEs for the Special Issues) handled between 1 and 10 manuscripts in 2016, with an average of 4 manuscripts. The average number of days AEs took from manuscript submission to first decision ranged from 15 to 88.

Grouping of manuscripts by the number of days to decision (30-day groups) shows considerable variation; 67% of them were decided within 60 days. This is an improvement over the 50% recorded in 2015. In 2016, only 8% of the manuscripts took >90 days to decision.

# Two M.Sc. GRADUATE STUDENT POSITIONS

Department of Biology, University of British Columbia - Okanagan

**Project title: Understanding the impact of irrigation on soil carbon storage and associated greenhouse gas emissions at a regional scale**

**Supervisor:** Dr. Melanie Jones

**Background:** Combustion of fossil fuels and changes in land use have contributed to a massive rise in atmospheric CO<sub>2</sub> concentrations. On agricultural sites, efficient, strategically managed irrigation has been proposed as a possible tool for mitigating rising CO<sub>2</sub> levels. However, there is an urgent need to develop a more integrated understanding of the impact of irrigation on soil organic and inorganic carbon dynamics across soil types and crops.

The Okanagan Valley in British Columbia, Canada, has a semi-arid climate; irrigation is required to sustain the diverse crops (e.g., grapes, apples, cherries, forage) grown in the region. We are using the Okanagan Valley as a 'natural laboratory' to understand how irrigation practices can affect soil C storage under different cropping systems and on different soil types.

## **Description of two available MSc positions:**

We are seeking two enthusiastic MSc students to join our inter-disciplinary research team. Both students will assist in the collection and analysis of soil samples from non-cultivated sites and from irrigated fields, orchards and vineyards located along length of the Okanagan Valley. These students will also learn how to measure soil CO<sub>2</sub> and N<sub>2</sub>O emissions at key points through the annual irrigation cycle, and will receive training in cutting-edge techniques for assessing soil properties and processes.

The first student will examine the contribution of organic C to soil C storage and CO<sub>2</sub> emissions. This student will learn techniques for quantifying water-stable aggregates to assess the stability of soil C pools, and will employ novel <sup>13</sup>C analyses to partition soil surface CO<sub>2</sub> efflux into that released by respiring roots and rhizosphere biota and that released by the decay of older soil organic carbon.

The second MSc student will focus on the inorganic soil C pool, and how it relates to total soil C storage and CO<sub>2</sub> emissions. This student will conduct a series of laboratory experiments to better understand how soil properties (e.g., soil texture, moisture, pH and C content) can influence the release of CO<sub>2</sub> from irrigation water-derived bicarbonates and soil inorganic C. This student will employ novel <sup>13</sup>C analyses to partition soil surface CO<sub>2</sub> efflux into that released from organic and inorganic sources.

## **A bit of light background reading:**

Fentabil et al. 2016a. Effect of micro-irrigation type, N-source and mulching on nitrous oxide emissions in a semi-arid climate: An assessment across two years in a Merlot grape vineyard. *Agric. Water Manage.* 171: 49-62.

Fentabil et al. 2016b. Effect of drip irrigation frequency, nitrogen rate and mulching on nitrous oxide emissions in a semi-arid climate: An assessment across two years in an apple orchard. *Agric. Ecosys. Environ.* 235: 242-252.

Hannam et al. 2016a. Irrigation practices, nutrient applications, and mulches affect soil nutrient dynamics in a young Merlot (*Vitis vinifera* L.) vineyard. *Can. J. Soil Sci.* 96: 23-36.

Hannam et al. 2016b. Bicarbonates in irrigation water contribute to carbonate formation and CO<sub>2</sub> production in orchard soils under drip irrigation. *Geoderma* 266: 120-126.

**Qualifications:** A background in Soil Science, Biology or Environmental Studies and a keen interest in agriculture, environmental health and ecosystem services are required. Applicants must also possess a valid driver's license.

**Annual stipend:** An annual stipend of \$20,000 will be provided. Scholarships are also available.

**Other important information:** The biology graduate program at the University of British Columbia's Okanagan campus in Kelowna, BC, offers tier-one degrees in a collegial, close-knit setting. Our dynamic faculty and students are engaged in a variety of research projects in the field of biological sciences, many in collaboration with partners in government, non-profit agencies or industry. Our research-based MSc degree provides students with theoretical, practical and analytical expertise, as well as experience in the application of scientific results to real-world problems. Graduates of the MSc program are prepared for positions in government, management, industry, education, consulting or for further graduate studies.

For more information about graduate studies in the Department of Biology at UBC-Okanagan, please visit <http://biol.ok.ubc.ca/graduate/biology.html>.

**To apply for one of these positions:** Please send your transcripts (unofficial versions are acceptable), CV and the names of two references to Drs. Melanie Jones ([melanie.jones@ubc.ca](mailto:melanie.jones@ubc.ca)) and Kirsten Hannam ([kirsten.hannam@ubc.ca](mailto:kirsten.hannam@ubc.ca)), and let us know which position interests you most.



# CALL FOR 21WCSS (World Congress of Soil Science) presentations

**August 12-17, 2018  
Rio de Janeiro, Brazil**

## **Human Dimensions of Soil Relation: soil cultural sessions of IUSS Division 4**

**IUSS Div. 4 is sponsoring several excellent sessions on soil culture**, including anthropology, art, economics, education, ethno-pedology, health, history, philosophy, psychology, sociology, theology, and related approaches with regard to soil, **at the World Congress of Soil Science in Rio de Janeiro, Brazil, August 12-17, 2018**. These include the following divisional symposia (the inter-divisional symposia of Div.4 are not yet finalized).

Those titles which deal very clearly with themes of the working group *on cultural patterns of soil understanding* are marked in **bold**; the names of conveners that are WG members are marked in *italics*.

C4.1.3 Soil in the Anthropocene; contact *Jock Churchman* (jock.churchman@adelaide.edu.au) for more information.

C4.1.4 Soil as natural capital: Economic and legal dimensions of ecosystem services; contact *Brent Clothier* (Brent.Clothier@plantandfood.co.nz) for more information.

C4.2.1 Soil and Human Health; contact *Eric Brevik* (Eric.Brevik@dickinsonstate.edu) for more information.

C4.2.3 Soil quality to secure human and environmental health; contact *Ganga Hetiarachchi* (ganga@ksu.edu) for more information.

C4.3.2 Assessment and inventory of land use change under the SDG's perspective; contact *Johan Bouma* (Johan.Bouma@planet.nl) for more information.

**C4.4.1 Soil science education in the 21st century**; contact *Damien Field* (damien.field@sydney.edu.au) for more information.

**C4.4.2 Soil education and public perception of soils**; contact *Cristine Muggler* (cmuggler@ufv.br) for more information.

**C4.5.1 Integration of historical, philosophical and sociological worldviews to secure and sustain soils in the future**; contact *Sabine Grunwald* (sabgru@ufl.edu) for more information.

**C4.5.2 Field to Palette: A Nexus Approach to Soil and Art**; contact *Alexandra Toland* (a.r.toland@googlegmail.com) for more information.

**WG15 Cultural Patterns of Soil Understanding A: Anthropological, psychological, religious and spiritual perspectives on soils**; contact *Nikola Patzel* (patzel@bodenkommunikation.info) for more information.

**WG16 Cultural Patterns of Soil Understanding B: Dialogues between traditional and scientific knowledge and perceptions of soils by different stakeholders**; contact *Guilherme Sobrinho* (guilhermesobrinho@gmail.com) for more information.

All contributions related to these areas are welcome. More information on each session can be found by going to [https://www.21wcss.org/?secao=abstract\\_topic&div=4](https://www.21wcss.org/?secao=abstract_topic&div=4) and clicking on the appropriate session or by contacting the organizers listed above. General information on the World Congress of Soil Science, including registration, abstract submission, and hotel reservations can be accessed at <https://www.21wcss.org/>. *There is a limit of one presentation per attendee.*

In order to complement the official program, we will organize after our sessions also **meetings for a) the whole Division 4, and b) the working group on cultural patterns of soil understanding**. This will not be a public program, not another symposium, but an occasion to meet personally in DIV4 and the WG, and **to have more time to talk about our group themes, and future activities**.

## UPCOMING EVENTS

### **The 2018 Joint Meeting of the:**

**Canadian Geophysical Union (CGU); Canadian Soil Science Society (CSSS); Computational Infrastructure in Geodynamics (CIG); Eastern Section of Seismological Society of America (ES-SSA) and ; Canadian Society for Agricultural and forest Meteorology (CSAFM); June 10-14, 2018, Niagara Falls**

Link: <https://meeting2018.cgu-ugc.ca/>

### **The 20th international conference on soil science and plant nutrition, January 25-26, 2018, Paris Montparnasse.**

Link: <https://www.waset.org/conference/2018/01/paris/ICSSPN>

### **The soil Tillage and soil properties session at the European geosciences union general assembly, April 8 – 13, 2018, Vienna, Austria.**

Link: <http://meetingorganizer.copernicus.org/EGU2018/session/28909>

More information on the EGU: <https://egu2018.eu/>

### **The 3rd european sustainable phosphorus conference (ESPC3), June 11 - 12, 2018, Helsinki, Finland**

Updated events listing online at <http://phosphorusplatform.eu/events/upcoming-events/1548-esp3-2018>

### **The north American forest soils conference – International symposium on forest soils soils-forests interactions in changing environments, June 10 - 16th, 2018, Quebec City, Canada**

Registration Now Open - Abstract Submission Deadline January 31, 2018

Link: <http://www.cef-cfr.ca/index.php?n=Colloque.NAFSC-ISFS2018>

### **The International commission on irrigation and drainage, August 12 - 17th, 2018, Saskatchewan, Canada**

Link: <https://icid2018.org/index.php/abstracts>

### **The 21st World congress of soil science, August 12 - 17, 2018, Rio de Janeiro, Brazil**

Read more: <https://www.21wcss.org/>

Download the congress information: [http://iuss.boku.ac.at/files/21wcss\\_-\\_meeting\\_information.pdf](http://iuss.boku.ac.at/files/21wcss_-_meeting_information.pdf)

### **The 21st international soil tillage and research organization (ISTRO) conference, September 24 - 27, Paris, France.**

Link: <http://istro2018.webistem.com>

Link to pdf file: [https://gallery.mailchimp.com/ca7fd4410b9dab34e3ef8b381/files/3ad53b36-2ccf-44a2-9626-65f831e2da55/Flyer\\_istro\\_Conference.pdf](https://gallery.mailchimp.com/ca7fd4410b9dab34e3ef8b381/files/3ad53b36-2ccf-44a2-9626-65f831e2da55/Flyer_istro_Conference.pdf)

Link to powerpoint file: [https://gallery.mailchimp.com/ca7fd4410b9dab34e3ef8b381/files/84c3a2d9-7ccc-447f-b536-22283f3da1bc/Flyer\\_istro\\_Conference.pptx](https://gallery.mailchimp.com/ca7fd4410b9dab34e3ef8b381/files/84c3a2d9-7ccc-447f-b536-22283f3da1bc/Flyer_istro_Conference.pptx)

### **The Anniversary conference of the Forest Research Institute (90 years), October 24 - 26, 2018, Sofia Bulgaria**

Links: [www.bas.bg/fribas](http://www.bas.bg/fribas) and [www.fri.bas.bg](http://www.fri.bas.bg).

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