ISTRO INFO
NEWSLETTER
of the
International Soil Tillage Research Organisation

Lars J. Munkholm

Together – Separately has become the new Danish mantra in our effort to control the COVID-19 outbreak. It expresses the desire to handle the COVID-19 crisis together despite of social distancing regulations. I am sure that variations of this expression have become standard daily life wordings in many other countries.

During the recent weeks, I have been in contact with colleagues at almost all continent and we are all working from home. We have learned the do's and don'ts of virtual meetings via Zoom, Skype, Teams, BlueJeans etc. E.g. to turn of the mic when you are not talking. It works surprisingly well even though it cannot fully replace a physical meeting. Especially, if you are many participants and/or if you do not know each other beforehand.

We also had to change our midterm ISTRO board meeting to a mix between a physical and virtual meeting. It was held just before most of Europe closed down (March 12) and some participated from Dublin and others via an online connection. We managed to cover the scheduled topics and end the meeting just one hour before UCD Dublin was closed down. The 2018 Paris conference was evaluated and the plans for the 2021 conference in Dublin were discussed. All good – but we missed the more informal talks during the breaks and at the following dinner where new ideas usually are developed and tested. *Together – Separately* works fine for a "business as usual" mode of operation. However, nothing beats *Together – Together* physical meetings when it comes to the formation and development of new ideas. Next year, there will be a great opportunity for the ISTRO community for a real *Together – Together* meeting at the 22nd ISTRO conference in Dublin. Hope to meet you there – stay safe and healthy.

⌘ ISTRO 2021 conference: Soil and tillage and the transition to digital agriculture

22nd ISTRO International Conference Dublin, Ireland. 20-24th September 2021.

Agriculture may seem largely the same as it always has been with machines and energy used to till, sow, maintain and harvest crops for food. However, over the last few years there has been a rapid and significant introduction of digital data, computers, networks, connections, sensors and models that are beginning to change how agriculture works, the skills needed by the farming industry and research required now and in the future. The 22nd ISTRO international conference will examine where we are, and the pathway forward for soil and tillage in the age of digital agriculture.

University College Dublin campus. From the UCD webpage.

In these uncertain times it is difficult to plan for the future, but we are taking a positive view 2021 and we look forward to the triannual gathering of the ISTRO community in Dublin next year. There will be space in the programme for everyone with interests related to the ISTRO mission. We will start to announce keynote speakers and open the call for oral and poster submissions in September 2020. We expect to have sessions on a wide range of topics including: Soil tillage – crop establishment and soil damage/compaction; Machinery systems; Conservation agriculture; Characterization of soil structure and soil physics; Sensors – soil, water, machine, plant; Soil – Plant – Root system processes; Nutrient management; Agro-Ecosystems and biodiversity; Impact – erosion, resource

depletion and emissions; Climate change, soil and tillage; Digital agriculture systems (precision agriculture, knowledge and recommendation systems); and The future of agriculture (Agriculture 4.0). Please start planning to submit your abstracts and prepare to attend an enjoyable conference in Dublin.

The conference will be held on the beautiful parkland campus of University College Dublin in Ireland's capital city, Dublin. Ireland is a small yet vibrant country with a long history of research and education in agriculture. UCD is a global university with faculty and students from almost all countries in the world. This will be a wonderful opportunity to be part of life on campus for a few days, while enjoying the delights of the city.

University College Dublin, Belfield Campus, located in south Dublin, with easy access to hotels, the city centre, ports and airports. From the UCD webpage.

Important Dates

- September 2020 to March 2021 – Call for Abstracts
- September 2020 – Registration Opens
- May 2021 – End of Early Bird Registration

⌘ Nominations for President-elect

The opportunity to host the 2027 ISTRO conference is now open. As members may already be aware of, the main ISTRO conference is held every 3 years. The 22nd conference will be held in Dublin in 2021 as described above and the 23rd in Virginia, USA in 2024. Those interested in holding the 24th conference in 2027 should nominate for ISTRO President-elect (and thus serve on the ISTRO board). In the first instance, they should contact Secretary-General Blair McKenzie (b.mckenzie@dundee.ac.uk) or Assistant Secretary-General Lars J. Munkholm (lars.munkholm@agro.au.dk) to discuss their interest.

⌘ Nominations for Assistant Secretary General

The Assistant Secretary General position will be vacant after the 2021 conference in Dublin where Lars J. Munkholm will take over from Blair McKenzie as Secretary General. The position involves service for 6 years as Assistant Secretary General followed by 6 years of service as Secretary General. The Assistant Secretary is responsible for ISTRO INFO and assists the Secretary General and the ISTRO Board in the planning and coordination of ISTRO business. Nominations are being accepted from all ISTRO members in good standing. If a member wishes to nominate a colleague or even themselves, please send the name, a brief biographical statement outlining the candidate's qualifications for the Assistant Secretary General position, and an affirmation that the candidate is willing to be on the ballot and to serve if elected to Secretary General Blair McKenzie on or before 1 September 2020. Please use the email address b.mckenzie@dundee.ac.uk for this communication.

⌘ Nominations for Board positions

Nominations for minimum two and maximum four Board positions of 6 years and are now being accepted from all ISTRO members in good standing. We aim at a good geographical spread and a gender balance. The current ISTRO Board has a good geographical spread but a very poor gender balance (all members are male). Therefore, we strongly encourage our female members to consider this opportunity.

As for the Assistant General Position, if a member wishes to nominate a colleague or even themselves, please send the name, a brief biographical statement outlining the candidate's qualifications and an affirmation that the candidate is willing to be on the ballot and to serve if elected to Secretary General Blair McKenzie on or before 1 September 2020. Please use the email address b.mckenzie@dundee.ac.uk for this communication.

Depending upon the number of nominations received, the current ISTRO Board members will identify six potential Board candidates. A ballot will be prepared and distributed to members in good standing around 1 November 2020. ISTRO members elected to these positions will assume their new positions following the 22st Triennial Conference in Dublin, Ireland in September 2021. If four or fewer nominations are received a ballot will not be required.

General requirements for Board members are to serve for a period of 6 years (2021 – 2027), to be available to attend pre- and post-conference Board meetings (held at the triennial conference) as well as a mid-congress Board meeting at the location of the 2024 and 2027 Triennial conference sites, to serve in various liaison positions to ISTRO Branch and/or Working Groups, and to actively participate in discussions and email exchanges associated with ISTRO business. Although funds for travel to ISTRO Board meetings are available (but not the triennial conference), it really helps the Organization if the candidate has some mechanism to help cover a portion of their travel expenses so that ISTRO dues can remain at their very modest level.
If you have any questions about any of these opportunities, please contact Blair McKenzie (b.mckenzie@dundee.ac.uk) or Lars J. Munkholm (lars.munkholm@agro.au.dk).

⌘ New Editor in Chief – Joshua Heitman

Photo: Brynn Heitman

Prof. Josh Heitman has joined the team of Editors-in-Chief of Soil and Tillage Research. Josh is working at the Department of Crop & Soil Sciences, North Carolina State University, USA. He is a new member of ISTRO. Josh's research interests include: soil and water management; rehabilitation of degraded soils; and sensor and model development for soil thermal and hydraulic properties. His e-mail address is: jlheitman@ncsu.edu

⌘ Central European ISTRO Conference - New date

The central European ISTRO conference "***Trends and challenges in soil-crop management"*** has been postponed to September 2022. The conference is organized by the ISTRO branches in the Czech Republic, Republic of Croatia and Hungary to be held in Brno, Czech Republic, on the campus of Mendel University. More information will follow in ISTRO INFO and on the ISTRO webpage, www.ISTRO.org.

⌘ CROSTRO Conference 2020 New date

The CROSTRO conference "***Agriculture in Nature and Environment Protection***" has been postponed to September 7–9, 2020 at the Faculty of Agrobiotechnical Sciences Osijek in Osijek, Republic of Croatia.

Roundtable's theme: an increasingly pressing issue of desertification, land degradation, and drought.

More information: Please find more information at the CROSTRO webpage http://www.hdpot.hr

⌘ ISTRO working group C Conservation Soil Tillage 1st meeting – New date

The 1st ISTRO WG-CST (working group conservation soil tillage) workshop meeting has been rescheduled to September 8–9, 2020 in Osijek, Republic of Croatia.

Main intention: to discuss and gather basic knowledge about the current situation in science and professional work in the domain of Conservation Soil Tillage and includes a field trip.

Preliminary program: Presentation and discussion on the first day, and field trip the second day.

Registration: via the WG-CST Registration form.

More information – consult: https://www.istro.org/index.php/working-groups/wg-c-conservation-soil-tillage

⌘ Upcoming Meetings and Events

Cancelled
EGU General Assembly, ~~May 3–8, 2020~~ in Vienna, Austria. Webpage: https://egu2020.eu/

June 2020
The Global Symposium on Soil Biodiversity, 'Keep soil alive, protect soil biodiversity', June 1–3, 2020 at FAO headquarters in Rome, Italy. ***NEW DATE*** Webpage:http://www.fao.org/about/meetings/soil-biodiversity-symposium/en/

8th International Crop Science Congress, June 21–25, 2020 in Saskatoon, Canada. Webpage: https://www.icsc2020.com/

August 2020
Eurosoil. August 24–28, 2020 in Geneva, Switzerland. Webpage: http://eurosoil2020.com/

September 2020
13th International Scientific/Professional Conference – Agriculture in nature and environment protection, September 7–9, 2020 in Osijek, Republic of Croatia. ***NEW DATE***

1st ISTRO WG-CST (working group conservation soil tillage) workshop meeting, September 8–9, 2020 in Osijek, Republic of Croatia. ***NEW DATE*** Webpage: https://www.istro.org/index.php/working-groups/wg-c-conservation-soil-tillage

October 2020
EIP-AGRI seminar 'Healthy soils for Europe', October 7–8, 2020 in Setubal, Portugal. Webpage: https://ec.europa.eu/eip/agriculture/en/event/eip-agri-seminar-healthy-soils-europe-sustainable

1st International Joint Congress on Sustainable Management of Cultural Landscapes in the context of the European Green Deal, October 7–10 2020 in Santo Stefano di Camastra, Italy. Webpage: https://www.ecocycles.net/essc2020/

International Soil Classification Congress, October 8–16, 2020, México. Webpage: http://iscc2020.org/

4th Global Soil Security Conference, October 12–15, 2020 in Seoul, Korea. ***NEW DATE*** Webpage: http://www.globalsoilsecurity2020.org/index.html

November 2020
ISCRAES 2020 - International Symposium on Climate-Resilient Agri-Environmental Systems, November 3–6, 2020 in Dublin, Ireland. ***NEW DATE*** Webpage: http://www.iscraes2020.org/

ASA-CSSA-SSSA International Annual Meeting, November 8–11, 2020 in Phoenix, Arizona. Webpage: https://www.acsmeetings.org/

3rd Annual Congress on Plant Science & Biosecurity, November 9–11, 2020 at Osaka, Japan. ***NEW DATE*** Webpage: https://acpb2020.com/

Soil Conference 2020, 'Soils, investing in our future', November 29–December 4, 2020 in Cairns, Queensland, Australia. Webpage: https://www.soilscienceaustralia.org.au/soils-conference-2020/

December 2020
World Soil Day, 5th December, worldwide.

May 2021
Global conference on sandy soils: Properties and management, May 30–June 3, 2020 in Madison, United States of America. ***NEW DATE*** Webpage: https://sandysoils.org/

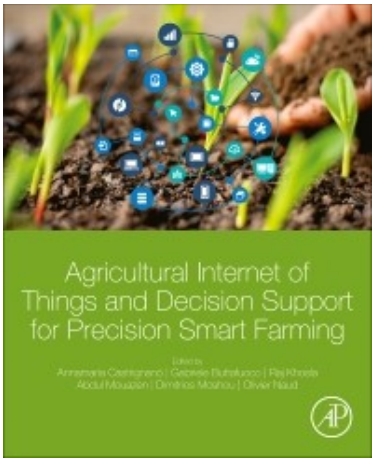
June 2021
The 22nd ISTRO conference on Agriculture in the 2020s: the role of soil and tillage research and innovation in the transition to digital agriculture, June 20–23, 2021 in Dublin Ireland.

September 2022
The 2nd Central European ISTRO conference and the 8th International conference of the Czech ISTRO branch – Trends and challenges in soil-crop management. September, 2022 in Brno, Czech Republic. ***NEW DATE***

⌘ New Books

Agricultural Internet of Things and Decision Support for Precision Smart Farming

Editors: A. Castrignano, G. Buttafuoco, R. Khosla, A. Mouazen, D. Moshou, O. Naud

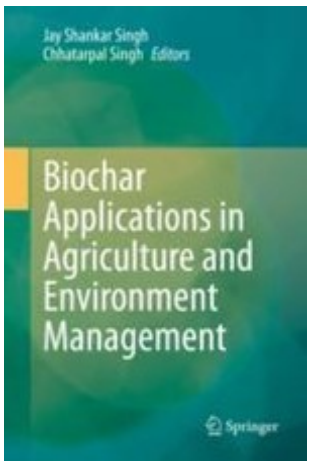


Agricultural Internet of Things and Decision Support for Smart Farming reveals how a set of key enabling technologies (KET) related to agronomic management, remote and proximal sensing, data mining, decision-making and automation can be efficiently integrated in one system. Chapters cover how KETs enable real-time monitoring of soil conditions, determine real-time, site-specific requirements of crop systems, help develop a decision support system (DSS) aimed at maximizing the efficient use of resources, and provide planning for agronomic inputs differentiated in time and space.

More information on this book:
https://www.elsevier.com/books/agricultural-internet-of-things-and-decision-support-for-precision-smart-farming/castrignano/978-0-12-818373-1

Biochar Applications in Agriculture and Environment Management

Editors: Singh, Jay Shankar, Singh, Chhatarpal

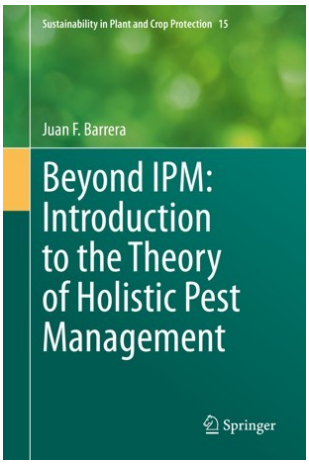


Biochar Applications in Agriculture and Environment Management provides up-to-date information on the use of biochar in management of soil health, agriculture productivity, green-house gases, restoration ecology and environment.

More information on this book:
https://www.springer.com/gp/book/9783030409968#aboutBook

Beyond IPM: Introduction to the Theory of Holistic Pest Management

Authors: Juan F. Barrera

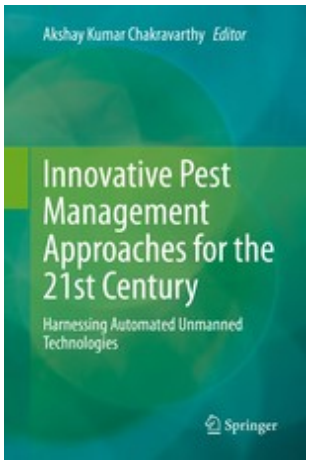


In *Beyond IPM: Introduction to the Theory of Holistic Pest Management* introduces the author a new paradigm of pest management called "Holistic Pest Management", or HPM. This approach is based on two central ideas: First, pest management actions must put the farmer at the centre of the system; Second, pest management must consider not only both pests but the other important components of the system in question.

More information on this book:
https://www.springer.com/gp/book/9783030433697#aboutAuthors

Innovative Pest Management Approaches for the 21st Century

Editors: Chakravarthy, A. K.



Innovative Pest Management Approaches for the 21st century highlights the importance of using communication tools in pest management, focusing on technology transfer to the ground level workers and farmers. It demonstrates success stories of utilizing automated unmanned technologies.

More information on this book:
https://www.springer.com/gp/book/9789811507939

ISTRO INFO is the newsletter of the **International Soil Tillage Research Organisation**. (www.istro.org).

All information contained in this newsletter are © ISTRO and may not be distributed without written permission of the Secretary General, Dr. Blair McKenzie (b.mckenzie@dundee.ac.uk) or the Assistant Secretary General, Dr. Lars J. Munkholm (lars.munkholm@agro.au.dk) .

For more information, please contact: Dr. Lars J. Munkholm, Assistant Secretary General, ISTRO, Aarhus University, Agroecology, P.O. Box 50, DK-8830 Tjele, Denmark.