ISTRO INFO
NEWSLETTER
of the
International Soil Tillage Research Organisation

Lars J. Munkholm

After 6 years as Assistant Secretary General, it is time to circulate our last ISTRO INFO. José Dörner will take over the job after the General Assembly in May. I have been very fortunate to have been assisted by PhD students Peter Bilson Obour, Loraine ten Damme and now Alvaro Calleja Huerta during the 6 years. We have done our best to keep you updated on ISTRO affairs (conferences, branch and working group meetings and workshop, elections etc.), news regarding "our" journal – Soil and Tillage Research (editor, status etc.), personalia (awards, obituaries etc.) and on meetings and books of relevance to the ISTRO community.

The last couple of years have been challenging for ISTRO – with cancellation of most planned meetings (not the least the ISTRO 2021/22 conference in Dublin). Fortunately, spring is here at the Northern hemisphere and that is also true for ISTRO. The central european ISTRO member countries are organising the 2nd Central European ISTRO Conference (CESTRO) in Brno, Czech Republic, September, 6th – 8th, 2022 (see attached flyer), the working group on Controlled Traffic Farming has got new leadership, webinars are being organised by the working groups on Subsoil Compaction, Controlled Traffic Farming and Visual Soil Examination and Evaluation while the working group on Conservation Tillage are planning a new physical meeting. Thus, there are plenty of opportunities to participate in scientific ISTRO activities before we meet again at our triannual conference in the USA in 2024. But I would also strongly recommend to attend the online ISTRO General Assembly, May 24th, as detailed below. Hope to see you there.

If you have input for the next ISTRO INFO, please send an e-mail to José Dörner, josedorner@uach.cl.

⌘ ISTRO2022 General Assembly

The General Assembly meeting will be held online on Tuesday May 24th at 12 noon (GMT+1) Irish Time.

You can register here.

Agenda according to the ISTRO constitution:

1. Reports from Officers and Board, including the presentation of audited accounts.

2. Reports from Chairpersons of Committees and Working Groups and from persons entrusted by the Board or General Assembly with special tasks.

3. Presentation of and voting on amendments to the Constitution and to the Bylaws (no amendments suggested).

4. Announce the election results of Officers and Board; election of Honorary Members.

5. Setting the membership fee for the next three-year period.

6. Plans for the 2024 conference.

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⌘ Controlled Traffic Farming WG – new leadership and initiatives

The Controlled Traffic Farming working group has been revitalized. We are happy to welcome Dr Diogenes L. Antille, Australia, as new Chair and Professor Reginaldo Barboza da Silva, Brazil, as new Deputy Chair of the CTF WG. Their plans include: Organise online presentations/talks to communicate CTF practice and research, organise a special session on CTF at the 2024 conference, and developing collaboration with other CTF organisations (e.g., ACTFA in Australia).

Chair: Dr Diogenes L. Antille

Diogenes Antille gained Agricultural Engineering (Argentina), and MSc (Soil Management) and Engineering Doctorate degrees from Cranfield University. He completed his post-doctoral training at Teagasc in Ireland (2011-2013) after which he moved to Toowoomba, Australia, to join the Centre for Agricultural Engineering at the University of Southern Queensland (2013-2018). In 2018, Antille moved to CSIRO Agriculture and Food (Canberra) where he works as a Senior Research Scientist (Soil Physics) and Team Leader (Resilient Soils Group). He specialises in soil and water management and has special interest in soil compaction and its mitigation, and controlled traffic farming. Antille is an Adjunct Senior Research Fellow (Conservation Agriculture) with the University of Southern Queensland and served as Adjunct Senior Researcher (Agricultural Engineering) at the Tasmanian Institute of Agriculture (University of Tasmania). Antille has published more than 60 journal articles, several book chapters and conference proceedings. He is a Chartered Engineer and Chartered Environmentalist through the U.K. Institution of Agricultural Engineers, and is a member of the Executive Board of the Australian Controlled Traffic Farming Association.

Deputy Chair: Professor Reginaldo Barboza da Silva

Reginaldo gained an Agricultural Engineering degree from Universidade Federal Rural do Semi-Arido followed by MSc and PhD degrees in Agronomy and Soil Science from Universidade Federal de Lavras (Brazil). He completed his post-doctoral training in Spain at the Polytechnic University of Madrid, University of A Coruña, and University of Cordoba. Reginaldo is currently a Professor of Soil Science at São Paulo State University (UNESP) and has expertise in applied soil physics and soil and water conservation. His current research focuses on soil compaction management, and the assessment of soil structure, soil workability and trafficability. Reginaldo is the former Director of the School of Agricultural Sciences at UNESP and was invited professor at the Faculty of Agricultural Engineering at Universidade de Campinas (Brazil). Reginaldo serves as Deputy Director of the Research Office at São Paulo State University.

⌘ Virtual workshop – ISTRO Working group B Subsoil Compaction (SSC)

Topic: "Spatial detection, distribution and assessment of soil loads, soil compaction and soil compaction risks – approaches, tools and models".

In the workshop we want to bring together colleagues, working in the field of spatial distribution of soil compaction and discuss current approaches, tools and models. This may include, but is not limited to, the following topics:
- Distribution of soil loads in agricultural fields, analysis of field traffic intensities;
- Detection of soil compaction, compaction effects and soil compaction patterns (UAV, Sensors etc.);
- Approaches and models to analyse and assess the spatial distribution of soil compaction and soil compaction risks at different scales.

The aim is to (i) discuss new insights in soil compaction research, (ii) activate new partnerships and (iii) search for potential new collaborations.

We invite all colleagues interested in presenting their work and/or participating in the discussion to contact us (chair: marco.lorenz@thuenen.de; secretary: mathieu.lamande@agro.au.dk). Please send an email with an expression of interest to participate or a brief description of your potential contribution by the 31st of May 2022. You will have the opportunity to present recent results, concepts, ideas or ongoing projects. There will be sufficient time for discussing in-between the presentations.

The exact date and schedule of the workshop will be coordinated and announced later, depending on interest and number of contributions. We are currently planning the workshop preferably in Sept. /Oct. 2022.

⌘ Update on Soil and Tillage Research

2020 was a challenging year for authors, reviewers, and editors globally and across journals. Soil and Tillage Research received over 1700 submissions, a 12% increase compared to 2019. However, while submissions increased, the journal has accepted 282 papers, a slight contraction compared to the 340 papers accepted in 2019. In 2021, the journal editors had handled over 1400 manuscripts and accepted 310 papers. On average, 20% of the submitted manuscripts were accepted for publication during these two years.

During the last two years, the geographic distribution of our authors remained unvaried. The top countries in terms of submitted manuscripts are China, Brazil, India, Iran, and United States. China has the highest number of accepted papers, followed by Brazil, the United States, Iran, and Germany.
The 2020 Journal Impact Factor was 5.374 (2019 IF 4.675), reflecting the high quality of the published content.

Most cited articles in 2022 published all time:

J Six, H Bossuyt, S Degryze, K Denef, 2004.
A history of research on the link between (micro)aggregates, soil biota, and soil organic matter dynamics.

Claire Chenu, et al., 2019.
Increasing organic stocks in agricultural soils: Knowledge gaps and potential innovations.

Most cited articles in 2022 for the IF window 2020 2021:

Yongxing Cui, et al, 2020.
Ecoenzymatic stoichiometry reveals microbial phosphorus limitation decreases the nitrogen cycling potential of soils in semi-arid agricultural ecosystems.

Guopeng Zhou, et al., 2020.
Co-incorporation of green manure and rice straw improves rice production, soil chemical, biochemical and microbiological properties in a typical paddy field in southern China.

Most cited articles in 2021 for the IF window 2019 2020

Claire Chenu, et al., 2019
Increasing organic stocks in agricultural soils: Knowledge gaps and potential innovations.

Jean-François Soussana, et al., 2019.
Matching policy and science: Rationale for the '4 per 1000 - soils for food security and climate initiative.

Most downloaded articles in 2022 from Science Direct

M. Krauss, et al., 2022.
Reduced tillage in organic farming affects soil organic carbon stocks in temperate Europe.

Tuomas J. Mattila, et al., 2022.
How farmers approach soil carbon sequestration? Lessons learned from 105 carbon-farming plans.

Most downloaded articles in 2021 from Science Direct

H.S. Jat, Madhu Choudhary, et al., 2020.
Temporal changes in soil microbial properties and nutrient dynamics under climate smart agriculture practice.

Thomas Keller, et al., 2019.
Historical increase in agricultural machinery weights enhanced soil stress levels and adversely affected soil functioning

Marianna Taffi, Elsevier.

⌘ Upcoming Meetings and Events

-- 2022 –

May

Soil and water conservation under changing climate in Northern or high altitude conditions. May 4th -5th, 2022, in Ås, Norway. Webpage: https://nibio.pameldingssystem.no/soil-and-water

EGU General Assembly 2022. May 23rd – 27th, 2022, in Vienna, Austria. Webpage: https://www.egu22.eu/

4th International Conference of Young Scientist. Soil in the Environment. May 29th to June 1st, 2022, in Toruń, Poland. Webpage: https://sites.google.com/view/site-torun-2020/

June

ISCRAES 2022 "International Symposium on Climate-Resilient Agri-Environmental Systems". June 7th – 10th, 2022, in Dublin, Ireland. Webpage: https://www.iscraes.org/

Intersol 2022 – The Soil in all its States. June 21st – 24th , 2022, in Lyon, France. Webpage: https://www.webs-event.com/en/event/intersol/

14th International Symposium Microelements in agriculture and in the environment. June 22nd – 25th, 2022, in Wrocław, Poland. Webpage: https://www.mikroelementy.eu/en/

July

12th International Symposium on Earthworm Ecology (ISEE12). July 10th – 15th, 2022, in Rennes, France. Webpage: https://isee12.symposium.inrae.fr/

International Symposium on Managing Land and Water for Climate Smart Agriculture. July 25th – 29th, 2022, in Vienna, Austria. Webpage: https://conferences.iaea.org/event/270/

22nd World Congress of Soil Science – Crossing boundaries, changing society. July 31st to August 5th, 2022, in Glasgow, UK. Webpage: https://22wcss.org/

August

ESAF2022: 15th international conference of the East and Southeast Asia Federation of Soil science societies (ESAFS). August 22nd – 26th, 2022, in Kuala Lumpur, Malaysia. Webpage: http://www.msss.com.my/esafs2022/

4th International Conference on Hydropedology. August 23rd – 26th, 2022, in Skukuza, South Africa. Webpage: https://www.ufs.ac.za/conferences/conference/fourth-international-conference-on-hydropedology

September

16th International Conference on Soil Micromorphology. September 4th – 8th, 2022, in Krakow, Poland. Webpage: http://www.icosm2020.sggw.pl/

2nd Central European ISTRO Conference (CESTRO) "Trends and challenges in soil-crop management". 6th – 8th September, 2022, in Brno, Czech Republic. Webpage: http://istro.cz/

5th International Interdisciplinary Conference on Land Use and Water Quality: Agriculture and the Environment. September 12th - 15th , 2022, in Maastricht, Netherlands. Webpage: https://www.luwq2022.nl/

October

Intersoil 2022 – What Strategy for European Soils in 2030. October 5th – 6th , 2022, in Brussels, Belgium. Webpage: https://www.webs-event.com/en/event/intersoil/appelacom/

ISFS 2022 - 10th International Symposium on Forest Soils. October 17-22, 2022, in Hangzhou, China. Webpage: https://isfs2022.casconf.cn/page/1450021481600913409

9th IASSC "International Acid Sulfate Soils Conference". November, 2022, in Adelaide, Australia. Webpage: https://biological.adelaide.edu.au/acid-sulfate-soil/iassc/

November

2022 ASA, CSSA, SSSA International Annual Meeting "Communication and Public Engagement for Healthy People and Healthy Planet". November 6th - 9th, 2022, in Baltimore, Maryland (USA). Webpage: https://www.acsmeetings.org

-- 2023 –

March

3rd Global Soil Biodiversity Conference. March 13 – 15, 2023, in Dublin, Ireland. Webpage: https://gsb2021.ie/

May

Global Conference on Sandy Soils – Properties and Management. May 30th to June 3rd, 2023, in Madison, USA. Webpage: https://sandysoils.org/

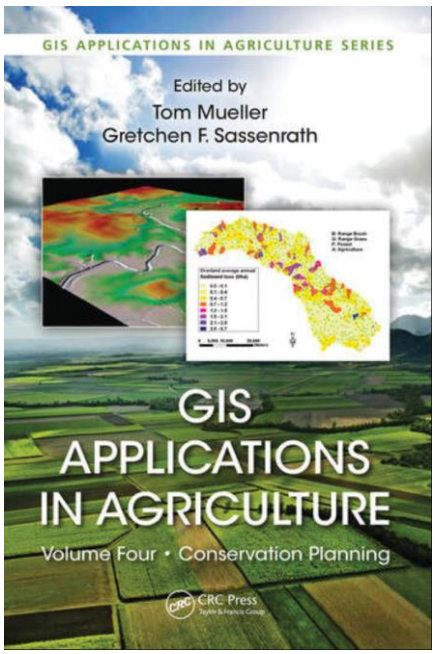
July

XXIII Latin-American Congress of Soil Sciences (XXII CLACS). July 30th – August 4th , 2023, in Florianópolis. Brasil. Webpage: https://www.slcs.org.mx/

⌘ New Books

GIS Applications in Agriculture. Volume Four. Conservation Planning

Editors: Tom Mueller, Gretchen F. Sassenrath

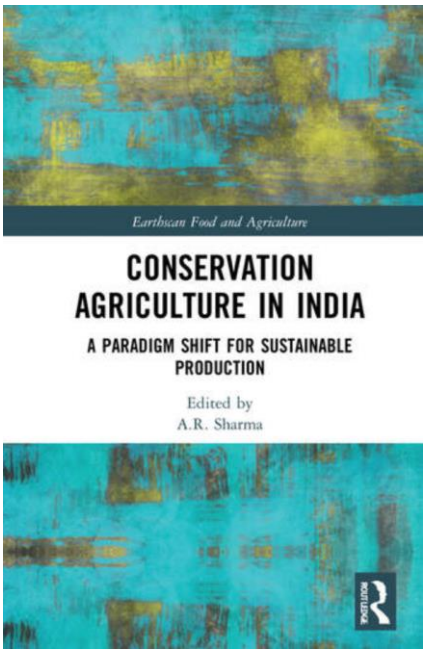


GIS Applications in Agriculture, Volume 4: Conservation Planning presents approaches developed by leading researchers working at the intersection of conservation and spatial technologies. Among others, the technologies include global positioning systems (GPS), geographic information systems (GIS), Internet mapping technologies, remote sensing, and various modeling applications. These advances allow improved prediction of soil erosion and environmental effects, better prioritization of land for conservation initiatives and funding, and enhanced prediction of the impact of management practices on natural resources.

More information on following this link.

Conservation Agriculture in India – A Paradigm Shift for Sustainable Production

Editors: A.R. Sharma

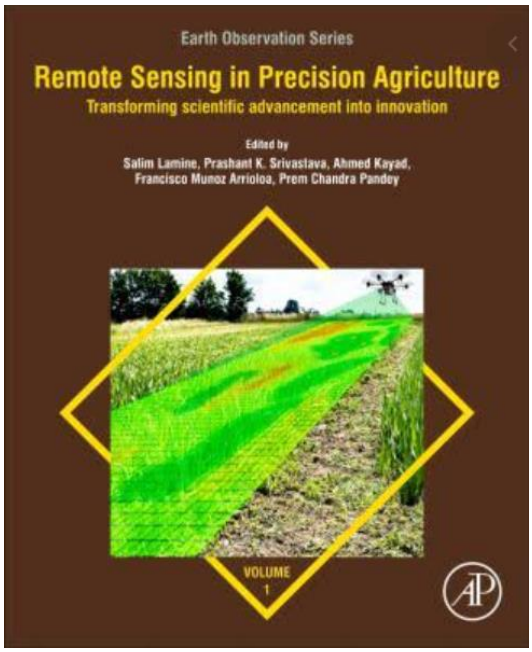


This volume reflects on the current status of conservation agriculture in India, asking why adoption has been slow and putting forward strategies to improve uptake. Chapters cover the various aspects of crop management such as soil, water, nutrients, weeds, crop residues, machinery and energy, in a range of environments, including irrigated and rainfed regions. The impact of climate change and the economic considerations behind adoption of conservation agriculture are also discussed. The volume concludes by discussing the future outlook for conservation agriculture in India, in particular drawing out parallels with other tropical and subtropical regions of the world.

More information on following this link.

Remote Sensing in Precision Agriculture – Transforming scientific advancement into innovation

Editors: G. Petropoulos, S. Lamine, P. Srivastava, A. Kayad, F. Muñoz Arriola, P. C. Pandey



Remote Sensing in Precision Agriculture compiles the latest applications of remote sensing in agriculture using spaceborne, airborne and drones' geospatial data. The book presents case studies, new algorithms and the latest methods surrounding crop sown area estimation, determining crop health status, assessment of vegetation dynamics, crop diseases identification, crop yield estimation, soil properties, drone image analysis for crop damage assessment, and other issues in precision agriculture. This book is ideal for those seeking to explore and implement remote sensing in an effective and efficient manner with its compendium of scientifically and technologically sound information.

More information on following this link.

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

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