

10th International Conference on Agro-Geoinformatics

43rd Canadian Symposium on Remote Sensing

(hybrid event)

Liping Di¹, Saeid Homayouni² and Monique Bernier²

¹ Conference co-chair, George Mason University, USA

² Conference co-chair, INRS, Quebec, Canada

Introduction

The joint 10th International Conference on Agro-Geoinformatics (ICAG) and 43rd Canadian Symposium on Remote Sensing (CSRS) was held at the Quebec City Convention Centre from July 11th to 14th 2022. This is the first time that the annual International Conference on Agro-Geoinformatics has teamed up with another event. The conference proceedings publish 39 selected papers presented at the joint conference. On behalf of the members of the Organizing Committee (Table 1) from both the International Society of Agromatics (ISAM) and the Canadian Remote Sensing Society (CRSS), we thank all the 326 delegates for joining us. In particular, we would like to thank all of the partners and exhibitors (<https://www.icag-csrs2022.org/en/about/partners>) who supported ICAG-CSRS 2022 and IEEE Geoscience and Remote Sensing Society (GRSS) for the technical sponsorship, which makes the publication of the proceedings through IEEE possible. We also acknowledge the 56 volunteers of the scientific committee (Table 2) who reviewed the 220 submitted abstracts.

Since it was a hybrid event, delegates were able to participate virtually or attend in person. A total of 326 delegates from 23 countries attended, including 213 at the Quebec City Convention Centre and 113 virtually. Two thirds of this total were from Canada, 33 from China and 19 from the USA.

As this was a hybrid conference, in-person oral presentations were streamed online. All delegates were able to access the pre-recorded videos of the oral presentations by virtual participants and of the short presentations by the presenting authors of the Interactive Posters. All delegates were able to participate in the online Q&A sessions for the virtual oral presentations. All recorded presentations will be available online to registered delegates until October 2022.

Theme of ICAG-CSRS 2022

The theme of this joint conference was “Remote Sensing and Geomatics for Sustainable Agriculture and Environment.” Four keynote speakers, including Ian Jarvis, Director of the GEO Global Agricultural Monitoring Initiative (GEOGLAM) from Switzerland, Zhengwei Yang, a research scientist from National Agricultural Statistics Service of U.S. Department of Agriculture (USDA NASS), and Jiali Shang and Heather McNairn, research scientists both from Agriculture and Agri-Food Canada, underlined the theme.

As a highlight, this conference provided an opportunity to stimulate open and inclusive dialogue about geomatics and remote sensing tools for agriculture and environmental applications. There were 110 presentations related to this particular topic, including 28 oral presentations, 16 interactive posters and 66 pre-recorded videos. The conference proceedings include 39 full-length papers reporting on the main theme of the conference from the presentations.

Other Popular Topics in Remote Sensing and Geomatics

This international conference provided updates on research in the era of artificial intelligence, big data analytics, Unmanned Aerial Vehicles (UAV), Lidar, Earth Observation satellites, and open-source and cloud computing, as well as applications in areas such as forestry, fire monitoring, land cover and land use, snow and ice, hazards and urban studies. In particular, there were two invited sessions on the monitoring of the Forest Ecosystem.

Outstanding Participation of the Canadian Space Agency

The President of the Canadian Space Agency, Lisa Campbell, honoured us by welcoming the attendees at this joint conference with a pre-recorded message at the opening ceremony. The new Strategic Plan of the Federal Government for Satellite Earth Observation in Canada was presented by Eric Laliberté, Director General of Space Utilization, Canadian Space Agency (CSA) in

a plenary session chaired by Mathieu Benoit, Natural Resources Canada and Janin Huard, CSA. Program managers from the CSA presented the Earth Observation Activities at CSA in two invited sessions, with topics ranging from RADARSAT-1 to the RADARSAT Constellation Mission to grant programs and the EO Continuity initiative. These sessions made possible the dialogue between various CSA stakeholders, including researchers, university students and professors, and representatives from the federal and provincial governments as well as members of the private sector in Canadian remote sensing and space.

Students and Young Professional Events

The Students and Young Professionals Committee organized a 3-minute Thesis Competition on Wednesday, July 13th, which was well attended. Eight students participated and the winners received an award from IEEE Women in Engineering and the IEEE GRSS. A plenary session and joint lunch were particularly aimed at providing opportunities for students and young professionals to learn from and meet with members of the remote sensing industry. We are pleased to know that the plenary session was particularly appreciated by the young scientists.

Four workshops led by remote sensing specialists were held on July 11th at INRS and attended mostly by graduate students. Students also acted as volunteers and we thank them for assisting the session chairs in both the Oral Presentation sessions and the virtual Q&A sessions.

The Canadian Remote Sensing Society (CRSS) presented its Annual Awards on Wednesday, July 13th. The International Society of Agromatics (ISAM) and CRSS recognized the best student oral, poster and virtual presentations during the closing plenary of the conference.

Conclusion

The joint conference was a successful one. The attendees enjoyed not only the conference presentations at the Québec City Convention Centre but also the historic district of Old Quebec, nice weather, good food and a lovely city. Those interested in music concerts in city parks and public places were able to attend the Quebec Summer (Music) Festival, with events held every evening during the conference.

Thank you again to all the delegates for your participation in the 10th International Conference on Agro-Geoinformatics and 43rd Canadian Symposium on Remote Sensing. It was a great pleasure to welcome and meet more than 200 of you in the beautiful city of Quebec!

General Conference Chairs

Prof. Liping Di, George Mason University, USA
Prof. Saeid Homayouni, INSA, Canada
Prof. Monique Bernier, INSA, Canada

Technical Program Committee

Dr. Josée Lévesque, Co-Chair, DRDC
Tom Lukowski, Co-Chair, Consultant
Dr. Zhengwei Yang, Co-Chair, USDA-NASS
Dr. Richard Fournier, Co-Chair, U Sherbrooke
Dr. Liying Guo, George Mason University
Dr. Shabnam Jabari, UNB
Dr. Li Lin, George Mason University
Dr. Jiali Shang, AAFC

Local Organizing Committee

Monique Bernier, Co-Chair & Treasurer, INRS
Saeid Homayouni, Co-Chair, INRS
Thierry Badard, U Laval
Athyna Cambouris, AAFC/CRAAQ
Daniel Delisle, CSA
Yannick Duguay, CGQ
Sabrina Gauthier, MAPAQ
Charles Gignac, AQT/U Laval

Chris Hopkinson, U Lethbridge
Ramata Magagi, U Sherbrooke

Workshops and Summer School Committee

Brigitte Leblon, Chair, UNB
Charles Gignac, AQT/U Laval
Kalifa Goïta, U Sherbrooke
Armand LaRocque, UNB
Nicolas Marchand, U Sherbrooke

Partnerships and Exhibitors Committee

Liping Di, Co-Chair, George Mason University
Charles Gignac, Co-Chair, U Laval
Yannick Duguay, CGQ

Student and Young Professional Activities Committee

Chayma Chaabani, Chair, INRS
Hamdy Elsayed, Toronto Metropolitan University
Omid Reisi Gahruei, U Laval
Hejar Shahabi Sorman Abadi, INRS

ISAM Student Competition Committee

Ruixin Yang, Chair, George Mason University

CRSS Student Awards Committee

Chris Hopkinson, Chair, U Lethbridge

Scientific Committee

Ahmed Shaker Abdelrahman, Toronto Metropolitan University	Jonathan Li, U Waterloo
Yuqi Bai, Tsinghua University	Derek Lichti, U Calgary
Thierry Badard, U Laval	Li Lin, George Mason University
Sarah Banks, ECCC	Bing Lu, SFU
Monique Bernier, INRS	Tom Lukowski, Consultant
Yacine Bouroubi, U Sherbrooke	Ramata Magagi, U Sherbrooke
Joe Buckley, RMC (Professor Emeritus)	Cecilia Masemola, University of KwaZulu Natal
Laura Chasmer, U Lethbridge	Heather McNairn, AAFC
Mohammed Dabboor, ECCC	Koreen Millard, Carleton U
Laura Dingle-Robertson, AAFC	Scott Mitchell, Carleton U
Yannick Duguay, Centre de géomatique du Québec	Mir Mostafavi, U Laval
Jinlong Fan, National Satellite Meteorological Center China	Roberto Pierdicca, UNIVPM
Samuel Foucher, CRIM	Desmond Power, C-Core
Richard Fournier, U Sherbrooke	Md Saifuzzaman, McGill U
Feng Gao, USDA	Randall Scharien, UVic
Charles Gignac, U Laval	Andrea Scott, U Waterloo
Kalifa Goïta, U Sherbrooke	Keshav Singh, AAFC
Liying Guo, George Mason University	Gordon Staples, MDA
Jeff Harris, Consultant	Bedir Tekinerdogan, Wageningen University
Yuhong He, U Toronto	Jérôme Théau, U Sherbrooke
Saeid Homayouni, INRS	Paul Treitz, Queen's University
Changping Huang, Aerospace Information Research Institute, Chinese Academy of Sciences	Mélanie Trudel, U Sherbrooke
Shabnam Jabari, UNB	B.Berk Üstündağ, Istanbul Technical University
Raymond Jahncke, NS Dept of Lands and Forestry	Dirk Werle, Aerde Environmental Research
Kevin Jones, PCI Geomatics	H Peter White, NRCan
Brigitte Leblon, UNB	Ruixin Yang, George Mason University
Josee Levesque, DRDC	Eugene Yu, George Mason University
	Peng Yue, Wuhan University
	Chen Zhang, George Mason University