International conference on Digitalization and Artificial Intelligence in Agricultural Management

15th November

8:30-9:00	Registration
09:00	Welcome and opening session

9:00 - 13:00   **Topic 1: AI in data collection to support monitoring and management of agricultural systems**
Link for online attendees: https://stockholmuniversity.zoom.us/j/69424406933
Moderator: Carla Ferreira

9:00 – 10:30   Keynote speakers
Daniel Jiménez: AI and agricultural management – opportunities and risks
Josse De Baerdemaeker: Quality Challenges for AI adoption in Agri-Food
Mattew Harrison: Operationalising satellite imagery and machine learning to quantify soil carbon from afar

10:30-11:00   Coffee break

11:00 - 13:00   Presentations and discussions
Utilizing Large Language Models in Agriculture: Monitoring & Management Innovations
Lindsey Moore
Large Language Model for Agriculture
Masahiro Ryo and Kazunori Suzuki
Digital solutions in agriculture management: Databases related to the dairy and beef value-chains
Pia Ulvenblad, Henrik Barth and Per-Ola Ulvenblad
Data Driven Artificial Intelligence Applications for Sustainable Agriculture in Kenya
Mercy Kimalat
Transforming Agriculture in West Africa: Leveraging Artificial Intelligence for Data-Driven Farm Management and Sustainable Crop Yield
Emmanuel Duah, Chanik Kwao-Agboado, Anthony Osei
AI-driven data analysis with mobile pictures for enhanced coffee crop management and yield prediction
Juan Camilo Rivera Palacio, Christian Bunn and Masahiro Ryo
A Nextgen Low Power Weather Station for the IoT age

Giuliano Vitali and Eugenio Magnanini
Not Everything is Data: Data Practices for AI in Indian Agriculture
Angelina Chamuah

13:00 - 14:00   Lunch

14:00 - 17:30   **Topic 2: AI in the optimization of agricultural management**
Link for online attendees: https://stockholmuniversity.zoom.us/j/64892446322
Moderator: Zahra Kalantari

14:00 – 15:00   Keynote speakers
Tetyana Zelenska: Responsible AI for Agriculture Transformation
Joel Hamrén: Agronod - a national platform for agricultural data sharing

15:00 - 15:30   Presentations and discussions
Opportunities and needs of AI for small-scale regenerative agriculture
Jorge Zapico
Autonomous Robotic Platform for Orchards Navigation
Adrien Durand-Petiteville and Viviane Cadenat

15:30-16:00   Coffee break

16:00 - 17:30   Presentations and discussions
Computer vision models to improve yield estimation in cherry orchards from Chilean central valley
Francisco Altimiras, Mauricio Antonelli, Osvaldo Yañez, Leonardo Pavez, Alireza Pourreza and Hector Cid
Autonomous drones and AI-assisted computer vision for mapping and management of wild stock
Mikhail Popov, Alex Jonsson, Barry Brown, Moira Mcgregor, Marco Moletta, Matteo Tadiello, Sebastian Wallman and Sara Nozkova
Unveiling Transformative Use Cases: AI and IoT in Agriculture at FAO/ITU Focus Group
Raghu Chaliganti
Data and machine learning for balancing the agricultural shifts of blue water to green around the world
Georgia Destouni

Daily Reference Evapotranspiration Forecasting via Novel Hybrid Machine Learning Methods to Conserve Agricultural Water Resources
Jinwook Lee, Sayed Bateni , Changhyun Jun, Essam Heggy, Mehdi Jamei, Dongkyun Kim, Hamid Ghafouri
Estimation of evaporation and drought stress of pistachio plant using UAV multispectral images and surface energy balance approach
Hamid Malamiri and Hadi Zare

16th November

9:00 - 12:30   **Topic 3: AI in climate change adaptation and mitigation of environmental impacts**
Link for online attendees: https://stockholmuniversity.zoom.us/j/62320543376
Moderator: Carla Ferreira

9:00 – 10:00   Keynote speakers
Panos Pardalos: AI and Agricultural Management
Josh Woodard: Inclusively Advancing Agri-Food Systems Through AI and Automation

10:00 - 10:30   Presentations and discussions
Nurturing Sustainable Futures: AI Enhanced Digital Advisory for Climate adaptation and mitigation
Brenda Gunde
Impact of AI in the agriculture sector to maintain climate change resilience and environmental sustainability
Sumanta Bhattacharya and Bhavneet Sachdev

10:30-11:00   Coffee break

11:00 - 12:30   Presentations and discussions
Advancing Carbon Sequestration Estimation in West African Agricultural Systems through AIDriven Biomass Modelling
Emmanuel Duah , Anthony Osei and Chanik Kwao-Agboado
Agricultural drought under climate change: a national scale prediction

Jung-Ching Kan , Carla Ferreira, Georgia Destouni, Haozhi Pan, Marlon Passos, Karina Barquet and Zahra Kalantari
Climate smart advisory for smallholder farmers through ML-enhanced weather predictions

Andreas Vallgren and Lorenzo Bottarelli

Optimizing advice for nature based solutions at the farm level: a case study in the Netherlands

Gerard Ros, Tessa van der Voort , Sven Verweij, Kees van den Dool, Brent Riechelman and Yuki Fuijta

Analysis of the use of Artificial Intelligence (AI) in three levels of climate change mitigation- Using a three-level model approach focused on mitigation and resilience

Saeed Givehchi

Explainable AI in Predicting Anthropogenic Forest Fire Risk in Austria: A Multi-Criteria Approach

Elisabeth Wimmer , Kevin Mallinger, Caroline Lawitschka, Sebastian Raubitzek, Thomas Neubauer and Sebastian Schrittwieser

12:30 - 13:30	Lunch

13:30 - 17:00	**Topic 4: Sustainability science perspective on AI application on agricultural systems**
	Link for online attendees: https://stockholmuniversity.zoom.us/j/65024400422
	Moderator: Victor Galaz

13:30 – 14:30	Keynote speakers
	Angelika Hilbeck: Supporting ecological transformation of agro-food systems with digital tools
	Guillermo Marcillo: Artificial Intelligence and Digital Agricultural Technologies: Their value on Applied Agroecosystem l

14:30 - 15:15	Presentations and discussions
	Artificial Intelligence (AI) in Agriculture: Transforming Farming for a Sustainable Future
	Amandeep Singh , Balvinder Singh, Siby Samuel, Aida Kebede, Manjit Singh and K. Dewangan
	Redesigning horticultural food systems with digital twins
	Richard Newcomb
	Smart Waste Management Hub for Sustainable Agriculture
	Balvinder Singh , Amandeep Singh and Siby Samuel

15:15-15:45	Coffee break

15:45 - 17:0	Presentations and discussions
	Increasing crop yields while rationalizing natural resources

Carla Ferreira , Zahra Kalantari, Ran Tao, Pan Zhao, Jing Wu, Nicolas Martin, Matthew Harrison and Naira Hovakimyan
Machine Learning and Process Based Water Quality Modelling: Synergies and Opportunities
Martyn Futter , Emma Lannergård and Paul Whitehead
Digitalization in agriculture, an approach for a more judicious use of production factors and crop management towards competitiveness and sustainability
António Ferreira , Arlindo Ribeiro, M. Antunes, F. Custódio, Carla Ferreira and Anne Boulet
AI on the Ground – Mapping the Landscape of Digital Agriculture investments in India
Vikrom Mathur
Food technology and digitalization for sustainability
Charlotte Bunge

19:00 Social dinner

17th November

9:00 - 12:30 **Round tables and discussions**
Link for online attendees: https://stockholmuniversity.zoom.us/j/67521872715

9:00 - 10:30 ***AI for sustainable agriculture and food security – potential, risks and uncertainties***
Moderator: Victor Galaz
Participants: Carlos Pueyo, Guillermo Marcillo, Giuliano Vitali, Josse De Baerdemaeker and Tetyana Zelenska

10:30 - 11:00 Coffee break

11:00 - 12:30 ***Challenges of AI in agriculture, including in small farms and in developing countries, and future perspectives and trends***
Moderator: Carla Ferreira
Participants: Daniel Jimenez, Josh Woodard, Maja Brisvall, Miriam Lotsu and Raghu Chaliganti

12:30 Closing ceremony