

# Swiss Remote Sensing Days 2022

Program at a glance

Day	Sunday (1 May)	Monday (2 May)	Tuesday (3 May)	Wednesday (4 May)
08h30-09h00		Welcome and practical infos		
09h00-10h00		Keynote: Susanne Mecklenburg	Keynote: Martin Herold	Keynote: Bertrand Le Saux
10h00-10h30		Coffee break		
10h30-12h30		Technical session	Technical session	Technical session
12h30-14h00		Lunch		
14h00-15h00		Career Forum #1	Excursion + dinner at grotto	Career forum #2
15h00-15h30	Coffee break			
15h30-17h30	Arrival in Monte Verità Technical session			
17h30-18h30				
18h30-19h00	Welcome cocktail			
19h00-...	Dinner	Conference dinner		

\* all meals in grey are included in the registration, as well as the participation to the excursion (incl. dinner)

## Technical sessions

Presentation format: every paper is presented as

- A teaser flash presentation of 3 minutes (3 slides max, no videos) slides to be provided beforehand on this link: <https://enacshare.epfl.ch/ukeMsurNfQSHhq8LF3CG4> name the file as (paperID\_Lastname.pdf)
- A poster presentation: bring your own poster (max format A0)!

## Detailed program

### Monday Morning

24	Robust Damage Estimation of Typhoon Goni on Coconut Crops with Sentinel-2 Imagery	Andres C Rodriguez Escallon, Rodrigo Caye Daudt, Stefano D'Aronco, Konrad Schindler and Jan D Wegner
1	Panoptic Segmentation of Satellite Image Time Series with Convolution	Vivien Sainte Fare Gamot
34	Multitask Learning for Estimating Power Plant Greenhouse Gas Emissions from Satellite Imagery	Joëlle Hanna, Michael Mommert, Linus Scheibenreif and Damian Borth
20	Towards traceable, transparent and sustainable cocoa farming in Côte d'Ivoire and Ghana using publicly available satellite imagery and deep learning	Nikolai Kalischek
36	ADELE: Overview of a deep learning application for land use and land cover change detection and classification in Switzerland	Claudio Facchinetti, Gillian Milani and Michael Leuenberger
40	UAV-BASED LIDAR HIGH-RESOLUTION SNOW DEPTH MAPPING IN THE SWISS ALPS: COMPARING FLAT AND STEEP FORESTS	Kalliopi Koutantou, Giulia Mazzotti and Philip Brunner
19	A data-driven approach in the search for Antarctic meteorites	Veronica Tollenaar, Harry Zekollari, Lhermitte Stef, David Tax, Vinciane Debaille, Steven Goderis, Philippe Claeys and Frank Pattyn
7	Recent Ice Trends in Swiss Alpine Lakes: 20-year Analysis of MODIS Data	Manu Tom, Tianyu Wu, Emmanuel Baltsavias and Konrad Schindler
17	Remote Sensing Tools for Snow Depth and Avalanche Mapping	Yves Bühler, Andreas Stoffel, Lucie Eberhard and Elisabeth Hafner
45	Influence of Land Surface Temperature on Permafrost Dynamics – a Northern Hemisphere Perspective of the last 40 Years	Dupuis, S., Götsche, F., Westermann, S. and S. Wunderle

### Monday afternoon

18	Crop Classification under Varying Cloud Cover with Neural Ordinary Differential Equations	Nando Metzger, Mehmet Özgür Türkoglu, Stefano D'Aronco, Jan Dirk Wegner and Konrad Schindler
27	COALITION-2: Nowcasting of convective systems from growing cumulus	Ulrich Hamann, Elena Leonarduzzi, Lorenzo Clementi, Lorís Foresti, Marco Gabella, Alessandro M. Hering, Luca Nisi, Marco Sassi and Urs Germann
38	Geostatistical Simulation Models Applications in Remote Sensing	Fatemeh Zakeri and Grégoire Mariéthoz
9	Impact of 3D radiative transfer on airborne NO2 imaging remote sensing over cities with buildings	Marc Schwaerzel, Dominik Brunner, Fabian Jakub, Claudia Emde, Brigitte Buchmann, Alexis Berne and Gerrit Kuhlmann
2	Physical Retrieval of Rain Rate from Ground-Based Microwave Radiometry	Wenyue Wang, Klemens Hocke and Christian Mätzler
23	Harmonized retrieval of middle atmospheric ozone from two microwave radiometers in Switzerland	Eric Sauvageat, Eliane Maillard Barras, Klemens Hocke, Alexander Haefele and Axel Murk
25	Passive and Active Remote Sensing of the Middle Atmosphere at the University of Bern	Gunter Stober, Eric Sauvageat, Witali Krochin, Guochun Shi, Klemens Hocke, Hou Shengyi, Wenyue Wang, Roland Albers and Axel Murk
28	Stratospheric Ozone variabilities driven by planetary wave dynamics at polar latitudes	Guochun Shi, Witali Krochin, Axel Murk and Gunter Stober
35	Estimation of Air Pollution with Remote Sensing Data: Revealing Greenhouse Gas Emissions from Space	Linus Scheibenreif, Michael Mommert and Damian Borth

## Tuesday morning

14	Global canopy height regression and uncertainty estimation from GEDI LIDAR waveforms with deep ensembles	Nico Lang and Nikolai Kalischek
21	Mapping high-altitude forest in the Swiss Alps with deep learning	Thiên-Anh Nguyen, Benjamin Kellenberger and Devis Tuia
32	Country-wide Retrieval of Forest Structure From Optical and SAR Satellite Imagery With Bayesian Deep Learning	Alexander Becker
12	How to find a good image-text embedding for remote sensing visual question answering?	Christel Chappuis, Sylvain Lobry, Benjamin Kellenberger, Bertrand Le Saux and Devis Tuia
22	Climatological drought monitoring in Switzerland using SAF satellite products	Annkatri Burgstall, Anke Duguay-Tetzlaff, Martin Hirschi, Sonia Seneviratne, Reto Stöckli, Quentin Bourgeois and Dominik Michel
5	Mapping functional diversity using individual tree-based morphological and physiological traits in a subtropical forest	Zhaoju Zheng, Yuan Zeng, Fabian Schneider, Yujin Zhao, Dan Zhao, Bernhard Schmid, Michael Schaeppman and Felix Morsdorf
6	Uncertainties in measurements of leaf optical properties are small compared to the biological variation within and between individuals of European beech	Fanny Petibon, Ewa A. Czyż, Giulia Ghielmetti, Andrea Hueni, Mathias Kneubühler, Michael E. Schaeppman and Meredith C. Schuman
11	Site specific characteristics determine drought resistance of Swiss forests	Joan Sturm, Maria J. Santos, Bernhard Schmid and Alexander Damm
33	Continuous observation of canopy water content changes with GPS sensors	Vincent Humphrey, Christian Frankenberg, Jeffrey D. Wood and Alexander Damm

## Wednesday Morning

8	Crop mapping from image time series: deep learning with multi-scale label hierarchies	Mehmet Ozgur Turkoglu, Stefano D'Aronco, Gregor Perich, Frank Liebisch, Constantin Streit, Konrad Schindler and Jan Dirk Wegner
39	FAST IMAGE LABELLING USING 3D RECONSTRUCTION	Antoine Carreaud, Krzysztof Lis and Adrien Gressin
10	Detecting Macro Floating Objects on Coastal Water Bodies using Sentinel-1	Raquel Carmo, Jamila Mifdal and Marc Rußwurm
29	Detecting phytoplankton fluorescence signal from space: what, why and how?	Remika Gupana, Daniel Odematt and Alexander Damm
26	OPTICAL CLOSURE OF REMOTE SENSING REFLECTANCE USING AIRBORNE LASER SCATTERING	Abolfazl Irani Rahaghi, Camille Minaudo, Alexander Damm and Daniel Odematt
31	DEVELOPMENT OF A POLARIMETRIC 50 GHZ SPECTROMETER FOR TEMPERATURE SOUNDING IN THE MIDDLE ATMOSPHERE	Witali Krochin, Gunter Stober, Roland Albers and Axel Murk
30	E-PROFILE – European networks of ground-based radar, lidar and microwave radiometers for meteorology and more	Rolf Rufenacht, Simone Bircher-Ardot, Myles Turp and Alexander Haeefe
15	Retrieval of C-band Path-Integrated Attenuation by melting hail in an Alpine environment using a mountainous bright scatterer	Marco Gabella
13	Measurement of surface displacements with a UAV-borne/car-borne L-band DInSAR system: system performance and use cases	Othmar Frey, Charles Werner, Andrea Manconi and Roberto Coscione