

Conference Agenda

42nd EARSeL Symposium

3-6 July 2023, Bucharest, Romania

Date: Monday, 03/July/2023

1:00pm - 4:00pm
RD1: Registration
 Location: **Registration desk**

2:00pm - 2:30pm
OC: Opening Ceremony
 Location: **Ioan Mihăilescu**
 Chair: **Dr. Ionut Sandric**
 Speakers:
 Prof. Lucian Ciolan - University of Bucharest Prorector
 Jean-Christophe Schyns - President of EARSeL
 Dr. Ovidiu Badea - National Institute for Research and Development in Forestry (INCDS) "Marin Drăcea"
 Prof. Enrico Corrado Borgogno Mondino - DISAFA-Università degli Studi di Torino
 Prof. Francesco Pirotti - TESAF, CIRGEO, University of Padova
 Dr. Cristian Vasile - Esri Romania
 Prof. Lena Halounová - ISPRS President

2:40pm - 3:30pm
Keynote Forestry: Dr Sorin Popescu - Texas A&M University
 Location: **Ioan Mihăilescu**
 Chair: **Dr. Ovidiu Badea**
 Chair: **Dr. Bogdan Apostol**

3:30pm - 4:00pm
CB1D1: Coffee break
 Location: **First floor corridor**

4:00pm - 5:40pm
ED: Trends in Remote Sensing applications
 Location: **Dimitrie Cantemir**
 Chair: **Dr. Katja Berger**
 Chair: **Prof. Bogdan Andrei Mihai**

FS1: Earth Observation applied in forest hazards management
 Location: **Grigore Moisil**
 Chair: **Dr. Sorin Popescu**
 Chair: **Dr. Bogdan Apostol**

E-learning On Time Series Analysis In Remote Sensing: The Way Towards Collaborative Course Development

Markéta Potůčková¹, Jana Albrechtová¹, Katharina Anders², Lucie Červená¹, Jakub Dvořák¹, Krzysztof Gryguc³, Bernhard Höfle², Lucie Kupková¹, Zuzana Lhotáková¹, Adriana Marcinkowska-Ochtyra³, Andreas Mayr⁴, Eva Neuwirthová¹, Adrian Ochtyra³, Martin Rutzinger⁴, Alex Šroller¹
 1: Charles University, Faculty of Science, Czech Republic; 2: Heidelberg University, Institute of Geography, 3DGeo Research Group, Germany; 3: University of Warsaw, Department of Geoinformatics, Cartography and Remote Sensing, Poland; 4: University of Innsbruck, Institute of Geography, Remote Sensing & Topographic LiDAR Research Group, Austria

Monitoring Of Drought-induced Forest Damages In Germany
Andreas Müterthies, Sebastian Mader, Nils Wolf
 EFTAS Fernerkundung Technologietransfer GmbH, Germany

Modelling Vitality Loss Of European Beech (Fagus Sylvatica L.) Using Random Forest Regression
Chunyan Xu, Michael Förster, Birgit Kleinschmit
 Technical University of Berlin, Germany

Moon and Remote Sensing in Education – A Concept for Implementing Remotely-Sensed Lunar Topics into the School Curriculum

Roman Johannis Hiby, Claudia Lindner, Fabian Meyer-Heß, Andreas Rienow
 Ruhr-University Bochum, Institute of Geography, Germany

Implementation of a Fuel Type Classification System for Sardinia, Italy, with the Integration of Remotely Sensed Data
Debora Voltolina¹, Daniela Stroppiana², Simone Sterlacchini¹, Matteo Sali², Bachisio Arca³, Mariano García⁴, Michele Salis³, Emilio Chuvieco⁴
 1: National Research Council, Institute of Environmental Geology and Geoengineering, Milano Unit, Italy; 2: National Research Council, Institute for Electromagnetic Sensing of the Environment, Milano Unit, Italy; 3: National Research Council, Institute of BioEconomy, Sassari Unit, Italy; 4: Universidad de Alcalá, Department of Geology, Geography, and Environment Science, Spain

Global Cloud-free Maps of Essential Vegetation Traits Processed from the TOA Sentinel-3 OLCI Catalogue in Google Earth Engine

Jochem Verrelst, David Kovács, Pablo Reyes-Muñoz, Matias Salinero-Delgado, Viktor Ixio Mészáros, Katja Berger
 University of Valencia, Spain

The Impact Of Wildfires On Water Quality Using CCI EO Products: Lake Baikal Case Study

Daniela Stroppiana, Lorenzo Parigi, Giulio Tellina, Claudia Giardino, Monica Pinardi, Rossana Caroni, Mariano Bresciani
 CNR-IREA, Italy

A Review of Remote Sensing Time Series Analysis for Vegetation Productivity Monitoring

Katja Berger^{1,2}, Lammert Kooistra³, Lukas Valentin Graf⁴, Benjamin Brede⁵, Clement Atzberger⁶, Pablo Reyes Munoz¹, Jochem Verrelst¹

1: Image Processing Laboratory (IPL), University of Valencia, Spain; 2: Mantle Labs GmbH, Austria; 3: Wageningen University & Research, Laboratory of Geo-Information Science and Remote Sensing, Wageningen, The Netherlands; 4: Earth Observation of Agroecosystems Team, Division Agroecology and Environment, Agroscope, Zurich, Switzerland; 5: Helmholtz Center Potsdam GFZ German Research Centre for Geosciences, Section 1.4 Remote Sensing and Geoinformatics, Potsdam, Germany; 6: Institute of Geomatics, University of Natural Resources and Life Sciences, Vienna, Austria

Benchmarking of Grassland Dynamic Models Coupled with Sentinel-2 to Monitor Grasslands Growth over Wallonia Region (Belgium)

Cozmin Lucau Danila¹, Yann Chemin², Yannick Curnel¹, Julien Morel², Mattia Rossi², Viviane Planchon¹

1: Walloon Agricultural Research Centre (CRA-W), Belgium; 2: EU Joint Research Centre (JRC), Italy

6:00pm

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10:00pm

IB: Icebreaker

Location: Courtyard of the University of Bucharest Rectorate

Date: Tuesday, 04/July/2023

8:00am RD2: Registration
- Location: Registration desk

4:00pm

9:00am Env: Remote sensing applications for environment
- Location: Dimitrie Cantemir
10:40am Chair: Prof. Dr. Andreas Rienow
Chair: Dr. Ionut Sandric

Quantification Of Net Carbon Stock Change Due To The Norwegian Reservoirs Development

Mahmoud Saber Kenawi, Tor Haakon Bakken
NTNU: Norwegian University of Science and Technology, Norway

Integrating Low-cost Sensors and Remote Sensing to Monitor Small Reservoirs in Kenyan Wetlands

Stefanie Steinbach^{1,2}, Anna Bartels¹, Martin W. Chege³, Niels Dedring¹, Wisdom Kipkemboi³, Simon W. Muthee³, Andrew Nelson², Kuria B. Thiong'o³, Sander J. Zwart⁴, Andreas Rienow¹
1: Department of Geography, Ruhr University Bochum, Germany; 2: Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, The Netherlands; 3: Institute of Geomatics, GIS and Remote Sensing (IGGRS), Dedan Kimathi University of Technology, Kenya; 4: Integrated Water Management Institute (IWMI), Accra, Ghana

Monitoring Mining Operations In The Rovinari Area Using Radar Interferometry

Andrei Toma, Ionut Sandric
University of Bucharest, Faculty of Geography, Romania

Climate versus Vegetation Indices Regression Models Classification across desert-fringe ecosystem

Maxim Shoshany, Sofia Mozhaeva
Technion, Isr. Institute of Technology, Israel

Multisource Point Cloud Fusion For Forest And Post-fire Porest Mapping: Case Study From The Bohemian Switzerland National Park

Alex Šrollerů, Eva Štefanová, Markéta Potůčková
Charles University, Faculty of Science, Department of Applied Geoinformatics and Cartography, Czech Republic

10:40am CB1D2: Coffee break
- Location: First floor corridor

11:10am

11:10am Keynote Agriculture: Dr Lorenzo Seguini - Joint Research Centre (JRC)
- Location: Ioan Mihăilescu
12:00pm Chair: Prof. Enrico Borgogno-Mondino
Chair: Prof. Dr. Francesco Pirotti

12:00pm 13th EARSeL Workshop on Imaging Spectroscopy (Valencia, Spain, April 2024)
- Location: Ioan Mihăilescu

12:05pm

12:05pm 43rd EARSeL Symposium (Manchester, UK, June 2024)
- Location: Ioan Mihăilescu

12:10pm

12:10pm EsriRo: Esri Romania - Sponsor presentation
- Location: Ioan Mihăilescu
12:25pm Chair: Dr. Ionut Sandric

W1 Agriculture: Land cover mapping and monitoring for supporting decisions in agriculture
Location: Grigore Moisil
Chair: Prof. Dr. Francesco Pirotti
Chair: Dr. Ursula Gessner

Methodological Proposal for Operational Monitoring of Agricultural Dynamics in Center Pivots Irrigation Areas in Brazil using Sentinel 2 Imagery

Hugo do Nascimento Bendini¹, Leila Maria Garcia Fonseca¹, Luiz Mario Lustosa Pascoal¹, Philippe Rufin^{3,4}, Caio Augusto Bertolini¹, Tharles de Sousa Andrade¹, Ravi Fernandes Mariano¹, Renato Gomes Silvério¹, Pedro Lacerda Santos¹, Daniel Assumpção Costa Ferreira², Thiago Henriques Fontenelle²
1: National Institute for Space Research (INPE), Brazil; 2: National Water and Sanitation Agency (ANA), Brazil; 3: Humboldt-Universität zu Berlin, Geography Department, Germany; 4: Université Catholique de Louvain, Earth and Life Institute, Belgium

Products for Monitoring of Agriculture from Earth Observation Time Series and Very High Resolution Data

Ursula Gessner¹, Sarah Asam¹, Andreas Hirner¹, Jennifer Kriese¹, Jonas Meier¹, Sophie Reinermann², Martina Wenzl¹
1: German Aerospace Center, Germany; 2: Julius-Maximilians-Universitaet Wuerzburg, Germany

The Data Cube of ERATOSTHENES Centre of Excellence to empower environmental monitoring in EMMENA Region

Stelios Neophytides^{1,3}, Thanasis Drivas², Christiana Papoutsas^{1,3}, Charalambos Kontoes², Diofantos Hadjimitsis^{1,3}
1: ERATOSTHENES Centre of Excellence, Cyprus; 2: National Observatory of Athens, Greece; 3: Cyprus University of Technology, Cyprus

Quantification And Mapping Of Non-Photosynthetic Cropland Biomass Using Laboratory Hyperspectral Data And Machine Learning

Stefanie Steinhäuser¹, Matthias Woche¹, Andrej Halabuk², Svetlana Košanová³, Tobias Hank¹
1: Ludwig-Maximilians-Universität (LMU), Germany; 2: Slovak Academy of Sciences, Slovakia; 3: Constantine the Philosopher University in Nitra, Slovakia

12:30pm
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1:00pm

Posters D2 W Agriculture: Crop dynamics monitoring using earth observation
Location: **First floor corridor**

Exploring Sentinel-2 Dense Image Time Series to Identify Cover Crop Emergence and Destruction dates in France: Towards the Development of an Approach for Biomass Estimation

Hugo do Nascimento Bendini¹, Rémy Fieuzal¹, Pierre Carrere², Aubin Allies², Aurélie Galvani², Éric Ceschia¹
1: CESBIO, Université de Toulouse, CNES/CNRS/INRAE/IRD/UT3, Toulouse, France; 2: EarthDaily Agro, Balma, France

Posters D2: Trends in Remote Sensing applications
Location: **First floor corridor**

Estimating Phenology Metrics From Sentinel-2 Time Series In Forest Sites

Lorenzo Parigi¹, Mirco Boschetti¹, Francesco Nutini¹, Filippo Bussotti², Martina Pollastrini², Daniela Stroppiana¹
1: Institute for Electromagnetic Sensing of the Environment, National Research Council, Milan, 20133, Italy; 2: University of Florence, Dipartimento di Scienze e Tecnologie Agrarie, Alimentari, Ambientali e Forestali (DAGRI), Florence, Italy

Deriving Winter Wheat Phenology From Combined Optical And SAR Time Series With Deep Learning

Felix Lober^{1,2}, Johannes Löw³, Marcel Schwieder^{1,2}, Alexander Gocht¹, Michael Schlund⁴, Patrick Hostert^{2,5}, Stefan Erasm¹
1: Thünen Earth Observation, Thünen Institute of Farm Economics, Germany; 2: Earth Observation Lab, Geography Department, Humboldt-Universität zu Berlin, Germany; 3: Department of Geocology, Institute of Geosciences and Geography, University of Halle-Wittenberg, Germany; 4: Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, the Netherlands; 5: Integrative Research Institute of Transformations of Human-Environment Systems (IRI THESys), Humboldt-Universität zu Berlin, Germany

Development Of A Geospatial Telemetric Water Quality Monitoring System.

Martin W. Chege^{1,2}, Kuria B. Thiong'o^{1,2}, Arthur W. Sichangi², Stefanie Steinbach^{3,4}, Andreas Rienow⁴
1: Remote sensing Research Group (RSRG); 2: Institute of Geomatics GIS & Remote sensing (IGGRS), Dedan Kimathi University of Technology (DeKUT), Kenya; 3: Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, Netherlands.; 4: Interdisciplinary Geographic Information Science, Institute of Geography, Ruhr-University Bochum, Bochum, Germany.

Derivation of Crop Parameters Using Sentinel-1 SAR Data: A Case Study for Winter Wheat in Northern Germany

Karlmarx Thangamani, Tanja Riedel, Jennifer McLelland, Markus Moeller, Heike Gerighausen
Julius Kühn Institute, Germany

Monitoring Irrigated Areas By Applying Convolutional Neural Networks To Sentinel-2 And Meteorological Time Series

Alejandro Martín Simón-Sánchez¹, José González-Piqueras¹, Luis de la Ossa², Juan Manuel Sánchez¹
1: Remote Sensing and GIS Group, Regional Development Institute, University of Castilla-La Mancha, Campus Universitario s/n, 02071 Albacete, Spain; 2: Computing Systems Department, University of Castilla-La Mancha, Campus Universitario s/n, 02071 Albacete, Spain

1:00pm
-
2:00pm
2:00pm
-
3:40pm

LD2: Lunch
Location: **First floor corridor**

NH2: Monitoring and mapping multi-hazards under climate change
Location: **Dimitrie Cantemir**
Chair: **Dr. Daniela Stroppiana**
Chair: **Prof. Bogdan Andrei Mihai**

Spatiotemporal Characteristics Of Drought And Their Impacts On Cropland Vegetation Over The Lower Mekong Basin Using Satellite-Based Time-Series Observations

Tuyen Ha Van^{1,2}, Juliane Huth¹, Soner Uereyen¹, Claudia Kuenzer^{1,2}
1: German Aerospace Center (DLR), Germany; 2: University of Wuerzburg, Germany

W2 Agriculture: New methods and algorithms in EO for agriculture
Location: **Grigore Moisil**
Chair: **Prof. Enrico Borgogno-Mondino**
Chair: **Dr. Marcel Schwieder**

Apple Fruit Load Estimation In Multi-temporal High-resolution UAV Imagery By Deep Learning

Chenglong Zhang¹, Joao Valente², Wensheng Wang⁴, Leifeng Guo³, Lammert Kooistra¹
1: Wageningen University & Research, Laboratory of Geo-Information Science and Remote Sensing, The Netherlands; 2: Wageningen University & Research, Information Technology Group, The Netherlands; 3: Chinese Academy of Agriculture Science, Agriculture Information Institute, China; 4: Ministry of Agriculture and Rural Affairs, Key Laboratory of Agricultural Big Data, China

Mapping Soil Erosion Intensity Based On Multitemporal Sentinel-1 SAR and Sentinel-2 MSI Satellite Imagery. An Inter-Comparison Approach Using In-situ Measurements

Marina Virghileanu, Bogdan-Andrei Mihai, Ionuț Săvulescu
University of Bucharest, Faculty of Geography, Romania

Leveraging PIXSEL's hyperspectral imagery for Land Use and Land Cover mapping in an agricultural region of Northeast Australia

Spyridon E. Detsikas¹, George P. Petropoulos¹, Rahul Raj²

HEC-RAS simulation of a Glacial Lake Outburst Flood to determine potential impacts using the example of Chamlang North Tsho (Lake 464) in the Hongu Valley, Nepal

Niels Dedring, Valerie Graw, Andreas Rienow

Geomatics Research Group (GRG), Ruhr-University Bochum (RUB), Bochum, Germany

1: DEPARTMENT OF GEOGRAPHY, HAROKOPIO UNIVERSITY OF ATHENS, EL. VENIZELOU 70, KALLITHEA, 17671, ATHENS, GREECE; 2: PIXXEL.SPACE, BENGALURU, KARNATAKA, INDIA

Evaluation of Sentinel-1-Based Change Detection Approaches for Regressive Erosion along the Coca River, Ecuador

Valerie Graw^{1,2,3}, Torben Dedring¹, Roman Hiby¹, Jose Jara-Alvear^{2,3,4}, Pablo Guzman^{2,3,4}, Carsten Juergens¹, Andreas Rienow¹

1: Geomatics Research Group (GRG), Ruhr-University Bochum (RUB), Bochum, Germany; 2: Transdisciplinary Center for Coupled Socio-Ecological Systems (TRACES), Universidad del Azuay (UDA), Cuenca, Ecuador; 3: Energy Sciences Research Group (CIENER), Universidad del Azuay (UDA), Cuenca, Ecuador; 4: La Corporación Eléctrica del Ecuador (CELEC EP), Cuenca, Ecuador

Mowing Detection Intercomparison Exercise (MODCiX): A Cross-European Evaluation of Mowing Detection Algorithms

Marcel Schwieder^{1,2}, Felix Lobert^{1,2}, Arnab Muhuri³, Natascha Oppelt³, Sarah Asam⁴, Sophie Reineremann⁵, Julien Morel⁶, Mattia Rossi⁶, Dominique Weber⁷, Filippo Sarvia⁸, Samuele De Petris⁸, Enrico Borgogno-Mondino⁸, Oliver Buck⁹, Stefan Ernst², Patrick Hostert^{2,10}, Silvia Valero¹¹, Anatol Garioud¹², Ann-Kathrin Holtgrave¹³, Clément Mallet¹⁴, Mathilde De Vroey¹⁵, Andreas Schaumberger¹⁶, Iason Tsardanidis¹⁷, Ruth Sonnenschein¹⁸, Stefan Erasmí¹

1: Thünen Institute of Farm Economics, Bundesallee 63, 38116 Braunschweig, Germany; 2: Humboldt Universität zu Berlin, Geography Department, Unter den Linden 6, 10099 Berlin, Germany; 3: Earth Observation and Modelling (EOM), Christian-Albrechts-Universität zu Kiel, Geographisches Institut, Ludewig-Meyn-Straße 8, 24118 Kiel, Schleswig-Holstein, Germany; 4: German Remote Sensing Data Center (DFD), German Aerospace Center (DLR), 82234 Wessling, Germany; 5: University of Würzburg, Institute of Geography and Geology, Department of Remote Sensing, 97074 Würzburg, Germany; 6: European Commission, Joint Research Center (JRC), 21027 Ispra, Italy; 7: Swiss Federal Research Institute WSL, Zürcherstrasse 111, 8902 Birmensdorf, Switzerland; 8: Department of Agricultural, Forest and Food Sciences, University of Turin, L.go Braccini 2, 10095 Grugliasco, Italy; 9: EFTAS Fernerkundung GmbH, Oststraße 2-18, 48145 Münster; 10: Humboldt Universität zu Berlin, Integrative Research Institute on Transformations of Human-Environment Systems - IRI THESys, Unter den Linden 6, 10099 Berlin, Germany; 11: CESBIO, Université de Toulouse, CNES/CNRS/INRAE/IRD/UPS, 31400 Toulouse, France; 12: IGN – French Mapping Agency (Institut Géographique National), 94160 Saint-Mandé, France; 13: Technische Universität Berlin, Geoinformation in Environmental Planning Lab, Straße des 17 Juni 145, 10623 Berlin, Germany; 14: Université Gustave Eiffel, IGN, ENSG, LASTIG, 94160 Saint-Mandé, France; 15: Earth and Life Institute, Université Catholique De Louvain, 1348 Louvain-la-Neuve, Belgium; 16: Agricultural Research and Education Center Raumberg-Gumpenstein, 8952 Irdning-Donnersbachtal, Austria; 17: BEYOND Centre of EO Research and Satellite Remote Sensing, IAASARS, National Observatory of Athens, 15236 Penteli, Greece; 18: Institute for Earth Observation, Eurac Research, Drususallee/Viale Druso 1, 39100 Bozen/Bolzano, Italy

Potential of Planet's SkySat Collect Images for Topographic Mapping

Gurcan Buyuksalih¹, Cem Gazioglu¹, Karsten Jacobsen²

1: Istanbul University, Institute of Marine Sciences and Management, Turkiye; 2: Leibniz University Hannover, Institute of Photogrammetry and Geoinformatics, Germany

Convolutional Neural Network Hardware Implementation For Soil Roughness Estimation

Stefan Popa, George Feldioreanu, Kamal Marandskiy, Mihai Ivanovici
Transilvania University of Brasov, Romania

Quantification Of Nitrogen Uptake In Cover Crops From UAV-based Multispectral Images

Paolo Dal Lago¹, Nikos Vavlas¹, Lammert Kooistra², Gerlinde De Deyn¹

1: Soil Biology Group, Wageningen University, The Netherlands; 2: Laboratory of Geo-information Science and Remote Sensing, Wageningen University, Netherlands, The

3:40pm
-
CB2D2: Coffee break
Location: **First floor corridor**

4:10pm
-
4:10pm
-
PPD2: Short - oral presentation of the posters
Location: **Ioan Mihăilescu**

5:50pm
-
4:30pm
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EARSel Council Meeting (members only)
Location: **Sala Senatului**

6:00pm

Date: Wednesday, 05/July/2023

8:00am RD3: Registration
- Location: Registration desk

4:00pm

9:00am FS2: Remote sensing solutions for a sustainable forest management
- Location: Dimitrie Cantemir
10:40am Chair: Dr. Bogdan Apostol

Sentinel-2, PlanetScope 2 And Airborne Hypspx Hyperspectral Imagery For Mountain Woody Species Mapping

Marcin Kluczek¹, Bogdan Zagajewski¹, Tomasz Zwiacz-Kozica²

1: Department of Geoinformatics, Cartography and Remote Sensing, Chair of Geomatics and Information Systems, Faculty of Geography and Regional Studies, University of Warsaw, Poland; 2: Tatra National Park, Poland

W3 Agriculture: Risk detection and management in agriculture - climate

Location: Grigore Moisil

Chair: Dr. Julianne Oliveira

Chair: Prof. Enrico Borgogno-Mondino

A Web Tool For Irrigation Management To Support Local Authorities And Farmers In Cyprus from ERATOSTHENES Centre of Excellence

Stelios Neophytides^{1,3}, Marinos Eliades¹, Georgios Papadavid², Christiana Papoutsas^{1,3}, Diofantos Hadjimitsis^{1,3}

1: ERATOSTHENES Centre of Excellence, Cyprus; 2: Agricultural Research Institute, Cyprus; 3: Cyprus University of Technology, Cyprus

Exploring Characteristics Of National Forest Inventories For Integration With Global Space-Based Forest Biomass Data

Karimon Nesha¹, Martin Herold¹, Veronique De Sy¹, Sytze De Bruin¹, Arnan Araza¹, Natalia Málaga¹, Javier GP Gamarra², Kristell Hergoualc'h³, Anssi Pekkarinen², Carla Ramirez², David Morales-Hidalgo², Rebecca Tavani²

1: Wageningen University and Research, Netherlands, The; 2: Food and Agriculture Organization of the United Nations; 3: Center for International Forestry Research (CIFOR)

Agricultural Drought Monitoring In The Danubian Lowland Using Vegetations Indices Derived From MODIS Time Series

Tomáš Rusňák

ILE SAS v.v.i., Slovak Republic

Automatic Detection of Tree Species in Heterogeneous Forests Using RGB Imagery and Deep Learning

Mirela Beloiu, Nataliia Rehus, Verena Griess

ETH Zurich, Department of Environmental Systems Science, Switzerland

Evaluating Sentinel-1's ability to identify bare soil on tillage parcels in winter in the Republic of Ireland using Random Forest Model

Mohana Priya Logakrishnan^{1,2}, Jesko Zimmermann¹, Stuart Green^{1,2}

1: TEAGASC, Ireland; 2: TERRAIN-AI, Ireland

Identification, Mapping And Assessment Of Windthrow Effects Using Remote Sensing Methods

Constantin-Cosmin Loghin¹, Flaviu Popescu¹, Florin Achim¹, Ionel Ban¹, Mihai Furdui¹, Robert-Ştefan Ciobanu¹, Razvan Raducu¹, Virgil Zamfira², Aurelian Vladioiu²

1: National Institute for Research and Development in Forestry "Marin Drăcea", Romania; 2: Curtea de Argeş Forest District

From the Lab to the Farm: Quantifying Factors Influencing Temperature Measurements from Miniaturized Thermal Cameras to Benefit Crop Water Stress Detection at Different Crop Growth Stages

Quanxing Wan¹, Magdalena Smigaj¹, Benjamin Brede², Lammert Kooistra¹

1: Laboratory of Geo-Information Science and Remote Sensing, Wageningen University & Research, Droevendaalsesteeg 3, 6708 PB Wageningen, The Netherlands; 2: Helmholtz Center Potsdam GFZ German Research Centre for Geosciences, Section 1.4 Remote Sensing and Geoinformatics, Telegrafenberg, 14473 Potsdam, Germany

Comparing Multispectral RPAS And Satellite Data For Rice Crop Multitemporal Characterisation

Enrico Chiesa, Samuele De Petris, Alessandro Farbo, Filippo Sarvia, Enrico Borgogno-Mondino

University of Turin, Department of Agricultural, Forest and Food Sciences, Grugliasco L.go Braccini 10095, Turin, Italy

10:40am CB1D3: Coffee break
- Location: First floor corridor

11:10am

11:10am Keynote Natural Hazards: Dr Filippo Catani - University of Padova
- Location: Ioan Mihăilescu

12:00pm Chair: Dr. Ionut Sandric

12:00pm Posters D3 W Agriculture: Integrated remote sensing methods for improving agricultural practices
- Location: First floor corridor

1:00pm

On-board Data Processing for real time inference using Edge-AI: An application on Weed Detection.

Sarathchandrakumar Thottuchirayil Sasidharan¹, Daniele Latini², Mihai Ivanovici³, Giovanni Schiavon¹, Kathiravan Thangavel⁴, Fabio Del Frate¹

Posters D3: Remote sensing applications for natural hazards
Location: First floor corridor

A Semiautomated Mapping of Landslide Volume Displacements Using UAV Aerial Imagery

Radu Irimia¹, Ionut Sandric¹, Viorel Ilinca², Zenaida Chitu^{3,4}, Ion Gheuca²

1: University of Rome, "Tor Vergata", Rome, Italy; 2: GEO-k srl, Rome, Italy; 3: University of Brasov, Braşov, Romania; 4: RMIT UNIVERSITY, Melbourne, Australia

Fertilization of Maize Crops Using Remote Sensors of an Autonomous Field Robot

Katarzyna Kubiak, Jan Kotlarz

Lukasiewicz - Institute of Aviation, Poland

Assessment of Grassland Forage Quality in the Context of Northern Europe Agriculture Using Sentinel-2

Julianne Oliveira¹, Julien Morel², Junxiang Peng¹, Bengt-Ove Rustas³, David Parsons¹

1: Swedish University of Agricultural Sciences, Department of Crop Production Ecology, Sweden; 2: European Commission, Joint Research Center, Ispra, Italy; 3: Swedish University of Agricultural Sciences, Department of Animal Nutrition and Management, Sweden

Mowing Detection Based On Sentinel-1 & -2 Data For Supporting CAP In Wallonia

François Godechal, Emilie Beriaux, Alban Jago, Adrien Cassiers, Cozmin Lucau-Danila, Yannick Curnei, Viviane Panchon

Walloon Agricultural Research Centre, Belgium

Mapping And Characterization Of Hedges In Agricultural Landscapes For Ecological Assessments In Bavaria, Germany

Jennifer Kriese¹, Sarah Asam¹, Mariel Dirscherl¹, Michael Stellmach¹, Kirstel Kerler², Johanna Buchner², Ursula Gessner¹

1: German Aerospace Center, Germany; 2: Bayerisches Landesamt für Umwelt, Germany

1: University of Bucharest, Romania; 2: Geological Institute of Romania, Romania; 3: National Meteorological Administration, Romania; 4: National Institute of Hydrology and Water Management, Romania

Eo-persist: a Cloud-based Remote Sensing Data System for Promoting Research and Socioeconomic Studies in Arctic Environments

George P. Petropoulos¹, Vassilia Karathanassi², Ionut Sandric³, Dimitris Sykas⁴, Marko Scholtze⁵, Lukasz Kubowicz⁶, Giuseppe Di Carpio⁷, Juha Lemmetyinen⁸, Massimiliano Chersich⁹, Manfred Kruschke¹⁰, Spyridon E. Detsikas¹

1: Department of Geography, Harokopio University of Athens, El. Venizelou 70, Kallithea, 17671, Athens, Greece; 2: Remote Sensing Laboratory, School of Rural, Surveying and Geoinformatics Engineering, National Technical University of Athens, 9 Heroon Polytechniou St., Zographou, Athens, 157 80, Greece; 3: Faculty of Geography, University of Bucharest, Bd. N. Balcescu, 1, 010041 Bucharest, Romania; 4: CloudEO Hellas, Boukouvala 8, 11471 Athens, Greece; 5: Department of Physical Geography and Ecosystem Science, Lund University, Se-22362 Lund, Sweden; 6: CloudFerro Sp. z o. o, ul. Nowogrodzka, 31 00-511, Warszawa, Poland; 7: PlanetGIS-SKY, Street Theodor Aman 17 E, Sinaia, Romania; 8: Arctic Space Center, Finnish Meteorological Institute, P.O. Box 503, 00101 Helsinki, Finland; 9: YETITMOVES SRL, Via Ferrara 1, 27020, Pavia, Italy; 10: CloudEO AG, Ludwigstrasse 8, 80539 Munich, Germany

Integration of Multi-sensor Remote Sensing Data for Monitoring Illegal Open Pit Mines

Krystyna Michałowska^{1,2}, Ewa Głowienka^{2,3}, Tomasz Pirowski^{2,3}

1: Gdańsk University of Technology, Poland; 2: University of Agriculture in Krakow; 3: AGH University of Science and Technology, Poland

1:00pm

-

2:00pm

2:00pm

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3:40pm

LD3: Lunch

Location: **First floor corridor**

NH1: Recent Earth Observation technology applications in natural hazards research

Location: **Dimitrie Cantemir**

Chair: **Prof. Dr. Filippo Catani**

Automatic Mapping of Landslides by Deep Learning and High-Resolution LiDAR Products

Ales Létal, Ionuț Șandric, Jan Klimes

Palacký University Olomouc, Czech Republic

Satellite Analysis Of The Impact Of Severe Meteorological Phenomena On The Vulnerable Sandy Lands Of The Baragan Plain

Claudiu-Valeriu Angearu, Anișoara Irimescu, Denis Mihăilescu, Irina Onțel, Argentina Nerțan, Vasile Crăciunescu

National Meteorological Administration, Romania

Mapping active slow-moving landslides using Persistent Scatters Interferometry in Romania

Ionut Sandric¹, Viorel Ilinca², Zenaida Chitu^{3,4}, Radu Irimia¹

1: University of Bucharest, Faculty of Geography, Romania; 2: Geological Institute of Romania, Romania; 3: National Meteorological Administration, Romania; 4: National Institute of Hydrology and Water Management, Romania

W4 Agriculture: Risk detection and management in agriculture - pests and weeds

Location: **Grigore Moisil**

Chair: **Prof. Enrico Borgogno-Mondino**

Chair: **Prof. Dr. Francesco Pirotti**

Leveraging Multimodality For Disease Detection In Seed Potatoes

Magdalena Smigaj, Harm Bartholomeus, Lammert Kooistra

Laboratory of Geo-Information Science and Remote Sensing, Wageningen University & Research, Droevendaalsesteeg 3, 6708 PB Wageningen, The Netherlands

Mapping Vineyards Pathogens Using Convolutional Neural Networks

Diana Petre¹, Ionuț Șandric², Diana Vizitiu³, Ionela Sărdărescu³, Marian Dârdală¹, Cristian Ioniță¹

1: Bucharest University of Economic Studies, Romania; 2: University of Bucharest; 3: INCDBH Ștefănești, Romania

Sentinel-2 And PlanetScope Data For Alien Invasive Species of Goldenrod (Solidago Spp.) Mapping

Karolina Barbara Zdunek, Marcin Kluczek, Bogdan Zagajewski

Department of Geoinformatics, Cartography and Remote Sensing, Chair of Geomatics and Information Systems, Faculty of Geography and Regional Studies, University of Warsaw, Poland

Enhancing Landslide Deformation Prediction in Southern Italy Using a CNN-LSTM Algorithm with Spatio-Temporal Dependency

Mohammad Amin Khalili, Luigi Guerriero, Domenico Calcaterra, Diego Di Martire

University of Naples "Federico II", Department of Earth, Environmental and Resource Sciences, Italy

Spatialization of Japanese Knotweed Colonies: from Local Drone Scale to Regional Airborne Application

Coraline Wyard¹, Florian Bueno^{1,2}, Benjamin Beaumont¹, Yasmina Loozen¹, Eric Hallot¹

1: Remote Sensing and Geodata Unit, Institut Scientifique de Service Public (ISSeP), Liège, Belgium; 2: Ecole Nationale des Sciences Géographiques (ENSG), Paris, France

Desertification Mitigation Policies In The Face Of Climate Change In Kenya: Exploring The Potential Of Remote Sensing For Supporting Stakeholder Involvement

Martin W. Chege¹, Angeline Asangire Oprong²

1: Remote Sensing Research Group (RSRG), Institute of Geomatics GIS & Remote sensing (IGGRS), Dedan Kimathi University of Technology (DeKUT), Kenya; 2: Carl von Ossietzky Universität Oldenburg

Assessing the Impact of Ozone on Crop Health and Productivity Using Open-Source Remote Sensing Data and Machine Learning

Luka Mamic¹, Francesco Pirotti^{2,3}

1: Sapienza University of Rome, Department of Civil, Building and Environmental Engineering, Italy; 2: University of Padova, Department of Land and Agroforestry Systems (TESAF), Italy; 3: University of Padova, Interdepartmental Research Centre in Geomatics (CIRGEO), Italy

3:40pm

-

CB2D3: Coffee break

Location: **First floor corridor**

4:10pm

4:30pm

-

EARSel General Assembly (members only)

Location: **Ioan Mihăilescu**

6:00pm

7:00pm

-

SDinner: Symposium dinner

Location: Restaurant Hanu' Berarilor Casa Oprea Soare

Address: Strada Poenaru Bordea 2, București 040092

11:00pm

Date: Thursday, 06/July/2023

8:00am RD4: Registration
- Location: Registration desk

12:00pm

9:00am LULC: Land use and land cover - remote sensing
- Location: Dimitrie Cantemir
10:40am Chair: Dr. Jochem Verrelst

Comparison of Machine Learning Algorithms For Land Cover Mapping According to Corine Land Cover Nomenclature

Marcin Kluczek¹, Bogdan Zagajewski¹, Edwin Raczko¹, Marlena Kycko¹, Anca Dabija¹, Ahmed H. Al-Sulttani¹, Anna Tardà², Lydia Pineda², Jordi Corbera²

1: Department of Geoinformatics, Cartography and Remote Sensing, Chair of Geomatics and Information Systems, Faculty of Geography and Regional Studies, University of Warsaw, 00-927 Warszawa, Poland; 2: Catalan Earth Observation Centre, Cartographic and Geological Institute of Catalonia, E-08038 Barcelona, Spain

UCUG: Urban climate and green infrastructure applications with remote sensing

Location: Grigore Moisil
Chair: Dr. Diana Andreea Onose
Chair: Irada Ismayilova

Investigating Extreme Temperature Variabilities in Deprived Urban Areas in Sub-Saharan African Cities

Stefanos Georganos¹, Sabine Vanhuyse², Angela Abascal³, Jon Wang⁴, Monika Kuffer⁴

1: Geomatics Unit, Department of Environmental and Life Sciences, Karlstad University, Sweden; 2: Department of Geosciences, Environment & Society, Université libre De Bruxelles (ULB), 1050 Bruxelles, Belgium; 3: Navarra Center for International Development, Instituto de Cultura y Sociedad (ICS), University of Navarra, Pamplona, Spain; 4: Faculty of Geo-Information Science & Earth Observation (ITC), University of Twente, Enschede, The Netherlands

Can we Improve the Accuracy of the Land Cover Classification by Pre-selection of the Reference Samples and Applying DEM in the Mountain Area in Norway?

Adam Waśniewski¹, Agata Hościło¹, Linda Aune-Lundberg²

1: Institute of Geodesy and Cartography, Centre of Applied Geomatics, Poland; 2: Norwegian Institute of Bioeconomy Research, Division of Survey and Statistics, Norway

Comparative Study of Urban Heat and its Vulnerability in Nashville and Portland, USA

Sunhui Sim
University of North Alabama, United States of America

ST_LUCAS: Easy Access System for Harmonized LUCAS Dataset

Tomáš Bouček, Martin Landa, Lukáš Brodský, Lena Halounová, Ondřej Pešek

CTU in Prague, Faculty of Civil Engineering, Czech Republic

Semantic Identification of Urban Green Spaces: Urban Gardens

Irada Ismayilova, Sabine Timpf
University of Augsburg, Germany

Exploring The Use Of Orthophotos In Google Earth Engine For High-Resolution Mapping Of Impervious Surfaces: A Data Fusion Approach In Wuppertal, Germany

Jan-Philipp Langenkamp, Andreas Rienow

Ruhr-University Bochum, Geomatics Research Group, Institute of Geography, Germany

Using GEOBIA and Vegetation Indices to Assess Small Urban Green Areas in Two Climatic Regions

Ana-Maria Popa^{1,2}, Diana-Andreea Onose^{1,2}, Ionut-Cosmin Sandic², Evangelos Dosiadis³, George Petropoulos³, Athanasios-Alexandru Gavrilidis^{1,2}, Antigoni Faka³

1: University of Bucharest, Centre for Environmental Research and Impact Studies, Romania; 2: University of Bucharest, Faculty of Geography, Romania; 3: Harokopio University of Athens, Department of Geography, Greece

Regional Modeling of Future Urban Growth based on Global Settlement Products – Comparing the Performances of OSM with the Global Human Settlement Layer and the World Settlement Footprint

Andreas Rienow

Ruhr University Bochum, Germany

Monitoring Urban Traffic Impact In Urban Environments Using Yolo7

Marian Puie, Bogdan-Andrei Mihai, Ionuț Șandric
University of Bucharest, Romania

10:40am CB1D4: Coffee break
- Location: First floor corridor

11:10am

11:10am Hy: Hyperspectral and multispectral applications of remote sensing
- Location: Dimitrie Cantemir
12:50pm Chair: Bringfried Pflug
Chair: Dr. Ionut Sandric

UAS: Using UAS for natural hazards and environmental studies

Location: Grigore Moisil
Chair: Prof. Mattia Crespi

Assessment Of The Novel Watersat Imaging Spectrometer Enhanced (WISE) Sensor For The Mapping Of Optically Shallow Inland And Coastal Waters

Gabriela Ifimov¹, Raymond Soffer¹, Raphaël Mabit², Simon Belanger²

1: National Research Council Canada; 2: Université du Québec à Rimouski

Self-Calibration Still An Underestimated Tool

Karsten Jacobsen
Leibniz University Hannover, Germany

Geo-monitoring Of Tree Species, Vitality And Maintenance Condition Of Fruit Trees In Meadow Orchards Using UAV Technology

Detection of Geothermal Anomalies Using Pre-Dawn Thermal Remote Sensing Data from ECOSTRESS Sensor

Agnieszka Soszynska¹, Thomas Groen¹, Harald van der Werff¹, Eunice Bonyo², Robert Hewson³, Robert Reeves⁴, Christoph Hecker¹

1: University of Twente, the Netherlands; 2: KenGen, Kenya; 3: Independent researcher, Australia; 4: GNS Science, New Zealand

Sarah Pflüger¹, Mario Bliersch¹, Maike Petersen¹, Alexander Siegmund^{1,2}

1: Heidelberg University of Education, Germany; 2: Heidelberg Center for the Environment (HCE) & Institute of Geography, Heidelberg University, Germany

Initial Validation of Sentinel-2 Collection-1 L2A-Products

Bringfried Pflug¹, Jérôme Louis², Avi Putri Pertiwi¹, Raquel de los Reyes¹, Francesco C. Pignatale³, Silvia Enache⁴, Rosario Quirino Iannone⁵, Valentina Boccia⁶, Ferran Gascon⁶

1: German Aerospace Centre, Remote Sensing Technology Institute, Germany; 2: Telespazio France - A Leonardo / Thales Company, France; 3: Telespazio Germany GmbH - A Leonardo / Thales Company, Germany; 4: CS Group, France; 5: Rhea spa, Italy; 6: European Space Agency (ESA), European Space Research Institute (ESRIN), Italy

The Support of the UAV Imagery in Complementarity of the Satellite High Resolution Remote Sensing Imagery for the Romanian Shore Monitoring

Razvan Mateescu¹, Liliana Rusu², Elena Vlasceanu¹, Dragos Niculescu¹

1: NIMRD, Romania; 2: DJUG, Romania

Monitoring High-Resolution LST In Woody Crops From The Synergy Of Sentinel-2 And Sentinel-3

Juan Manuel Sánchez¹, Joan Miquel Galve¹, Alejandro Martín Simón-Sánchez¹, José González-Piqueras¹, Ramón López-Urrea²

1: University of Castilla-La Mancha, Remote Sensing and GIS group, IDR, Campus Universitario s/n, 02071 Albacete, Spain; 2: Instituto Técnico Agronómico Provincial, Parque empresarial Campollano, 2ª Avda. Nº 61, 02007 Albacete, Spain.

The Relation Between Tree Above-ground Biomass and Crown Height Model Using a High-resolution Camera on UAV: a Case Study in Sessile Oak Stand

Alexandru-Bogdan Cucu, Gheorghe Raul Radu, Ştefan Petrea, Tibor Şerban

National Institute for Research and Development in Forestry "Marin Drăcea", Romania

Assessment of Fractional Woody Vegetation Cover Change in an African Savannah Region

Elias Symeonakis¹, Christina Karakizi¹, Eva Arnau¹, Antonis Korkofigkas²

1: Manchester Metropolitan University, United Kingdom; 2: National Technical University of Athens, Greece

Identification Of The Driving Factors For The Occurrence Of Forest Fires And The Zoning Of Forest Fire Hazard Through Logistic Regression And Random Forest In Romania Fire Hazard Through Logistic Regression and Random Forest in Romania

Adrian Lorent^{1,2}, Marius Petrila¹, Bogdan Apostol¹, Florinel Capalb^{1,2}, Cristiana Marcu¹, Ovidiu Badea^{1,2}

1: National Institute for Research and Development in Forestry (INCDS), "Marin Drăcea", Romania; 2: "Transilvania" University of Braşov, Faculty of Silviculture and Forest Engineering, Braşov, Romania

1:00pm

-

YSA: Young Scientist Award Ceremony

Location: **Ioan Mihăilescu**

Chair: **Prof. Mattia Crespi**

1:10pm

1:10pm

-

CS: Closing Ceremony

Location: **Ioan Mihăilescu**

Chair: **Jean-Christophe Schyns**

Chair: **Dr. Ionut Sandric**

1:20pm

1:20pm

-

LD4: Lunch

Location: **First floor corridor**

2:20pm

2:20pm

-

FE: Field excursion

Two options are available for the field excursion:

- Trip to Natural Park Vacaresti <https://parcnaturalvacaresti.ro/en/>
- Bucharest Old Town in the context of Seismic Risk

6:00pm

The option to chose is available during the registration