Conference Agenda

Session Overview

Date: Monday, 17/June/2024

8:00am - 5:00pm — **Registration**
Location: Business School of Manchester Metropolitan University

8:45am - 9:00am — **Opening ceremony**
Location: BS G.36
Chair: **Dr. Elias Symeonakis**
Chair: **Prof. Patrick Hostert**
Opening ceremony 5-min talks from:
- Prof Nick Brook, Pro-Vice Chancellor for Research, MMU
- Dr Jean-Christophe Schyns, EARSeL President
- Dr Elias Symeonakis, local organiser

9:00am - 9:30am — **Keynote C. Tucker: Hyper-Spatial Remote Sensing**
Location: BS G.36
Chair: **Dr. Elias Symeonakis**

9:30am - 10:45am

W1 Agriculture
Location: BS G.36
Chair: **Prof. Enrico Borgogno-Mondino**
Chair: **Prof. Patrick Hostert**

Satellite Based Estimation Of Grassland Yield And Quality Dynamics

Andreas Schaumberger[1], Andreas Klingler[1], Aleksandar Dujakovic[2], Konrad Mayer[3], Felix Reuß[4], Clement Atzberger[2], Francesco Vuolo[2]
1: Agricultural Research and Education Center (AREC) Raumberg-Gumpenstein, Austria; 2: University of Natural Resources and Life Sciences, Institute of Geomatics, Austria; 3: GeoSphere Austria; 4: Vienna University of Technology, Department of Geodesy and Geoinformation, Austria

Subnational Statistics from Field-Level Yield Estimation and Forecast: Evaluation of Models Ingesting Sentinel-2 data

Pierre Houdmont[1], Martin Claverie[2], Pierre Defourny[1]
1: UCLouvain,Earth and Life Institute, Belgium; 2: EU Comission, Joint Research Center (JRC-ISPRA), Italy

Annual Grassland Yield Estimation Based On Sentinel-2 Time Series

Sophie Reinermann[1,2], Anne Schucknecht[3], Ursula Gessner[2], Sarah Asam[2], Ralf Kiese[4], Claudia Kuenzer[1,2]
1: Department of Remote Sensing, Institute of Geography and Geology, University of Wuerzburg, Germany; 2: German Remote Sensing Data Center (DFD), Earth Observation Center (EOC), German Aerospace Center (DLR), Germany; 3: OHB System AG, Image Simulation and Processing Team, Germany; 4: Karlsruhe Institute of Technology, Institute of Meteorology and Climate Research – Atmospheric Environmental Research, Germany

Towards the Early Detection of Autumn Wheat in PRISMA Images

Mihai Ivanovici[1], Serban Oprisescu[1], Corneliu Florea[1,2]
1: Transilvania University of Brasov, Romania; 2: National University of Science and Technology Politehnica of Bucharest, Romania

A Systematic Study On The Influence Of Remote Sensing Data Resolution Designed To Improve The Efficiency Of Soil Organic Carbon Monitoring Activities

Savannah McGuirk[1,2], S. Mohammad Mirmazloumi[3]
1: Carbon Monitoring Services, Canberra, Australia; 2: CUAVA, the ARC Training Centre for CubeSats, UAVs and their Applications, University of Sydney, Australia; 3: Leibniz-Centre for Agricultural Landscape Research (ZALF), Germany

UAS S1
Location: BS G.35
Chair: **Dr. Klaas Pauly**
Chair: **Dr. Coraline Wyard**

Improving Accessibility Of Drone-based Environmental Monitoring Through A Direct Georeferencing-based Image Processing Service

Klaas Pauly, Pieter-Jan Baeck, Liesbeth De Keukelaere, Dominique De Munck, Wouter Dierckx, Walter Horsten, Robrecht Moelans, Sam Oswald, Gert Strackx, Kris Vanhoof, Dries Raymaekers
VITO, Belgium

Near Real-Time Flood Detection And Mapping Using UAS

Pieter-Jan Baeck, Lisa Landuyt, Kris Vanhoof, Walter Horsten, Klaas Pauly, Nicolas Lewyckyj
VITO, Remote Sensing Department, Belgium

AI-based Tree Species Classification and Segmentation from UAS Multispectral Data

Romy Schlögel[1], Nicola Dimarco[1], Louis Andreani[1], Matthieu Duval[2], Cadwal Borremans[1,3], Benoît Bartiaux[1]
1: Spacebel, Earth Observation Applications, Belgium; 2: Multitel asbl, Department of AI, Belgium; 3: University of Liège, Department of Geography, Belgium

Prediction of Turbidity and TDS in Dam Reservoir from Multispectral UAV-Drone and Sentinel-2 Image Sensors using Stacked Machine Learning Models

Yashon Ouma[1], Phillimon Odirile[1], Boipuso Nkwae[1], Ditiro Moalafhi[2], George Anderson[1], Bhagabat Parida[3], David Mandiyanike[1], Jiaguo Qi[4]
1: University of Botswana, Botswana; 2: BUAN; 3: BIUST; 4: Michigan State University

Integrating Field Surveys with UAV Imagery for Agricultural Plant Cover Monitoring

Carmen Orts[1], Maria Desamparados Soriano[2], Ramón Pons-Crespo[3], Ángel Marqués-Mateu[3], Gabriel Riutort-Mayol[4]
1: Instituto Valenciano de Investigaciones Agrarias (IVIA), Spain; 2: Universitat Politècnica de Valènica, Department of Plant Production, Spain; 3: Universitat Politècnica de Valènica, Department of Cartographic Engineering, Geodesy and Photogrammetry, Spain; 4: Fundación para el Fomento de la Investigación Sanitaria y Biomédica (FISABIO), Spain

10:45am - 11:00am

Monday Poster (1): 2 min short presentations
Location: BS G.36
Chair: **Prof. Enrico Borgogno-Mondino**
Chair: **Dr. Marcel Schwieder**

UAS S1 (cont.)
Location: BS G.35

Mowing Detection Based On Sentinel-2 Time Series: From Wallonia to Europe

François Godechal[1], Emilie Beriaux[1], Alban Jago[1], Marcel Schwieder[2], Felix Lobert[2], Adrien Cassiers[1], Viviane Planchon[1], Yannick Curnel[1]
1: Walloon Agricultural Research Centre, Belgium; 2: Thünen Institute of Farm Economics, Germany

Within-field Crop Growth Heterogeneity from Multi-year Leaf Area Index Time Series Analysis

Tom Kenda, Pierre Houdmont, Céline Champagne, Xavier Draye, Pierre Defourny
Université catholique de Louvain, Earth and Life Institute, Belgium

Time-Series Of Remotely Sensed Data To Estimate Wheat Grain Yield At Field Level

Francesco Nutini[1], Mattia Scarpantoni[1], Federico Filipponi[2], Mirco Boschetti[1]
1: Institute for Electromagnetic Sensing of the Environment, National Research Council of Italy, Milano, Italy; 2: Institute of Environmental Geology and Geoengineering, National Research Council of Italy, Roma, Italy

Exploring The Relationships Between Ground Observations And Remotely Sensed Hazelnut Spring Phenology

Sofia Bajocco[1], Mara Di Giulio[1], Abdoul Hamid Mohamed Sallah[2], Simone Bregaglio[1]
1: CREA - Council for Agricultural Research and Economics, Research Center for Agriculture and environment, Italy; 2: Ferrero Hazelnut Company, Ferrero Trading Lux, Senningerberg, Luxembourg

Is the MOD16A2 Product Reliable enough for Mapping Potential Evapotranspiration for Agriculture-related Applications? Preliminary Results in Piemonte (NW Italy).

Alessandro Farbo, Filippo Sarvia, Samuele De Petris, Federica Ghilardi, Enrico Borgogno-Mondino
DISAFA – Department of agriculture, forest and food sciences, University of Turin, Italy

Analysing Sentinel-1 Temporal Profiles for Discriminating Winter Catch Crops Along with Main Crops in Germany

Shanmugapriya Selvaraj[1], Phillip Lemke[1], Damian Bargiel[2], Heike Gerighausen[1]
1: Julius Kuehn Institute, Institute for Crop and Soil Science, Germany; 2: Hochschule Geisenheim University, Department of Landscape Planning and Nature Conservation, Germany

Plant Species Richness Across Grasslands in Germany

Javier Muro
Thuenen Institute, Germany

11:00am - 11:30am **Coffee Break**
Location: **Business School of Manchester Metropolitan University**

11:30am - 12:45pm

W2 Agriculture

Location: **BS G.36**
Chair: **Dr. Sarah Asam**
Chair: **Dr. Marcel Schwieder**

Crop Phenology Assessment with Multiscale and Multisource Time Series

Magdalena Main-Knorn[1], Claas Nendel[1,2,3], Laura Flores[1,4], Gohar Ghazaryan[1,5]
1: Leibniz Centre for Agricultural Landscape Research (ZALF), Germany; 2: Institute of Biochemistry and Biology, University of Potsdam, Potsdam, Germany; 3: Integrative Research Institute on Transformations of Human-Environment Systems (IRI THESys), Humboldt-Universität zu Berlin, Berlin, Germany; 4: Institute of Earth and

UAS S2

Location: **BS G.35**
Chair: **Dr. Klaas Pauly**
Chair: **Dr. Coraline Wyard**

Surface Reflectance Intercomparison Exercise For Vegetation (SRIX4Veg) Overview And Results

Niall Origo[1], Harry Morris[1,3], Chloe Randall[1], Morven Sinclair[1], Rasma Ormane[1], Matthew Scholes[1], Bernardo Mota[1], Fernando Camacho[2], Jorge Sanchez-Zapero[2], Enrique Martínez-Sanchez[2], Jadu Dash[3], Luke A Brown[3,4], Valentina Boccia[5]
1: National Physical Laboratory, United Kingdom; 2: Earth Observation Laboratory (EOLab); 3: School of Geography

Environmental Science, University Potsdam, Potsdam, Germany; 5: Earth Observation Lab, Geography Department, Humboldt-Universität zu Berlin, Berlin, Germany

How Does Phenology Shape Crop- And Orbit-Specific InSAR Coherence And PolSAR-Signatures Of Sentinel-1

Johannes Markus Löw[1], Steven Hill[2], Michael Thiel[2], Tobias Ullmann[2], Christopher Conrad[1]
1: Martin-Luther-University Halle-Wittenberg, Germany; 2: Earth Observation Research Cluster, Department of Remote Sensing, Institute of Geography and Geology, University of Würzburg, Germany

"Sensitivity Of C-band Backscatter To Field Management Practices"

Felix Reuß, Mariette Vreugdenhil, Emanuel Bueechi, Bernhard Raml, Wolfgang Wagner
Vienna University of Technology, Austria

Integration of Remote Sensing, Ground Data and Meteo-climatic Variables for Agricultural Drought Monitoring: First Results of a Data-driven Approach

Filippo Bocchino[1,3], Riccardo Contu[1], Lorenza Ranaldi[1], Antonio Denaro[3], Laura Rosatelli[3], Camillo Zaccarini[3], Deodato Tapete[4], Alessandro Ursi[4], Maria Virelli[4], Patrizia Sacco[4], Valeria Belloni[1], Roberta Ravanelli[1], Mattia Crespi[1,2]
1: Geodesy and Geomatics Division - DICEA, Sapienza University of Rome, Italy; 2: Sapienza School for Advanced Studies, Sapienza University of Rome, Italy; 3: Institute of Services for the Agricultural and Food Market (ISMEA) - Agricultural Risk Management Department; 4: Italian Space Agency (ASI), Italy

Classification Of Organic And Conventional Farming Practices And Crop Types Using A Multitask Deep Learning Model

Jan Hemmerling[1], David Mickisch[2], Theresa Follath[2], Begüm Demir[2], Stefan Erasmi[1]
1: Thünen Institute of Farm Economics; 2: Technische Universität Berlin

and Environmental Science, University of Southampton; 4: School of Science, Engineering and Environment, University of Salford; 5: European Space Research Institute, European Space Agency

Towards Drone-Based Aquatic Reflectance Fiducial Reference Measurements To Validate Aquatic Reflectance Satellite Products

Liesbeth De Keukelaere[1], Sindy Sterckx[1], Klaas Pauly[1], Ils Reusen[1], Agnieszka Bialek[2], Niall Origo[2]
1: VITO, Belgium; 2: National Physical Laboratory, United Kingdom

A Methodological Workflow for Ultra-high Resolution Dsm Generation with LiDAR Data in Wetlands

Erika Piaser[1,2], Andrea Berton[3], Giovanna Sona[2,4], Paolo Villa[1]
1: Institute for Electromagnetic Sensing of the Environment, National Research Council of Italy; 2: Department of Civil and Environmental Engineering, Politecnico di Milano, Italy; 3: Institute of Geosciences and Earth Resources, National Research Council of Italy; 4: National Biodiversity Future Centre (NBFC), Italy

Weakly Supervised Image Semantic Segmentation of UAV Multispectral Orthophotos to Reduce Image Labelling Effort for the Mapping of Woody Invasive Alien Plants

Diogo André Duarte[1], Gil Gonçalves[1,2], Cidália Fonte[1,2]
1: INESC Coimbra - Instituto de Engenharia de Sistemas e Computadores de Coimbra, Portugal; 2: University of Coimbra, Department of Mathematics, Coimbra, Portugal

Glacier Change Monitoring from Multitemporal UAV data: the Case Study of Forni Glacier (Italy)

Davide Fugazza
Università degli studi di Milano, Italy

12:45pm - 1:00pm

Monday Poster (2): 2 min short presentations
Location: **BS G.36**
Chair: **Prof. Enrico Borgogno-Mondino**
Chair: **Dr. Marcel Schwieder**

Application of YOLOv8n for Agricultural Parcel Delineation from Historical Aerial Photographs in the Ecuadorian Andes

Fabián Santos, Fernanda Suárez, Santiago Bonilla
Universidad Indoamerica, Ecuador

On the Use of NDVI to Estimate LAI in Field Crops: presenting the LAIr package

Sofia Bajocco[1], Carlotta Ferrara[2], Lorenzo Crecco[1], Nicola Puletti[2], Simone Bregaglio[1], Francesco Chianucci[2]
1: CREA - Council for Agricultural Research and Economics, Research Center for Agriculture and Environment, Italy; 2: CREA - Council for Agricultural Research and Economics, Research Center for Forestry and Wood, Italy

Exploring Snow Cover Trends In Western Alps (NW Italy) By Remote Sensing And Their Possible Effects On Agriculture

Francesco Parizia[1,2], Luigi Perotti[1], Samuele De Petris[1], Enrico Borgogno Mondino[1]
1: Università degli Studi di Torino, Italy; 2: Università degli Studi di Roma “La Sapienza”, Italy

Unsupervised Winter Crop Mapping with Sentinel-1 and -2 temporal analysis

UAS S2 (cont.)
Location: **BS G.35**

Hsuan-Yi Li[1], James A Lawrence[1], Philippa J Mason[2], Richard C Ghail[3]
1: Department of Civil and Environmental Engineering, Skempton Building, Imperial College London, South Kensington, London SW7 2AZ, UK; 2: Department of Earth Science & Engineering, Imperial College London, Prince Consort Road, London SW7 2AZ, UK; 3: Department of Earth Sciences, Queens Building 245, Royal Holloway, University of London Egham, Surrey TW20 0EX, UK

Accuracy Assessment of Remote Sensing UAV's Spatial Positioning when Processing Predefined Flight Patterns and during Automatic Landing Process

Timo P. Lehmann, Simon Drollinger, Daniela Sauer, Jonas Fierke, Birgitta M. Putzenlechner, Daniel Wyss, Martin Kappas
Georg-August-University of Goettingen, Institute of Geography, Germany

Integrating IEEE P4001 Standards For Hyperspectral Imager Calibration Into UAS Sensor Calibration Workflows – The Case Of NERC FSF's UAS Sensor Suite

Robbie Ramsay
NERC Field Spectroscopy Facility, United Kingdom

The Importance of Feature Engineering for the Explainability of (German) Digital Soil Mapping Products – a SOC Content Modelling Example in Bavaria

Markus Möller[1], Simone Zepp[2], Martin Wiesmeier[3], Younes Garosi[1], Uta Heiden[4]
1: Julius Kühn Institute (JKI), Germany; 2: German Aerospace Center (DLR), German Remote Sensing Data Center (DFD); 3: Bavarian State Research Center for Agriculture, Institute for Organic Farming, Soil and Resource, Management; 4: German Aerospace Center (DLR), Remote Sensing Technology Institute (IMF)

1:00pm - 2:30pm **Lunch**
Location: Business School of Manchester Metropolitan University

2:30pm - 3:00pm **Keynote P. Hostert: Multi-Super-Hyper: on the convergence of optical remote sensing approaches**
Location: BS G.36
Chair: **Dr. Elias Symeonakis**

3:00pm - 4:00pm

W3 Agriculture
Location: BS G.36
Chair: **Prof. Enrico Borgogno-Mondino**
Chair: **Dr. Samuele De Petris**

Graph Neural Networks for Crop Cover Mapping

Elif Donmez[1], Johannes Leonhardt[3], Ribana Roscher[2,3], Thomas Heckelei[1], Hugo Storm[1]
1: Institute for Food and Resource Economics, University of Bonn, Bonn, Germany; 2: Institute of Bio-and Geosciences, Forschungszentrum Jülich GmbH, Jülich, Germany; 3: Institute of Geodesy and Geoinformation, University of Bonn, Bonn, Germany

Using Orthophotos And Deep Learning For Mapping Hedgerows In Bavaria, Germany

Verena Huber García[1], Jennifer Kriese[1], Sarah Asam[1], Mariel Dirscherl[1], Kristel Kerler[2], Johanna Buchner[2], Michael Stellmach[2], Ursula Gessner[1]
1: German Aerospace Center (DLR), Germany; 2: Bayerisches Landesamt für Umwelt (LfU), Germany

National Scale Hedgerow Monitoring with Planet Scope

Javier Muro, Lukas Blickensdörfer, Anna Köber, Gideon Tetteh, Marcel Schwieder, Stefan Erasmi
Thuenen Institute, Germany

National Scale Drought Impact and Risk assessment with the use of Sentinel-2 and Sentinel-3 time series

Semantic S1
Location: BS G.35
Chair: **Dr. Martin Sudmanns**
Chair: **Dr. Gregory Giuliani**

Plato: Implementing a Semantic Data Cube System

Dimitris Bilidas, Anastasios Mantas, Filippos Yfantis, George Stamoulis, Manolis Koubarakis
National and Kapodistrian University of Athens, Greece

Prediction And Transferability Of Median Grain Size On Tidal Flats Using A Deep Learning Model With Sentinel-2 Images

Logambal Madhuanand[1], Catharina J. M. Philippart[1,2], Wiebe Nijland[1], Steven M. de Jong[1], Allert I. Bijleveld[2], Elisabeth A. Addink[1]
1: Utrecht University, Department of Physical Geography, The Netherlands; 2: NIOZ Royal Netherlands Institute for Sea Research, Department of Coastal Systems, The Netherlands

One-layer RGB Representation Of Big EO Data Analyses For Supporting The Visual Communication Of Multi-temporal Change Detection

Dirk Tiede[1], Hannah Augustin[1], Thomas Strasser[1], Steffen Reichel[2], Markus Kerschbaumer[2], Kristýna Měchurová[2], Martin Sudmanns[1]
1: University of Salzburg, Department of Geoinformatics - Z_GIS, Austria; 2: Spatial Services GmbH, Austria

Gohar Ghazaryan[1,6], Maximilian Schwarz[2], Seyedmohammad Mirmazloumi[1], Harison Kipkulei[1], Tobias Landmann[3], Henry Kyalo[3], Rose Waswa[4], Tom Dienya[5]
1: Leibniz Centre for Agricultural Lanscape Research, Germany; 2: Remote Sensing Solutions GmbH, Germany; 3: International Centre of Insect Physiology and Ecology, Kenya; 4: Regional Centre for Mapping of Resources for Development, Kenya; 5: Ministry of Agriculture and Livestock Development, Kenya; 6: Geography Department, Humboldt-Universität zu Berlin, Germany

Multi-scale Hierarchical Graph Convolutional Network for Semantic Segmentation of Remote Sensing Imagery

Zhiqiang Liu, Ping Tang, Zheng Zhang, Zhitao Zhao
Aerospace Information Research Institute，CAS, China, People's Republic of

4:00pm - 4:30pm

Coffee Break
Location: **Business School of Manchester Metropolitan University**

4:30pm - 6:00pm

W4 Agriculture

Location: **BS G.36**
Chair: **Dr. Gohar Ghazaryan**
Chair: **Dr. Marcel Schwieder**

High Resolution Crop Condition and Drought Impact Mapping Using Sentinel-2 Imagery and Machine Learning

Seyedmohammad Mirmazloumi[1], Harison Kipkulei[1], Gohar Ghazaryan[1,2]
1: Leibniz Centre for Agricultural Landscape Research (ZALF), Germany; 2: Geography Department, Humboldt-Universität zu Berlin, Germany

Leveraging Embedded Cameras to Build a Time Machine for Field Observations

Alban Jago, François Godechal, Emilie Beriaux, Adrien Cassiers, Viviane Planchon
Walloon Agricultural Research Centre, Belgium

Potential of Hyperspectral EnMAP Data to Improve Crop-Type Classification of Sub-Acre Smallholder Fields in Kenya

Leander Leist[1], Sebastian Egli[2], Johannes Drönner[3], Jörg Bendix[1]
1: University of Marburg, Germany; 2: AgriBORA GmbH; 3: Geo Engine GmbH

Temporally Transferable Crop Mapping With Temporal Encoding And Deep Learning Augmentations

Vu Dong Pham[1,2], Gideon Tetteh[3], Fabian Thiel[1], Stefan Erasmi[3], Marcel Schwieder[3,4], David Frantz[5], Sebastian van der Linden[1,2]
1: Institute of Geography and Geology, University of Greifswald, Friedrich-Ludwig-Jahn-Str. 16, 17489 Greifswald, Germany; 2: Interdisciplinary Centre for Baltic Sea Region Research (IFZO), University of Greifswald, 17489 Greifswald; 3: Thünen Institute of Farm Economics, Bundesallee 63, 38116 Braunschweig, Germany; 4: Geography Department, Humboldt-Universit¨at zu Berlin, Unter den Linden 6, 10099 Berlin, Germany; 5: Geoinformatics – Spatial Data Science, Trier University, Behringstraße 21, Trier 54296, Germany.

The GROUNDED EO Project: Developing Improved Decametric Vegetation Products by Combining Earth Observation, Machine Learning, and Routine Ground Reference Measurements

Luke Brown[1], Philippe Goryl[2], Stephen Plummer[2]
1: University of Salford, Manchester, United Kingdom; 2: European Space Agency, Frascati, Italy

An Optimization Approach for Deriving Phenological Information of Different Crop Types in Germany Using Sentinel-2 Time Series

Abdelaziz Htitiou, Florian Beyer, Markus Möller, Heike Gerighausen
Julius Kühn-Institut, Institut für Pflanzenbau und Bodenkunde, Braunschweig,Germany

Semantic S2

Location: **BS G.35**
Chair: **Dr. Martin Sudmanns**
Chair: **Prof. Dr. Dirk Tiede**

An Approach for the Semantic Enrichment of Sentinel-1 Imagery Suitable for Large-scale Analysis

Luke McQuade, Martin Sudmanns, Dirk Tiede
University of Salzburg, Department of Geoinformatics - Z_GIS, Austria

Semantic World – A Novel Benchmark Dataset For Semi-Supervised Semantic Segmentation

Felix Kröber[1], Dirk Tiede[1], Andrea Baraldi[2], Sébastien Lefèvre[3]
1: University of Salzburg, Department of Geoinformatics – Z_GIS, Austria; 2: Spatial Services GmbH, Austria; 3: Université Bretagne Sud, IRISA UMR 6074, France

Fine-Tuning SAM for Accurate Impervious Surface Segmentation in Very High-Resolution Orthophotos

Jan-Philipp Langenkamp[1], Thomas Chrisitan van Dijk[2], Andreas Rienow[1]
1: Ruhr-University Bochum, Institute of Geography, Interdisciplinary Geoinformation Science, Germany; 2: Ruhr-University Bochum, Faculty of Civil and Environmental Engineering, Institute for Infrastructure and Environment, Environmental Informatics, Germany

Hybrid Temporal Attention for Crop Type Mapping from Satellite Image Time Series

Weixiong Zhang, Ping Tang, Zheng Zhang
Aerospace Information Research Institute，CAS, China, People's Republic of

Building Energy Forecasts Using Earth Observation Open Data

Stylianos Kokkas, Paschalis Bizopoulos, Antonios Lalas, Konstantinos Votis
Centre for Research and Technology Hellas, Greece

6:00pm - 9:00pm

Icebreaker
Location: **Business School North Atrium Foyer**

Date: Tuesday, 18/June/2024

8:00am - 5:00pm

Registration
Location: **Business School of Manchester Metropolitan University**

9:00am - 9:30am

Keynote R. Lucas: Towards Global Recovery of Ecosystems and Environments
Location: **BS G.36**
Chair: **Dr. Elias Symeonakis**

Towards Global Recovery of Ecosystems and Environments

Richard Maxwell Lucas
Aberystwyth University, United Kingdom

9:30am - 10:45am

W1 LULC
Location: **BS G.36**
Chair: **Dr. Gregory Giuliani**
Chair: **Dr. Birgitta Putzenlechner**

The TIMELINE Project: Four Decades of Geophysical Data to Observe the Impacts of Climate Change in Europe

Stefanie Holzwarth[1], Sarah Asam[1], Martin Bachmann[1], Martin Böttcher[2], Andreas Dietz[1], Christina Eisfelder[1], Andreas Hirner[1], Matthias Hofmann[1], Grit Kirches[2], Detmar Krause[1], Julian Meyer-Arnek[1], Simon Plank[1], Thomas Popp[1], Philipp Reiners[1], Sebastian Rößler[1], Thomas Ruppert[1], Alexander Scherbachenko[1], Meinhard Wolfmüller[1]
1: German Aerospace Center (DLR), German Remote Sensing Data Center (DFD), Germany; 2: Brockmann Consult GmbH, Germany

Generating a 40-years AVHRR NDVI Composite Time Series for Europe at 1 km resolution

Sarah Asam, Christina Eisfelder, Andreas Hirner, Philipp Reiners, Martin Bachmann, Stefanie Holzwarth
German Aerospace Center (DLR), Germany

Mapping Ecosystem Conditions Using Multi-source EO Data Cubes

Chaonan Ji[1], Hannes Feilhauer[1,2,3], Stefanie Holzwarth[4], Eya Cherif[1,3], David Montero[1,2], Maximilian Söchting[1], Miguel D. Mahecha[1,2,3]
1: Leipzig University, Remote Sensing Centre for Earth System Research, Germany; 2: German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig, Germany; 3: Center for Scalable Data Analytics and Artificial Intelligence (ScaDS.AI), Dresden-Leipzig, Germany; 4: German Aerospace Center, Remote Sensing Data Center, Germany

Environmental Impacts of Earth Observation (EO) Data in the Constellation Age

Karen Anderson, Magdalena Mleczko, Robert Brewin, Kevin Gaston, Markus Mueller, Jamie Shutler, Xiaoyu Yan, Ruby Wilkinson
University of Exeter, United Kingdom

The Enmap-Box: Making Better Use of Multi- and Hyperspectral Data in Qgis

Benjamin Jakimow[1], Akpona Okujeni[1], Andreas Janz[1], Fabian Thiel[2], Leon-Friedrich Thomas[3], Patrick Hostert[1], Sebastian van der Linden[2]
1: Humboldt-Universität zu Berlin, Earth Observation Lab, Germany; 2: University of Greifswald, Earth Observation and Geoinformation Science Lab, Germany; 3: University of Helsinki, Department of Agricultural Sciences, Finland

Comparative Validation of Recent High-Resolution Global Land Cover Maps

Panpan Xu[1], Nandin-Erdene Tsendbazar[1], Martin Herold[1,2], Sytze de Bruin[1], Myke Koopmans[1], Tanya Birch[3], Sarah Carter[4], Steffen Fritz[5], Myroslava Lesiv[5], Elise Mazur[4], Amy Pickens[6], Peter Potapov[6], Fred

Thermal
Location: **BS G.35**
Chair: **Dr. Agnieszka Soszynska**
Chair: **Dr. Mary Francesca Langsdale**

Understanding The Thermal Environment Of Uk Cities With Satellite Remote Sensing

Charlotte Paton[1,2], Darren Ghent[1,2], Mike Perry[1,2], John Remedios[1,2]
1: University of Leicester, Earth Observation Science, School of Physics and Astronomy, UK; 2: National Centre for Earth Observation, Space Park Leicester, University of Leicester, UK

A City-scale 3D Thermographic Model for Inspection of Building Energy Efficiency

Shaojuan Xu, Bastian Heider
Research Institute for Regional and Urban Development, Germany

Aerosol Correction for SWIR Methane Retrieval

Michael Pieper, Ronald Lockwood, Michael Chrisp
Massachusetts Institute of Technology Lincoln Laboratory, United States of America

Monitoring Land Surface Temperature from Space - New Perspectives for Environmental Monitoring

Daniel Spengler[1], Elsy Ibrahim[2], Tianran Zhang[1], Matthieu Taymans[2]
1: constellr GmbH, Germany; 2: constellr S.e., Belgium

Multi-angular Airborne Observations For Evaluation Of Thermal Directionality At The Satellite Scale

Mary Francesca Langsdale[1,2], Martin Wooster[1,2], Dirk Schuettemeyer[3], Simon Hook[4], Callum Middleton[1,2], Mark Grosvenor[1,2], Bjorn Eng[4], Roberto Colombo[5], Franco Miglietta[6], Lorenzo Genesio[6], Jose Sobrino[7], Micol Rossini[5], Gerardo Rivera[4], Daniel Beeden[8], William Jay[9]
1: National Centre for Earth Observation, United Kingdom; 2: Department of Geography, King's College London, UK; 3: European Space Agency, Netherlands; 4: NASA Jet Propulsion Laboratory, USA; 5: University of Milano Bicocca, Italy; 6: Institute of Bioeconomy, CNR, Italy; 7: University of Valencia, Spain; 8: British Antarctic Survey, UK; 9: NEODAAS Plymouth Marine Laboratory, UK

Stolle[4], Alexandra Tyukavina[6], Ruben Van de Kerchove[7], Daniele Zanaga[7]
1: Wageningen University, The Netherlands; 2: GFZ German Research Centre of Geosciences, Germany; 3: Google, USA; 4: World Resources Institute, USA; 5: International Institute for Applied Systems Analysis (IIASA), Austria; 6: University of Maryland, USA; 7: Flemish Institute for Technological Research (VITO), Belgium

10:45am - 11:00am

W1 LULC (cont.)
Location: **BS G.36**

Tuesday Poster (1): 2 min short presentations
Location: **BS G.35**
Chair: **Dr. Agnieszka Soszynska**

Thermal Remote Sensing Application on Brazilian Subtropical Region to Identify Sandinization Processes

Fabio Marcelo Breunig[1], Lenio Soares Galvão[2], Marcos Adami[2], Ricardo DalAgnol[3], Tony Vinicius Sampaio[1], Romario Trentin[4]
1: Federal University of Paraná (UFPR), Department of Geography, Brazil.; 2: Brazilian National Institute for Space Research (INPE), Remote Sensing Division, Brazil.; 3: University of California Los Angeles (UCLA), Institute of the Environment and Sustainability, USA.; 4: Federal University of Santa Maria (UFSM), Department of Geography, Brazil.

A Comparative Tree Height Analysis Using GEDI, Photogrammetry Data And Field Measurements Of Selected Areas Of Patagonia

Martin Kappas[1], Katharina Walter[1], Birgitta Putzenlechner[1], Ariel Winter[1,2], Daniel Wyss[1]
1: University of Goettingen, Germany; 2: Centro de Investigación y Extensión Forestal Andino Patagónico (CIEFAP), Argentina

Potential of TanDEM-X 30m Edited DEM

Karsten Jacobsen
Leibniz University Hannover, Germany

Deriving Leaf Area Index Time Series Over Heterogeneous Landscapes In West Africa

Verena Huber García, Frank Thonfeld, Jonas Meier, Ursula Gessner
German Aerospace Center (DLR), Germany

Identifying “Hot Spots” And “Cold Spots” In Urban Areas Using Remote Sensing Data

Petra Miletich[1], Heinz Gallaun[1], Judith Köberl[2], Dominik Kortschak[2], Michael Kernitzkyi[2]
1: JOANNEUM RESEARCH Forschungsgesellschaft mbH, DIGITAL - Remotesensing and Geoinformation, Austria; 2: JOANNEUM RESEARCH Forschungsgesellschaft mbH, LIFE - Weather and Climate Risk Management, Austria

Monitoring Climate Change in Urban Environments: Integrating Satellite and Ground Data in a Krakow Case Study

Ewa Glowienka, Krystyna Michałowska, Sławomir Mikrut
AGH University of Krakow, Poland

11:00am - 11:30am

Coffee Break
Location: **Business School of Manchester Metropolitan University**

11:30am - 12:45pm

W2 LULC
Location: **BS G.36**
Chair: **Prof. Dr. Sebastian van der Linden**
Chair: **Dr. Gregory Giuliani**

Monitoring Vegetation Essential Climate Variables using Multispectral Satellite Imagery: What can we actually map?

Richard Anthony Fernandes[1], Luke Brown[2], Jadu Dash[3], Najib Djamai[1], Gang Hong[1], Courtney Meier[4], Harry Morris[5], Lixin Syn[1]
1: CANADA CENTRE FOR REMOTE SENSING, GOVERNMENT OF CANADA, CANADA; 2: UNIVERSITY OF SALFORD, UNITED KINGDOM; 3: UNIVERSITY OF SOUTHAMPTON, UNITED KINGDOM; 4: BATELLE

Young Scientist Awards
Location: **BS G.35**
Chair: **Dr. Elias Symeonakis**
Chair: **Jean-Christophe Schyns**

Canopy Temperature Mapping at Different Crop Growth Stages to Assess Water Stress in Maize

Quanxing Wan[1], Magdalena Smigaj[1], Benjamin Brede[2], Lammert Kooistra[1]
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

ECOLOGY, UNITED STATES OF AMERICA; 5: NATIONAL PHYSICAL LABORATORY, UNITED KINGDOM

SI Traceable Validation Of Copernicus Biophysical Products Using An fAPAR Network

Harry Morris, Chloe Randall, Morven Sinclair, Rasma Ormane, Matthew Scholes, Niall Origo
National Physical Laboratory, United Kingdom

Prediction of Forest Floor Spectral Properties from LiDAR and SAR Sensors in Temperate and Boreal Forests

Audrey Mercier[1], Mari Myllymäki[1,2], Aarne Hovi[1], Daniel Schraik[1,2], Miina Rautiainen[1]
1: School of Engineering, Aalto University, Espoo, Finland; 2: Natural Resources Institute Finland (Luke), Latokartanonkaari 9, 00790 Helsinki, Finland

Biogeophysical Effects of Forest Cover Loss and the Role of Forest Management: Multi-scale Optical and Thermal Monitoring of Disturbance Plots in Central Germany

Birgitta Putzenlechner[1], Simon Grieger[1], Philipp Koal[2], Susanne Karel[3], Leon Ramin[1], Lajos Blume[1], Timo Lehmann[1], Martin Kappas[1], Ingolf Profft[2]
1: Georg-August-University Göttingen, Germany; 2: Forest Research and Competence Center Gotha (FFK), ThüringenForst AöR, Germany; 3: Austrian Research Centre for Forests (BFW), Department of Forest Inventory, Austria

Assessing Effects of Forest Disturbance on Land Surface Temperature in Low Mountain Ranges of Central Germany using GEE and the Landsat Archive

Simon Grieger[1], Lajos Blume[1], Martin Kappas[1], Susanne Karel[2], Philipp Koal[3], Birgitta Putzenlechner[1]
1: Georg August University of Göttingen, Institute of Geography, Department Cartography, GIS and Remote Sensing, Germany; 2: Austrian Research Centre for Forests (BFW), Department of Forest Inventory, Austria; 3: Forestry Research and Competence Centre Gotha (FFK), ThüringenForst AöR, Germany

Earth Observation Based Tools to Support Sustainable Forest Certification

Janik Deutscher[1], Martin Puhm[1], Petra Miletich[1], Andreas Wimmer[1], Roland Perko[1], Max Kampen[2], Koimé Kouacou[3], Sebastian Vogler[3], Anh Nguyen[3], Natalia Kobliuk[3]
1: Joanneum Research, Austria; 2: Sinergise Solutions GmbH, Austria; 3: Beetle ForTech, Austria

Sensing and Geoinformatics, Telegrafenberg, 14473 Potsdam, Germany

Phytoplankton Diversity Along The Spanish Mediterranean Coast Through Satellite Optical Radiometry

Gonzalo Martínez Fornos[1,2,3], Annalisa Di Cicco[4], Marco Talone[1,2], Elisa Berdalet[2]
1: Barcelona Expert Centre, Barcelona, Spain; 2: Instituto de Ciencias del Mar (ICM-CSIC), Barcelona, Spain; 3: Universidad Politécnica de Catalunya, Barcelona, Spain; 4: Istituto di Scienze Marine (ISMAR-CNR), Rome, Italy

Measuring Urban Socioeconomic Disparities In The Global South From Space Using Convolutional Neural Network: The Case of City of Kigali, Rwanda

Esaie Dufitimana
Quantum Leap Africa/African Institute for Mathematical Sciences (AIMS), Rwanda

Improving Land Surface Temperature Observations With Machine Learning Techniques

Abigail Marie Waring[1,2], Darren Ghent[1,2], David Moffat[2,3], John Remedios[1,2]
1: University of Leicester, School of Physics & Astronomy, Department of Earth Observation Science; 2: National Centre for Earth Observation (NCEO); 3: Plymouth Marine Laboratory

Semi-supervised Learning for the Mapping of Salix Trees Using Multi-temporal Planetscope Imagery.

Robbe Neyns, Pieter Libin, Kyriakos Efthymiadis, Frank Canters
Vrije Universiteit Brussel, Belgium

12:45pm - 1:00pm

W2 LULC (cont.)
Location: **BS G.36**

Tuesday Poster (2): 2 min short presentations
Location: **BS G.35**
Chair: **Jean-Christophe Schyns**
Chair: **Dr. Elias Symeonakis**

30-years Vegetation Trends for Europe Derived from the TIMELINE NDVI Time-series

Christina Eisfelder, Sarah Asam, Andreas Hirner, Philipp Reiners, Martin Bachmann, Stefanie Holzwarth
German Aerospace Center (DLR), German Remote Sensing Data Center (DFD), Germany

Annual Monitoring Of Vegetation Dynamics In The Baltic Sea Region (2000 – 2022)

Vu Dong Pham[1,2], Fabian Thiel[1], Farina de Ward[1], Christina Hellman[1], Duc Viet Nguyen[1], Felix Beer[1], Alexandra Barthelmes[3], David Frantz[4], Sebastian van der Linden[1,2]
1: Institute of Geography and Geology, University of Greifswald, Partner in the Greifswald Mire Centre, Friedrich-Ludwig-Jahn-Str. 16, 17489 Greifswald, Germany; 2: Interdisciplinary Centre for Baltic Sea Region Research (IFZO), University of Greifswald, 17489 Greifswald.; 3: Institute of Botany and Landscape Ecology, University of

Greifswald, Soldmannstraße 15 17487 Greifswald; 4: Geoinformatics – Spatial Data Science, Trier University, Behringstraße 21, Trier 54296, Germany.

Land Use and Climate Change Dynamics in the Okavango River Basin of Namibia and Angola

Kaleb Negussie[1,2], Daniel Wyss[2], Martin Kappas[2]
1: Namibia University of Science and Technology, Namibia; 2: Georg-August University Göttingen, Germany

Using RNN-based Models For Vegetation Prediction With PlanetScope Time Series And Meteorological Data

Ales Marsetic[1,2], Ursa Kanjir[1]
1: ZRC SAZU, Slovenia; 2: Space-SI, Slovenia

Land Cover Data Mapping from Multisensor Imagery for Soil Erosion Predictive Modelling in Mountain Protected Areas. A Case Study from Bucegi Mountains High Plateau, Romanian Carpathians.

Bogdan Andrei Mihai[1], Marina Vîrghileanu[1], Ionuț Săvulescu[1], Bogdan Olariu[1], Ionuț Șandric[1], Carmen Bizdadea[2]
1: University of Bucharest, Faculty of Geography, Romania; 2: University of Bucharest, Simion Mehedinți Doctoral School, Faculty of Geography, Romania

FAIR Research Data: Analysis-Ready Sentinel-1 and Sentinel-2 Data as a Standardized Web Service

Florian Beyer[1], Jennifer McClelland[2], Tanja Riedel[2], Marvin Dierks[1], Heike Gerighausen[1], Markus Moeller[1]
1: Julius Kuehn Institute, Institute for Crop and Soil Science, Germany; 2: Julius Kuehn Institute, Institute for Strategies and Technology Assessment, Germany

1:00pm - 2:30pm **Lunch**
Location: **Business School of Manchester Metropolitan University**

2:30pm - 3:00pm **Keynote M. Disney: Terrestrial lidar and forests: 3D perspectives, achievements and challenges**
Location: **BS G.36**
Chair: **Dr. Elias Symeonakis**

3:00pm - 4:00pm

W3 LULC
Location: **BS G.36**
Chair: **Dr. Gregory Giuliani**
Chair: **Dr. Birgitta Putzenlechner**

Quality Estimation Of Land Cover Maps: Review Of Methods And An Outlook From The Perspective Of Metrology

Anna Pustogvar[1,2], Bernardo Mota[1], Samuel E. Hunt[1], Andrew Thompson[1], Heiko Balzter[2,3]
1: National Physical Laboratory, United Kingdom; 2: University of Leicester, United Kingdom; 3: National Centre for Earth Observation, United Kingdom

Evaluation of Large Scale Synthetic Multispectral Satellite Images using Generative Adversarial Networks on Land Cover and Sentinel-2 Data

Torben Dedring, Andreas Rienow
Ruhr University Bochum, Germany

Impacts of Equal and Proportional Allocations in Accuracy Assessment of a Rare Class

Ismael José Fervença de Jesus[1,2], Cidália Maria Parreira da Costa Fonte[2,3], Alberto Jorge Lebre Cardoso[1], Jacinto Paulo Simões Estima[1]
1: University of Coimbra, CISUC, Department of Informatics Engineering, Coimbra, Portugal; 2: Institute for Systems Engineering and Computers at Coimbra (INESC Coimbra), Coimbra, Portugal; 3: University of Coimbra, Department of Mathematics, Coimbra, Portugal

A Method for Detecting and Distinguishing Light and Dark Terrain Shadows in Very High-resolution

Drylands S1
Location: **BS G.35**
Chair: **Dr. Elias Symeonakis**
Chair: **Dr. Mariano Moreno de las Heras**

Towards a Global Spectral Biocrust Dataset, a Missing Piece of Drylands´s Earth Observation

Juan Francisco Martinez-Sanchez[1], Yolanda Canton[1], Sonia Chamizo[2], Bettina Weber[3], M.Pilar Martín[4], Emilio Rodriguez-Caballero[1]
1: Center for Scientific collections at the University of Almeria (CECOUAL), Spain; 2: ESTACION EXPERIMENTAL DE ZONAS ARIDAS (CSIC), Spain; 3: UNIVERSITY OF GRAZ, Austria; 4: ENVIRONMENTAL REMOTE SENSING AND SPECTROSCOPY LABORATORY (SPECLAB-CSIC), Spain

Application of Unmanned Aerial vehicles to Enhance the Spatial Distribution of Indigenous Species to be introduced during dryland ecosystem Restoration

Yolanda Canton[1], Janira Fernandez[1], Juan Martinez[1], Lisa Maggioli[1], Aitor Alameda[1], Sonia Chamizo[2], Emilio Rodriguez[1]
1: University of Almeria, Spain; 2: EEZA-CSIC

Biocrust Effects on the Spectral Response of Drylands Regions to Water Pulses, Implications for Ecosystem

Borja Rodríguez-Lozano, Emilio Rodríguez-Caballero, Carlos Adolfo Urueta-Urueta, Yolanda Cantón
University of Almeria, Spain

Satellite Imagery

Xiao Zhu[1], Tiejun Wang[1], Andrew Skidmore[1], Stephen Lee[2], Isla Duporge[3,4]
1: University of Twente, Faculty of Geo-Information Science and Earth Observation, The Netherlands; 2: U.S. Army Research Laboratory, Army Research Office, United States; 3: The National Academies of Sciences, United States; 4: Princeton University, Department of Ecology and Evolutionary Biology, United States

Mapping of Invasive Black Locust (Robinia pseudoacacia): Investigating Temporal and Spatial Transferability of classification model using 6-year Sentinel-2 data

Tomáš Rusňák, Andrej Halabuk
ILE SAS v.v.i., Slovak Republic

Towards A Comprehensive Appraisal Of Eco-Hydro-Geomorphic Functioning In Drylands Based On Structure Traits And UAS Data

Eva Arnau-Rosalen[1], Adolfo Calvo-Cases[2], Angel Marques-Mateu[3], Emilio Rodriguez-Caballero[4], Ramon Pons-Crespo[3], Matilde Balaguer-Puig[3], Roberto Lazaro-Suau[5], Jorge Lopez-Carratala[6], Elias Symeonakis[1]
1: Manchester Metropolitan University, United Kingdom; 2: University of València, Interuniversity Institute for Local Development (IIDL), Spain; 3: Universitat Politècnica de València, Department of Cartographic Engineering, Geodesy and Photogrammetry, Spain; 4: University of Almería, Department of Agronomy, Spain; 5: Experimental Station of Arid Zones (EEZA-CSIC), Department of Desertification and Geo-Ecology, Almería, Spain; 6: Catholic University of Murcia-UCAM, Spain

4:00pm - 4:30pm **Coffee Break**
Location: **Business School of Manchester Metropolitan University**

4:30pm - 5:50pm

W4 LULC

Location: **BS G.36**
Chair: **Dr. Birgitta Putzenlechner**
Chair: **Dr. Gregory Giuliani**

Land Use and Land Cover Mapping on National Scale

Roland Perko, Sead Mustafic, Petra Miletich, Karlheinz Gutjahr
Joanneum Research, Austria

Land Cover Classification Refinement Through Image Segmentation

Jan Svoboda[1], Bertrand le Saux[2], Peter Naylor[2], Josef Laštovička[1], Přemysl Štych[1]
1: Charles Universty - Faculty of Science, Czech Republic; 2: Φ-lab, ESRIN, European Space Agency, Frascati I-0044, Italy

Assessing The Accuracy Of Sentinel 1 And Sentinel 2 Derived Shorelines Using Ground Truth Data

Adéla Šedová[1], Triantafyllia-Maria Perivolioti[2], Jesús Palomar-Vázquez[3], Markéta Potůčková[1], Josep E. Pardo-Pascual[3], Antonios Mouratidis[2]
1: Charles University, Czech Republic; 2: Aristotle University of Thessaloniki, Greece; 3: Polytechnical University of Valencia, Spain

An Assessment Of Long-term And Large-scale Wetlands Change Dynamics In The Limpopo Transboundary Basin Using Cloud-based Earth Observations Data

Siyamthanda Gxokwe[1,2], Timothy Dube[1], Nancy Job[2], Dominic Mazvimavi[1]
1: University of the Western Cape, South Africa; 2: South African National Biodiversity Institute, South Africa

Imaging Spectrometer Employing Digital Focal Plane Array for Fire Detection

Ronald Lockwood, Michael Griffin, Kevin Ryu, Michael Chrisp, James Johnson, Corrie Smeaton, Michael Pieper
Massachusetts Institute of Technology Lincoln Laboratory, United States of America

Grassland History From Remote Sensing Time Series: Improving The Data Basis For Greenhouse Gas Reporting

Lukas Blickensdörfer[1,2], Tom Brög[1], Felix Lobert[1,2], Patrick Hostert[2,3], Stefan Erasmi[1]
1: Thünen Institute of Farm Economics, Thünen Earth Observation (ThEO), Germany; 2: Humboldt-Universität zu Berlin, Earth Observation Lab, Geography Department, Germany; 3: Humboldt-Universität zu Berlin, Integrative Research Institute of Transformations of Human-Environment Systems (IRI THESys), Germany

Drylands S2

Location: **BS G.35**
Chair: **Dr. Elias Symeonakis**
Chair: **Dr. Emilio Rodriguez-Caballero**

Converting Tree Crown Area Into Tree Carbon

Compton Tucker
National Aeronautics and Space Administration (NASA), USA

Exploring the Resilience of Holm Oak Woodlands to Extreme Droughts Using a Large-scale Remote Sensing Approach in Eastern Spain

Mariano Moreno de las Heras[1], Esther Bochet[2], Sergio M. Vicente-Serrano[3], Tíscar Espigares[4], Maria J. Molina[2], Vicente Monleón[5], José M. Nicolau[6,7], Jaume Tormo[6,7], Patricio García-Fayos[2]
1: Universitat de Barcelona, Spain; 2: Desertification Research Centre (CIDE, CSIC-UV-GVA), Spain; 3: Pyrenean Institute of Ecology (IPE-CSIC), Spain; 4: Universidad de Alcalá, Spain; 5: US Forest Service Pacific Northwest Research Station, USA; 6: Universidad de Zaragoza, Spain; 7: Environmental Sciences Institute of Aragón (IUCA), Spain

How Satellite-derived Phenology Reveals Vegetation Growth Forms in Namibia's Drylands

Lasse Harkort[1], Vistorina Amputu[2], Jari Mahler[3], Leon Nill[1], Akpona Okujeni[1], Achim Röder[3], Patrick Hostert[1,4]
1: Humboldt University Berlin, Germany; 2: University of Tübingen, Germany; 3: Trier University, Germany; 4: IRI THESys, Humboldt-Universität zu Berlin

Fractional Mapping of Savannah Vegetation Species using Drone and EnMap Hyperspectral Data

Christina Karakizi[1], Akpona Okujeni[2], Eleni Sofikiti[3], Konstantinos Karantzalos[3], Patrick Hostert[2], Elias Symeonakis[1]
1: Manchester Metropolitan University; 2: Humboldt-Universität zu Berlin; 3: National Technical University of Athens

A Combined Approach of Optimizing Object-Based Image Analysis (OBIA) for WorldView-3 Imagery of Mankweng, South Africa

Deepthi Patric[1], Gertrud Schaab[1], Martin Kappas[2], Daniel Wyss[2]
1: KARLSRUHE UNIVERSITY OF APPLIED SCIENCES, INSTITUTE OF APPLIED RESEARCH, GERMANY; 2: UNIVERSITY OF GÖTTINGEN, INSTITUTE OF GEOGRAPHY, GERMANY

5:50pm - 6:00pm	**W4 LULC (cont.)** Location: **BS G.36**	**Tuesday Poster (3): 2 min short presentations** Location: **BS G.35** Chair: **Dr. Elias Symeonakis** Chair: **Dr. Emilio Rodriguez-Caballero** **Dryland Patchy Vegetation Cover Delineation From Orthoimages: Spatial Patterns And Scale Issues** **Eva Arnau-Rosalen[1], Angel Marques-Mateu[2], Antonis Korkofigkas[3], George Vamvoukakis[3], Christina Karakizi[1], Ramon Pons-Crespo[2], Emilio Rodriguez-Caballero[4], Roberto Lazaro-Suau[5], Adolfo Calvo-Cases[6], Elias Symeonakis[1]** 1: Manchester Metropolitan University, United Kingdom; 2: Universitat Politècnica de València,; 3: National Technical University of Athens; 4: University of Almería; 5: Experimental Station of Arid Zones (EEZA-CSIC),; 6: University of València **Mapping and Monitoring of Grass Species in Arid Ecosystems of Namibia – A Multi-Sensor Approach** **Daniel Wyss[1], Paul Bantelmann[1], Martin Kappas[1], Helen Sophie Schmidt[1], Elisabeth Twitileni Pius[2]** 1: Georg August University Göttingen, Germany; 2: Namibia University of Sciences and Technology **Vegetation Colonization On Agricultural Terrace Landscapes: Recovery Trends Triggered By Abandonment And Wildfires Using Landsat Series In The Mediterranean.** **Eva Arnau-Rosalen[1,3], Adolfo Calvo-Cases[2], Alberto Belenguer-Estevan[3], Elias Symeonakis[1]** 1: Manchester Metropolitan University, United Kingdom; 2: University of València, Interuniversity Institute for Local Development (IIDL), Spain; 3: University of València, Department of Geography, Spain **Remote-Sensing Based Detection of Dunes in the Atacama Desert – a Contribution to the Pedosphere-Biosphere Interaction of Coastal Fog Ecosystems in Northern Chile** **Luca Jehle[1], Maike Petersen[1], Alexander Siegmund[1,2]** 1: Heidelberg University of Education, Department of Geography - Research Group for Earth Observation (rgeo), Germany; 2: Heidelberg University, Institute of Geography & Heidelberg Center for the Environment (HCE), Germany **Towards Sustainable Water Resource Management: WebGIS-Based Real-Time River Discharge Optimization System.** **Martin W. Chege[1,2], Kuria B. Thiong'o[1,2], Arthur W. Sichangi[2], Moses M. Ngigi[2], Andreas Rienow[3]** 1: Remote sensing Research Group (RSRG); 2: Institute of Geomatics GIS & Remote sensing, Dedan Kimathi University of Technology (DeKUT), Kenya; 3: Ruhr-University Bochum, Interdisciplinary Geographic Information Science, Germany
6:00pm - 7:00pm	**EARSeL Council Meeting (members only)** Location: **BS G.34**	
6:00pm - 9:00pm	**City Tour** Location: **Business School of Manchester Metropolitan University** City tour on foot, meet up in the Conference Venue (Business School). Tour for EARSeL Council members will leave at 7:00 pm	

Date: Wednesday, 19/June/2024

8:00am - 5:00pm

Registration
Location: **Business School of Manchester Metropolitan University**

9:00am - 9:30am

Keynote M. Belgiu: Space-based Solutions for Environmental Challenges in the Global South
Location: **BS G.26**
Chair: **Monika Kuffer**
Chair: **Dr. Stefanos Georganos**

9:30am - 11:00am

W1 G. South
Location: **BS G.26**
Chair: **Monika Kuffer**
Chair: **Dr. Stefanos Georganos**

Data-Centric AI To Map And Characterize Informal Settlements From Earth Observation Data

Bedru Tareke[1], Paulo Silva Filho[1], Claudio Persello[1], Monika Kuffer[1], Raian V. Maretto[1], Jon Wang[1], Angela Abascal[1], Priam Pillai[2], Binti Singh[3], Juan Manuel D'Attoli[4], Caroline Kabaria[5], Juilo Pedrassoli[6], Patricia Brito[6], Peter Elias[7], Elio Atenogenes[8], Andrea Ramírez Santiago[8]
1: University of Twente, Netherlands, The; 2: Pillai College of Engineering, Navi Mumbai, India; 3: KRVIA, Mumbai, India; 4: National Registry of Informal Settlements (RENABAP), Argentina; 5: APHRC, Nairobi, Kenya; 6: Universidade Federal da Bahia, Salvador, Brazil; 7: University of Lagos, Nigeria; 8: INEGI, Mexico

Evaluating Geospatial Data Adequacy for Integrated Risk Assessments: A Malaria Risk Use-Case

Linda Petuschnig[1,2], Thomas Clemen[2], E. Sophia Klaußner[1], Ulfia Clemen[2], Stefan Lang[1]
1: University of Salzburg, Austria; 2: University of Applied Sciences Hamburg, Germany

Assessing Habitat Fragmentation and Landscape Patterns in the Cerrado and Amazon Transition (CAT)

Chuanze Li, Angela Harris, Polyanna da Conceição Bispo, Matthew Dennis
Department of Geography, School of Environment, Education and Development, University of Manchester, Oxford Road, Manchester M13 9PL, UK

Assessment Of Burned Areas In Africa From High And Medium Spatial Resolution Multi-spectral Satellite Images

Daniela Stroppiana[1], Matteo Sali[1,2], Giovanna Sona[3], Pietro Alessandro Brivio[1], Magí Franquesa[4,5], M. Lucrecia Pettinari[5], Emilio Chuvieco[5]
1: Consiglio Nazionale delle Ricerche – Istituto per il Rilevamento Elettromagnetico dell'Ambiente (CNR-IREA), Milano, Italy; 2: Università degli Studi di Milano-Bicocca, Milano, Italy; 3: Dipartimento di Ingegneria Civile e Ambientale (DICA), Politecnico di Milano, Milano, Italy; 4: Instituto Pirenaico de Ecología, Consejo Superior de Investigaciones Científcas (IPE-CSIC), Zaragoza, Spain; 5: Universidad de Alcalá, Environmental Remote Sensing Research Group, Department of Geology, Geography and the Environment, Alcalá de Henares, Spain

Navigating Urban Complexity: assessing Socio-Spatial Dynamics in Household Waste Practices in Bandung, Indonesia

Giulia Frigo, Claudia Binder, Christian Zurbrugg
EPFL (École Polytechnique Fédérale de Lausanne), Switzerland

Urban S1
Location: **BS 3.11**
Chair: **Dr. Valerie Graw**
Chair: **Prof. Dr. Carsten Juergens**

Improving Settlement Classification Method For Urban Systems Using Satellite-Derived Building Footprint Dataset

Wole Ademola Adewole[1,2], Ortis Yankey[1,2], Edson Utazi[1,2], Chris Lloyd[1,2], Samantha Cockings[1], Andrew J Tatem[1,2]
1: University of Southampton, United Kingdom; 2: WorldPop, Geography and Environmental Science, University of Southampton, United Kingdom

Heat Health Risk Mapping at Regional Scale Using Land Surface Temperature and Socioeconomic Indicators in Wallonia, Belgium

Yasmina Loozen[1], Coraline Wyard[1], Laure Roupioz[2], Eric Hallot[1]
1: ISSeP, Remote sensing and Geodata Unit, Belgium; 2: ONERA DOTA, France

A Comparative Multitemporal Analysis of Spatial Justice and Sustainable Development in Conflict-affected Regions: Lessons from the Syrian War and the Nacala Development Corridor in Mozambique

Andreas Rienow, Mounir Azzam, Ricardo Gellert Paris
Ruhr-University Bochum, Germany

Constructing a Large-scale 3D Building and Tree Model for Glasgow City via Airborne LiDAR Point Clouds

Qiaosi Li, Qunshan Zhao
Urban Big Data Centre, School of Social and Political Sciences, University of Glasgow, Glasgow, UK

Calculating a Multitemporal Local Climate Zone Dataset for European Cities

Anna Hellings[1], Andreas Rienow[1], Benjamin Bechtel[1], Matthias Demuzere[2]
1: Ruhr University Bochum, Germany; 2: Ghent University, Belgium

Differentiating the Urban-Rural Dichotomy: A Probability-Based Approach Applied to Bavaria, Germany

Hannes Taubenböck[1,2], Ariane Droin[2], Ines Standfuß[1], Michael Wurm[1], Marta Sapena[1], Tobias Ullmann[2]
1: German Aerospace Center (DLR), German Remote Sensing Data Center (DFD), Germany; 2: Julius-Maximilians-Universität Würzburg, Institute of Geography and Geology, Germany

11:00am - 11:30am

Coffee Break
Location: **Business School of Manchester Metropolitan University**

11:30am - 1:00pm

W2 G. South
Location: **BS G.26**
Chair: **Monika Kuffer**
Chair: **Dr. Stefanos Georganos**

Urban S2
Location: **BS 3.11**
Chair: **Dr. Valerie Graw**
Chair: **Prof. Dr. Carsten Juergens**

Assessing the Data Quality of GHSL and Other Global Data Sets for Monitoring Urbanisation in the Global South

Thomas Kemper, Martino Pesaresi, Michele Melchiorri, Johannes H. Uhl
European Commission, Italy

Mapping Urban Land Use in Data-scarce Areas of the Global South

Jasper van Vliet, Job Rosier
VU University Amsterdam, Institute for Environmental Studies, the Netherlands

Introduction to DIY-BU-Mapping Tool: Mapping Urban Expansion in Africa on the Cloud

Marta Sapena[1], Johannes Mast[1], Christian Geiß[1,2], Hannes Taubenböck[1,3]
1: German Aerospace Center (DLR), German Remote Sensing Data Center (DFD), Germany; 2: University of Bonn, Department of Geography, Germany; 3: Julius-Maximilians-Universität Würzburg, Institute of Geography and Geology, Germany

Measuring and mapping Tenure Security using Earth Observation and Open Geo-Spatial Data

Divyani Kohli-Poll Jonker[1], Dana Thomson[2], Ron Mahabir[3], Monika Kuffer[1]
1: ITC, University of Twente, The Netherlands; 2: Columbia climate School, United States; 3: University of Liverpool, United Kingdom

Assessing And Monitoring The Effectiveness Of The Biological Control Implemented To Address The Invasion Of Water Hyacinth (Eichhornia Crassipes) In Hartbeespoort Dam, South Africa

Timothy Dube[1], Pawu Mqingwana[1], Cletah Shoko[2], Siyamthanda Gxokwe[1]
1: University of the Western Cape, South Africa; 2: The University of Witwatersrand, South Africa

Do Disasters Disrupt The Spatial Growth Of Informal Settlements? The Case Of Mocoa, Colombia

Ricardo Camacho, Jagannath Aryal, Abbas Rajabifard
The University of Melbourne, Australia

Spectral Unmixing of PRISMA Hyperspectral Imagery for Assessing the Correlation Between Material Abundances and LST

Alberto Vavassori, Maria Antonia Brovelli
Politecnico di Milano, Italy

Web Tool for Detecting and Extracting Rooftop Solar Panels

Adedayo Kelvin Adeleke, Hlonela Mntonintshi
University of Pretoria, South Africa

Daily Ground-Level O3 Prediction Models for the Continental Biogeographical Region using Open Remote Sensing Data and Machine Learning: A Case Study for the Veneto Region

Luka Mamic[1], Francesco Pirotti[2,3]
1: Sapienza University of Rome, Department of Civil, Building and Environmental Engineering, Italy; 2: University of Padua, Department of Land and Agroforestry Systems (TESAF), Italy; 3: University of Padua, Interdepartmental Research Centre in Geomatics (CIRGEO), Italy

UHeat – Assessing Urban Heat Island Intensity

Mark Hallows, Guneet Hawley, Dimple Rana, Nabihah Ghufoor, Attila Lukacs, Ben Coombs
Arup, United Kingdom

1:00pm - 2:30pm **Lunch**
Location: Business School of Manchester Metropolitan University

2:30pm - 3:00pm **Keynote M. Pfeifer: Integrating remote sensing into conservation sciences at scales at which land management decisions are made**
Location: BS G.26
Chair: **Dr. Elias Symeonakis**

3:00pm - 4:00pm **W3 G. South**
Location: BS G.26
Chair: **Monika Kuffer**
Chair: **Dr. Stefanos Georganos**

Spatio-Temporal Changes of Morphological Slums Around the World

John Friesen[1], Nicolas Johannes Kraff[2], Hannes Taubenböck[1,2]
1: University of Würzburg, Germany; 2: German Aerospace Center, Germany

The IDEAMAPS Modelling Framework: Modelling Sub-domains of Deprivation

Monika Kuffer[1], Angela Abascal[1], Ryan Engstrom[2], Grant Tregonning[3], Dana R. Thomson[4], Adenike Shonowo[3], Qunshan Zhao[3], Alexandra Middleton[5], Wenlan Zhang[6], Joao Porto de Albuquerque[3]
1: University of Twente, Netherlands, The; 2: George Washington University, USA; 3: University of Glasgow, UK; 4: Columbia University, USA; 5: University of Warwick, UK; 6: UCL, UK

Between Light Pollution and Missing Access to Essential Light at Night

Angela Abascal[1,2], Monika Kuffer[2], Alejandro Sanchez[3], Christopher C. M Kyba[4,5], Miguel Román[6], Franz Hölker[7]
1: Public University of Navarre, Spain; 2: University of Twente, The Netherlands; 3: Universidad Complutense de Madrid, Spain; 4: GFZ German Research Centre for Geosciences, Germany; 5: Ruhr-University Bochum, Germany; 6: Leidos, Inc. United States; 7: Leibniz Institute of Freshwater Ecology and Inland Fisheries, Germany

Differences Between Formal and Informal Settlements in Accessibility to Healthcare in Sub–Saharan Cities

John Friesen[1], Stefanos Georganos[2], Jan Haas[2]
1: University of Würzburg, Germany; 2: Karlstad University, Sweden

4:00pm - **Coffee Break**
Location: Business School of Manchester Metropolitan University

4:30pm

4:30pm - 6:00pm

W4 G. South

Location: BS G.26
Chair: **Monika Kuffer**
Chair: **Dr. Stefanos Georganos**

Mapping population in deprived urban areas using Earth Observation and Machine Learning

Stefanos Georganos[1], Sabine Vanhuysse[2], Angela Abascal[2], Jon Wang[3], Monika Kuffer[3]
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: Faculty of Geo-Information Science & Earth Observation (ITC), University of Twente, Enschede, The Netherlands

Nighttime Lights Time Series Analysis Unveil Spatial Inequalities and Extractive Economic Dynamics along the Nacala Development Corridor in Lichinga, Mozambique

Ricardo Gellert Paris[1], Andreas Rienow[2]
1: Ruhr-University Bochum, Institute of Geography, Institute of Development Research and Development Policy, Germany; 2: Ruhr-University Bochum, Institute of Geography, Interdisciplinary Geoinformation Science, Germany

Mapping And Modelling Land Values In African Cities With Machine Learning And Openly Accessible Data

Felix Agyemang[1], Michael Osei Asibey[2], Sean Fox[3]
1: University of Manchester, Department of Planning, Property and Environmental Management, United Kingdom; 2: Kwame Nkrumah University of Science and Technology; 3: University of Bristol

Navigating Data Privacy and Utility by Integrating Multiple Imputation and Deep Learning: A Study on Linking Satellite Images with Anonymized Surveying

Mohammad Kakooei[1], James Bailie[2], Xiao-Li Meng[2], Adel Daoud[1,3]
1: Chalmers university of technology, Göteborg, Sweden; 2: Harvard University, Cambridge, MA, USA; 3: Institute for Analytical Sociology (IAS), Linköping University, Linköping, Sweden

Urban Heat Analysis In Africa's Most Deprived Areas: Combining Earth Observation, Machine Learning And Citizen Science

Angela Abascal[1], Monika Kuffer[2], Sabine Vanhuysse[3], Stefanos Georganos[4], Jon Wang[2], Nicera Wanjiru[5]
1: Department of Engineering, Public University of Navarre (UPNA), Pamplona, Spain; 2: Faculty of Geo-Information Science & Earth Observation (ITC), University of Twente, Enschede, The Netherlands; 3: Department of Geosciences, Environment & Society, Université libre De Bruxelles (ULB), 1050 Bruxelles, Belgium; 4: Geomatics Unit, Department of Environmental and Life Sciences, Karlstad University, Sweden; 5: Community mappers, Nairobi, Kenya

Geological

Location: BS 3.11
Chair: **Prof. Konstantinos Nikolakopoulos**
Chair: **Aggeliki S. Kyriou**

Satellite Data Processing In The Frame Of The M4mining Project. A Case Study From Greece.

Konstantinos Nikolakopoulos[1], Evlampia Kouzeli[1], Saeid Asadzadeh[2], Nicole Köllner[2], Friederike Koerting[3], Justus Constantin Hildebrand[3], Steven Micklethwaite[4], Ekaterina Savinova[4]
1: University of Patras, Greece; 2: GFZ, Germany; 3: NORSK ELEKTRO OPTIKK AS, HYSPEX, NORWAY; 4: THE UNIVERSITY OF QUEENSLAND, SUSTAINABLE MINERALS INSTITUTE, AUSTRALIA

Mapping permafrost thawing induced landslides in the European Arctics

Ionut Sandric, Radu Irimia
Univerity of Bucharest, Faculty of Geography

Enhancing the Detection of Rare Earth Element Contents using Space-Borne Hyperspectral Data

Veronika Kopackova-Strnadova[1], Johannes Giebel[2], Vladislav Rapprich[1], Tomas Magna[1]
1: Czech Geological Survey, Czech Republic; 2: TU Berlin, 10587 Berlin, Germany

Integrating Remote Sensing Products and Advanced Methodological Models for Resilient Blue Economy: The OCEANIDS Approach

Eirini Marinou, Polychronis Kolokoussis, Christos Kontopoulos, Vasiliki Charalampopoulou
Geosystems Hellas SA, Greece

Preserving Cultural Heritage Sites From Geohazards Using Remote Sensing Methods.

Aggeliki S. Kyriou, Konstantinos G. Nikolakopoulos
University of Patras, Greece

6:00pm - 6:30pm

EARSeL General Assembly (members only)

Location: BS G.26

7:00pm - 11:00pm

Symposium dinner

Location: HOME Theatre, Cinema and Exhibition Centre

Date: Thursday, 20/June/2024

8:00am - 10:00am

Registration
Location: **Business School of Manchester Metropolitan University**

9:00am - 9:30am

Keynote R. Santoleri: Earth Observation of Marine Heat Waves in the global warming scenario: forcing mechanism and impacts
Location: **BS G.36**
Chair: **Dr. Florinda Artuso**
Chair: **Dr. Federico Angelini**

9:30am - 11:00am

W1 Coastal
Location: **BS G.36**
Chair: **Dr. Florinda Artuso**
Chair: **Dr. Federico Angelini**

Forel-Ule Index As A Universal Indicator Of Optical Water Types And A Proxy for Water Quality: Application to Coastal Areas Around the World

Lenka Fronkova[1], Tiago Silva[1], Naomi Greenwood[1], Michelle Devlin[1], Richard Heal[1], Kate Collingridge[1], Richard Harrod[1], Michael Day[1], William Procter[1], Danja Hoehn-Adams[1], Dave Sivyer[1], Charlotte Reeve[1], Tom Hull[1], Roi Martinez[1], Alakesh Samanta[3], Pravakar Mishra[2], Tune Usha[2]
1: Centre for Environment Fisheries and Aquaculture Science, United Kingdom; 2: National Centre for Coastal Research, India; 3: National Centre for Coastal Research, India

Validation of Satellite Hyperspectral Radiometric Measurements Based on Multispectral Data from the AERONET-OC Network: an Assessment of the Uncertainty Due to Spectral Mismatch

Marco Talone[1,2], Giuseppe Zibordi[3], Jaime Pitarch[4]
1: Barcelona Expert Centre, Barcelona, Spain; 2: Instituto de Ciencias del Mar (ICM-CSIC), Barcelona, Spain; 3: Goddard Space Flight Center of the National Aeronautics and Space Administration, Greenbelt, MD 20771 USA; 4: Istituto di Scienze Marine (ISMAR-CNR), Rome, Italy

Pigments Distribution In The Mediterranean Sea Through Satellite Optical Radiometry

Borja Sanchez[1,2], Marco Talone[1,2], Jesus Cerquides[3], Annalisa Di Cicco[4], Emanuele Organelli[4]
1: Barcelona Expert Center, Barcelona, Spain; 2: Institut de Ciències del Mar, ICM-CSIC, Barcelona, Spain; 3: Instituto de Investigación en Inteligencia Artificial, IIIA-CSIC, Barcelona, Spain; 4: Istituto di Scienze Marine, ISMAR-CNR, Rome, Italy

Phytoplankton Groups In The Baltic Sea From Ocean Colour Observations

Annalisa Di Cicco[1], Vittorio Ernesto Brando[1], Elisabetta Canuti[2], Joanna Stoń-Egiert[3], Michela Sammartino[1], Marco Picone[4], Simone Colella[1], Luis González Vilas[1]
1: National Research Council - Institute of Marine Sciences (CNR-ISMAR), Italy; 2: Joint Research Centre, European Commission (JRC-EC), Italy; 3: Institute of Oceanology, Polish Academy of Sciences (IOPAN), Poland; 4: Institute for Environmental Protection and Research (ISPRA), Italy

Continuous Evaluation of Uncertainties in HPLC-Based Phytoplankton Pigment Quantification in Support to Remote Sensing Validation: A Comprehensive Approach.

Elisabetta Canuti[1,2], Florinda Artuso[3], Astrid Bracher[4], Vanda Brotas[5], Trerese Buchaca[6], Emmanuel Devred[7], Annalisa Di Cicco[8], Celine Dimier[9], Vesna Flander Putrle[10], Isabella Giardino[3], Priscilla Goela[11], Merete Grung[12], Carlo Rafael Mendes[13], Sandra Murawski[4], Ilka Peeken[4], Andreia Tracana[4], Josephine Ras[9], Rudiger Röttgers[14], Crystal Thomas[15], Sonja Wiegmann[4]
1: Joint Research Centre (European Commission), Italy; 2: University of Urbino, Urbino, Italy; 3: Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile, Frascati, Italy; 4: Alfred Wegener Institute

Education S1
Location: **BS G.35**
Chair: **Dr. Maike Petersen**
Chair: **Johannes Keller**

Monitoring Natural Phenomena from the Classroom with Edusat.

Rosa Olivella, Josep Sitjar, Laura Olivas
University of Girona, Spain

Empowering Equality and Access to the Copernicus Space Programme - Insights, Challenges and Collaborative Strategies - a View from Women in Copernicus

Alina - Mihaela Vizireanu[1], Nathalie Stephenne[2], Grazia Fiore[3], Eleni Loulli[4]
1: Milton Keynes City Council, United Kingdom; 2: Service Public de Wallonie (SPW), Geomatic Department, Belgium; 3: Space Y, Permanent Representative, France; 4: Cyprus University of Technology, Cyprus

A Multi-Level Perspective on Developing Earth Observation Educational Content for Diverse Audiences

Henryk Hodam, Andreas Rienow
Ruhr-Universität Bochum, Germany

Enhancing Learners' Involvement In Participatory Environmental Conservation

Bartholomew Thiongo Kuria[1], Wisdom Kipkemboi[1], Simon Wachira Muthee[1], Martin Wainaina Chege[1], Johanna Anyesi Wanjala[1], Andreas Rienow[2]
1: Dedan Kimathi University of Technology, Kenya; 2: Ruhr University Bochum

Capacity Development on digital Geomedia for UNESCO sites: Effectiveness and lasting effects of short-term training courses on Remote Sensing, GIS and mobile Geotools

Kristina Hild[1], Maike Petersen[1], Alexander Siegmund[1,2]
1: Heidelberg University of Education, Department of Geography - Research Group for Earth Observation (rgeo), Germany; 2: Heidelberg University, Institute of Geography & Heidelberg Center for the Environment (HCE), Germany

Helmholtz Centre for Polar and Marine Research, Bremerhaven, Germany; 5: University of Lisbon, Lisbon, Portugal; 6: Centre d'Estudis Avançats de Blanes – CEAB, CSIC, Girona, Spain; 7: Bedford Institute of Oceanography, Fisheries and Oceans, Dartmouth, Canada; 8: ISMAR - Consiglio Nazionale per le Ricerche, Italy; 9: Laboratoire d'Océanographie de Villefranche, IMEV-CNRS, Villefranche-sur-Mer, France; 10: National Institute of Biology, Piran, Slovenia; 11: S2AQUAcoLAB, Olhão, Portugal; 12: Norsk Institutt for Vannforskning, Norway; 13: Federal University of Rio Grande, Rio Grande, Brazil; 14: Helmholtz-Zentrum hereon GmbH, Germany; 15: NASA Earth Sciences Division, Goddard, USA

Experience of the Diagnostic and Metrology Laboratory of ENEA in Coastal Remote Sensing and the INSURE Project

Federico Angelini, Florinda Artuso, Francesco Colao, Luca Fiorani, Valeria Spizzichino, Antonio Palucci
ENEA, Italy

11:00am - 11:30am

Coffee Break
Location: **Business School of Manchester Metropolitan University**

11:30am - 12:45pm

W2 Coastal
Location: **BS G.36**
Chair: **Dr. Florinda Artuso**
Chair: **Dr. Federico Angelini**

Phytoplankton Response To Marine Heatwaves Using Satellite Data

Francesca Neri, Angela Garzia, Tiziana Romagnoli, Stefano Accoroni, Francesco Memmola, Marika Ubaldi, Alessandro Coluccelli, Pierpaolo Falco, Cecilia Totti
Università Politecnica delle Marche, Italy

Marine Heatwave in the Mediterranean: The 2022/2023 Event, Remote Sensing, and In-Situ Observations with a Focus on Lampedusa Island marine environment

Salvatore Marullo[1], Rosalia Santoleri[1], Damiano Sferlazzo[2], Alcide di Sarra[2], Francesco Monteleone[2], Daniela Meloni[2], Mattia Pecci[2]
1: CNational Research Council of Italy (CNR), Institute of Marine Sciences (ISMAR), Rome, Italy; 2: ENEA - Laboratory for Observations and Measurements for Environment and Climate, Rome, Italy

Exploring Long-Term Trends and Anomalies in Coastal Sea Surface Temperature Using AVHRR Data

Reiners Philipp[1], Obrecht Laura[2], Dietz Andreas[1], Stefanie Holzwarth[1], Künzer Claudia[1,2]
1: German Aerospace Center (DLR), German Remote Sensing Data Center (DFD), Germany; 2: University of Würzburg, Institute of Geography and Geology, Germany

Satellite Detection And Analysis Of Hawksbill Turtle Habitats In The Gulf Of Honduras/Caribbean Sea

Fiona Brurein[1], Lauren Biermann[2], Meret Huber[1], Vanda Brotas[3]
1: University of Mainz; 2: University of Plymouth; 3: University of Lisbon

The Surface Water and Ocean Topography Mission in the Coastal Zone: 2D Altimetry for Mapping Intertidal Morphology Area and Change

Ian Dougal Lichtman[1], Paul Bell[1], P. David Cotton[2], Chris Banks[1], Francisco J. M. Calafat[1,3], Christine Gommenginger[1]
1: National Oceanography Centre, UK; 2: SatOC Ltd.; 3: University of the Balearic Islands, Spain

Education S2
Location: **BS G.35**
Chair: **Dr. Maike Petersen**
Chair: **Johannes Keller**

The Earth-Moon System with Remote Sensing in Education – Implementing Lunar and Cis-Lunar Topics into the School Curriculum

Roman Johannis Hiby, Claudia Lindner, Andreas Rienow
Ruhr-University Bochum, Germany

Learning transfer @ Copernicus Master in Digital Earth – Encoding a swift transition to the Workplace in Education

Eva-Maria Steinbacher, Stefan Lang, Barbara Schernthanner-Hofer
PLUS University of Salzburg, Austria

Empowering Student Communities: Integrating Crowdsourcing, Remote Sensing, And Geoinformatics For Climate Change Mitigation

Eleni Loulli[1], Marianna Hadjichristodoulou[1], Despina Makri[1], Eleni Neofytou[1], Dimitris Koumoulides[1], Eleftherios Theodoropoulos[2], Stavroula Sigourou[2], Foteini Salta[2], Charalampos Kontoes[2], Christiana Papoutsa[1]
1: ERATOSTHENES Centre of Excellence, Cyprus; 2: BEYOND Center for EO Research and Satellite Remote Sensing, Institute for Astronomy, Astrophysics Space Applications and Remote Sensing (IAASARS), National Observatory of Athens (NOA), Greece

Time-Series-Analysis, Drone-Data, and EnMAP-Data in schools – Teachers Beliefs and Needs

Johannes Keller[1], Mario Blersch[1], Christian Plass[1], Alexander Siegmund[1,2]
1: DEPARTMENT OF GEOGRAPHY – RESEARCH GROUP FOR EARTH OBSERVATION (RGEO), HEIDELBERG UNIVERSITY OF EDUCATION, GERMANY; 2: HEIDELBERG CENTER FOR THE ENVIRONMENT (HCE) & INSTITUTE OF GEOGRAPHY, HEIDELBERG UNIVERSITY, GERMANY

Copernicus Academy CZ Office - a Success Story of EO/Copernicus Capacity Building Activities

Přemysl Štych, Josef Laštovička, Jan Svoboda, Daniel Paluba, Jakub Jelen
Charles University, Faculty of Science, Department of Applied Geoinformatics and Cartography, EO4Landscape team, Czech Republic

12:45pm - 1:00pm

Thursday Poster: 2 min short presentations
Location: **BS G.36**
Chair: **Dr. Florinda Artuso**

Education S2 (cont.)
Location: **BS G.35**

Linking Biodiversity And Hyperspectral Bio-Optics From A Process-Based Sampling Strategy In Tidal Environments

Federico Falcini[1], Jaime Pitarch[1], Isa Schon[2], Domenico D'Alelio[3], Daniele Bellardini[3], Pier Francesco Moretti[4], Mario Sprovieri[1], Patrick Roose[2]
1: Consiglio Nazionale delle Ricerche, Institute of Marine Sciences, Italy; 2: Royal Belgian Institute of Natural Sciences, Operational DirectorateNatural Environments, Freshwater Biology, Belgium; 3: Stazione Zoologica Anton Dohrn, Department of Integrative Marine Ecology, Italy; 4: Consiglio Nazionale delle Ricerche, Department Of Earth System Sciences And Environmental Technologies, Italy

Mapping Coastal Area Dynamics in Oristano Gulf (Italy) Using Satellite Images

Mariano Bresciani[1], Monica Pinardi[1], Salvatore Mangano[1], Alice Fabbretto[1], Claudia Giardino[1], Andrea Satta[2], Juan Montes Pérez[3], Enrico Duo[3], Paulo Cabrita[3], Paolo Ciavola[3]
1: CNR - IREA Institute for Electromagnetic Sensing of the Environment, National Research Council, Milan, Italy; 2: CNR – IAS Institute for the Study of Anthropic Impact and Sustainability in Marine Environment, Oristano, Italy; 3: Department of Physics and Earth Sciences, University of Ferrara, Ferrara, Italy

EnsAD: Improving Coastal Algae Forecasts With EnMAP Hyperspectral Data

Eefke Marijn Van Der Lee[1], Johannes Timm[1], Annika Grage[1], Karin Heyer[1], Ina Lorkowski[1], Thorger Brüning[1], Dagmar Mueller[2], Kerstin Stelzer[2], Carsten Brockmann[2]
1: Federal Maritime and Hydrographic Agency, Germany; 2: Brockmann Consult GmbH, Germany

Monitoring the Impact of Climatological Changes on the Spatial Changes of the Aletsch Glacier

Andrija Krtalic[1], Kristina Zeman Šteković[2], Ana Kuveždić Divjak[1]
1: Faculty of Geodesy University of Zagreb, Croatia; 2: SOPRA PROJEKT LTD

1:00pm - 1:30pm

Closing ceremony

Location: **BS G.36**
Chair: **Dr. Elias Symeonakis**
Chair: **Dr. Christina Karakizi**
Closing ceremony 5-min talks from:
- Dr Elias Symeonakis, local organiser
- Dr Jean-Christophe Schyns, EARSeL President
- Local Organiser of 44th EARSeL Symposium 2025

1:30pm - 3:00pm

Lunch
Location: **Business School of Manchester Metropolitan University**