

13-16 September 2022
Paphos - Cyprus

Earth Observation for Environmental Monitoring



41st EARSeL Symposium 2022
6th EARSeL Workshop on Developing Countries



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Final Programme

41st EARSeL Symposium 2022

Date: Tuesday, 13/Sept/2022

<p>9:00am OC: Opening Ceremony - Location: Aphrodite Hall 10:30am</p>	
<p>10:30am KS1: Keynote Speech - Location: Aphrodite Hall 11:00am Keynote Speaker: Prof. Ioannis Gitas, Aristotle University of Thessaloniki Title: "EO Applications in Forest Fire Management - A European Mediterranean perspective"</p>	
<p>11:00am Coffee Break - Location: Arion Bar 11:30am</p>	
<p>11:30am S_CC: Climate Change and Desertification - Location: Adonis 1:00pm Chair: Dr. Felix Bachofer</p> <p>Four Decades of Geophysical Land, Ocean and Atmosphere Products over Europe to Answer Climate-related Questions - the TIMELINE Project Stefanie Holzwarth¹, Asam Sarah¹, Bachmann Martin¹, Böttcher Martin², Sophie Reinermann¹, Dietz Andreas¹, Eisfelder Christina¹, Hirner Andreas¹, Hofmann Matthias¹, Kirches Grit², Krause Detmar¹, Meyer-Arnek Julian¹, Plank Simon¹, Popp Thomas¹, Reiners Philipp¹, Rößler Sebastian¹, Rupert Thomas¹, Scherbachenko Alexander¹, Wolfmüller Meinhard¹ 1: DLR, Germany; 2: Brockmann Consult GmbH</p> <p>Monitoring Drought Events In Germany And Cyprus Using More Than 20 Years Of MODIS Data Ursula Gessner¹, Sophie Reinermann², Sarah Asam¹, Ioannis Varvaris³, Eleni Loulli^{3,4}, Felix Bachofer¹, Diofantos Hadjimitsis^{3,4}, Claudia Kuenzer¹ 1: German Aerospace Center, Germany; 2: University of Würzburg, Germany; 3: ERATOSTHENES Centre of Excellence, Limassol, Cyprus; 4: Cyprus University of Technology, Limassol, Cyprus</p> <p>Light Pollution in Selected Polish Cities Using VIIRS and Census Data Wojciech Łachowski, Aleksandra Łęczek Institute of Urban and Regional Development, Poland</p> <p>Correlation Of Abrupt Shifts In Forest Phenology With Amplitude Changes In Sentinel-1 SAR Data And Land Surface Temperature From Landsat-8 Christos Theocharidis^{1,2}, Chris Danezis^{2,1}, Ioannis Gitas³, Diofantos Hadjimitsis^{2,1}</p>	<p>SS_WM: Special Session - Wildfires Monitoring Location: Aphrodite Hall Chair: Prof. Arnon Karnieli Chair: Dr. Manuel Salvoldi</p> <p>Understanding Fire Dynamics Using FRP: The GEO Perspective Simon Jones, Kostas Chatzopoulos-Vouzoglanis, Karin Reinke, Mariela Soto-Berelev, Chermelle Engel RMIT UNIVERSITY, Australia</p> <p>Satellite-based Detection of Potential Post-fire Regime Shifts in Multiple Dimensions of Ecosystem Functioning Bruno Marcos¹, João Gonçalves², Domingo Alcaraz-Segura³, Mário Cunha⁴, João P. Honrado⁵ 1: CIBIO-InBIO/BIOPOLIS (University of Porto); 2: CIBIO-InBIO/BIOPOLIS (University of Porto), proMetheus (IPVC); 3: iecolab-IISTA & Dept. of Botany (University of Granada), CAESCG (University of Almería); 4: DGAOT-FCUP & INESC TEC (University of Porto); 5: DBio-FCUP & CIBIO-InBIO/BIOPOLIS (University of Porto)</p> <p>Wildfire Damage Assessment Over Arakapas Village In Cyprus Using Sentinel-2 Imagery. Maria Prodromou^{1,2}, Kyriacos Themistocleous^{1,2}, Chris Danezis^{1,2}, Ioannis Gitas³, Hadjimitsis Diofantos^{1,2} 1: Department of Civil Engineering and Geomatics, Cyprus University of Technology, Limassol, Cyprus; 2: ERATOSTHENES Centre of Excellence, Limassol, Cyprus; 3: Department of Forestry, Laboratory of Forest Management and Remote Sensing, Aristotle University of Thessaloniki, Greece</p>

1: ERATOSTHENES Centre of Excellence, Cyprus; 2: Cyprus University of Technology, Department of Civil Engineering and Geomatics, Cyprus; 3: Aristotle University of Thessaloniki, School of Forestry and Natural Environment, Greece

Spatial Consistency Regularized Weakly-Supervised Deep Learning for Wildfire Burned Area Mapping with Low-Resolution Labels

Puzhao Zhang, Yifang Ban

KTH Royal Institute of Technology, Sweden

Mapping Wildfire Scores – NDVI vs. NBR vs. AFRI

Arnon Karnieli, Manuel Salvoldi

Ben Gurion University, Israel

1:00pm

Lunch Break

Location: **Pantheon Restaurant**

2:00pm

2:00pm

P1: Poster Session (5-Slides Presentations)

Location: **Aphrodite Hall**

Chair: **Dr. Argyro Nisantzi**

4:00pm

Ecological Impacts of Wildfire Severity and Pyrodiversity Quantified with Remote Sensing and Deep-Learning

Xi-Lillian Pang¹, Puzhao Zhang², Ulla Mörtberg¹, Yifang Ban²

1: Department of Sustainable Development, Environmental Science and Engineering. KTH Royal Institute of Technology, Sweden; 2: Division of Geoinformatics. KTH Royal Institute of Technology, Sweden.

A Long-Term Spatiotemporal Analysis Of Biocrusts Across A Diverse Arid Environment: The Case Of The Israeli-Egyptian Sandfield

Kliil Noy¹, Noa Ohana-Levi^{1,2}, Natalya Panov¹, Micha Silver¹, Arnon Karnieli¹

1: The Remote Sensing Laboratory, French Associates Institute for Agriculture and Biotechnology of Drylands, The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Israel; 2: Independent researcher, Ashalim, 85512, Israel

Evaluation Of Open-Source Data And Remote Sensing Techniques For Spatially Explicit Very High-Resolution Soil Sealing Information In North-Rhine Westphalia (Western Germany)

Jan-Philipp Langenkamp, Christian Daniel, Andreas Rienow

Ruhr-University Bochum, Germany

Joint Exploitation of Sentinel-1 and Sentinel-2 Temporal Composites for Land Cover and Crop Type Mapping

Giorgos Begkos, Christina Karakizi, Konstantinos Karantzalos

National Technical University of Athens, Remote Sensing Laboratory, Greece

Local Climate Zone Mapping for Climate Mitigation and Adaption

Benjamin Bechtel¹, Matthias Demuzere¹, Jonas Kittner¹, Panagiotis Sismanidis¹, Gerald Mills²

1: Ruhr-University Bochum, Germany; 2: University College Dublin, Ireland

Detecting ships in the Cyprus region using Sentinel-1 SAR data: A comparison of results using Sentinel Application Platform (SNAP) and Arc GIS Pro - deep learning

Eleftheria Kalogirou¹, Diofantos G. Hadjimitsis^{1,2}, George Melillos^{1,2}

1: Department of Civil Engineering and Geomatics, Cyprus University of Technology, Limassol, Cyprus; 2: ERATOSTHENES Centre of Excellence, Limassol, Cyprus

Flood Risk Assessment in catchment areas in Cyprus using Earth Observation

Iosifina Kountouri^{1,2}, **Evagoras Evagorou**^{2,1}, **Christodoulos Mettas**^{1,2}, **Christiana Papoutsas**^{1,2}, **Chris Danezis**^{1,2}, **Haris Kontoes**³, **Argyro Nisantzi**^{1,2}, **Kyriacos Themistocleous**^{2,1}, **Silas Michaelides**^{2,1}, **Diofantos Hadjimitsis**^{1,2}

1: Department of Civil Engineering and Geomatics, Cyprus University of Technology, Limassol, Cyprus; 2: ERATOSTHENES Centre of Excellence, Limassol, Cyprus; 3: National Observatory of Athens, Beyond Centre of Excellence, Athens, Cyprus

Advanced Training Course On Remote Setting For Educators At The Junior Academy Of Sciences Of Ukraine

Svitlana Babiichuk¹, **Olga Tomchenko**², **Natalia Kobliuk**¹

1: National Center "Junior Academy of Sciences of Ukraine", Kyiv, Ukraine; 2: State Institution "Scientific Centre for Aerospace Research of the Earth of the Institute of Geological Sciences of the National Academy of Sciences of Ukraine", Kyiv, Ukraine

Belgian Experience In The Eagle LULUCF Cross Border Mapping Exercise

Benjamin Beaumont¹, **Nathalie Stéphenne**², **Johannes Van Geertsom**³, **Stefan Kleeschulte**⁴

1: Institut Scientifique de Service Public - ISSeP, Remote Sensing and Geodata Unit,; 2: Service Public de Wallonie - SPW, Geomatic Department, Belgium; 3: National Geographic Institute – NGI, Belgium; 4: Space4Environment, Luxembourg

Assessing the consistency of forest biophysical parameters retrieved from Sentinel-2, Landsat-8 and GEDI in Central Germany

Birgitta Putzenlechner¹, **Federico Filipponi**², **Philipp Koal**³, **Iris Jeuffrard**⁴, **Martin Kappas**¹

1: Georg-August-Universität, Göttingen, Germany; 2: Institute for Environmental Protection and Research (ISPRA), Rome, Italy; 3: Forestry Research and Competence Center ThüringenForst, Gotha, Germany; 4: National School of Geographic Sciences (ENSG), Champs-sur-Marne, France

Wood Decay Detection In Norway Spruce Trees With Multitemporal PlanetScope Data Analysis

Michele Dalponte¹, **Yady Tatiana Solano-Correa**², **Hans Ole Ørka**³, **Erik Næsset**³, **Terje Gobakken**³

1: Fondazione Edmund Mach, Italy; 2: University of Cauca, Colombia; 3: Faculty of Environmental Sciences and Natural Resource Management, Norwegian University of Life Sciences, Norway

Integration of Terrestrial Laser Scanning (TLS) and Airborne Laser Scanning (ALS) Processed Data for the Assessment of Norway Spruce Dendrometric Characteristics – a Case Study

Bogdan Apostol¹, **Adrian Lorent**^{1,2}, **Serban Chivulescu**¹, **Albert Ciceu**^{1,2}, **Marius Petrilă**¹, **Florin Capalb**^{1,2}, **Cristiana Marcu**¹, **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

Assessment Of GEDI Data For Its Use In Deriving Remote-Sensing-Based 3D Forest Information

Florian Josef Lipp¹, **Manuela Hirschmugl**^{1,2}

1: University of Graz, Austria, Austria; 2: Joanneum Research, Institute DIGITAL, Graz, Austria

Integration of Canopy Height Models Derived from Airborne LiDAR Data and UAV Aerial Imagery by DTM-DSM Matching in the Forest Free Areas

Bogdan Apostol¹, Marius Petrila¹, Juan Garcia Duro¹, Adrian Lorent^{1,2}, Florin Capalb^{1,2}, Cristiana Marcu¹, Sorina Farcas¹

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

Comparison of PRISMA and Sentinel-2 Imagery for Detection of Agricultural Areas

Francesco Pirotti¹, Mario Angelo Gomasca², Enrico Borgogno Mondino³

1: University of Padova, TESAF Department, Italy; 2: National Research Council (CNR-IREA), Italy; 3: University of Torino, Department of Agricultural, Forest and Food Sciences, Italy

Evaluation Of Sentinel-2 Vegetation Indices To Differentiate Forest Recovery Phases In Czechia

Natalia Kobiuk, Daniel Paluba, Přemysl Štych

Charles University, Department of Applied Geoinformatics and Cartography, Czech Republic

Choosing Optimal Time For Estimating Yield of Winter Oilseed Rape And Winter Wheat

Jakub Tomasz Ceglarek¹, Agnieszka Glinko², Cezary Kaźmierowski¹, Remigiusz Łukowiak³, Sławomir Królewicz¹, Jan Piekarczyk¹

1: Adam Mickiewicz University in Poznan, Poland; 2: GISPRO S.A.; 3: Poznan University of Life Sciences

A Web GIS Mapping Service For A Better Exploitation Of The Forest Melliferous Resources In South East Romania

Adrian Lorent^{1,2}, Vladimir Gancz¹, Marius Petrila¹, Bogdan Apostol¹, Florin Capalb^{1,2}, Ionica Soare³

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; 3: "Dunărea de Jos" University of Galaţi, Faculty of Economics and Business Administration, Galaţi, Romania

Grassland Mowing Frequency Estimation in Google Earth Engine Using Sentinel-2 Imagery.

Davide Andreatta^{1,2}, Damiano Gianelle², Michele Scotton¹, Loris Vescovo², Michele Dalponte²

1: University of Padova, Department of Agronomy, Food, Natural Resources, Animals and Environment, Italy; 2: Edmund Mach Foundation, Research and Innovation Centre, Italy

3:00pm

-

4:00pm

S_Agri1: Agroforestry, Forests, Agriculture and Food Security

Location: **Adonis**

Chair: **Dr. Marios Tzouvaras**

Detecting Large Scale Land Deals From Landsat Timeseries As Spatial Implications Of Export-Oriented Policies Along The Nacala Development Corridor, Mozambique

Ricardo Paris, Andreas Rienow

Ruhr university Bochum, Germany

Mapping Forest Change Areas and Assessing Forest Disturbance Agents from Sentinel-2 Time Series

Janik Deutscher¹, Martin Puhm¹, Andreas Wimmer¹, Katja Öhmichen², Jens Wieseahn³

1: Joanneum Research, Austria; 2: Thünen Institute of Forest Ecosystems, Germany; 3: Nordwestdeutsche Forstliche Versuchsanstalt, Germany

Improved Handling of Artefacts in Sentinel-2 Time Series Modelling and in Detection of Vegetation Disturbances

Martin Puhm, Janik Deutscher, Andreas Wimmer
Joanneum Research, Austria

The use of Sen4CAP in an attempt to perform Common Agricultural Policy monitoring in Cyprus

Marios Tzouvaras^{1,2}, Dimitris Sykas¹, Christiana Papoutsas^{1,2}, Maria Prodromou^{1,2}, Elena Papageorgiou³, Christiana Theodorou³, Agathangelos Hadjichristofi³, George Georgiou⁴, Diofantos Hadjimitsis^{1,2}

1: Department of Civil Engineering and Geomatics, Faculty of Engineering and Technology, Cyprus University of Technology, Limassol, Cyprus; 2: Eratosthenes Centre of Excellence, Limassol, Cyprus; 3: Cyprus Agricultural Payments Organisation, Cyprus; 4: Novatex Solutions Ltd, Nicosia, Cyprus

4:00pm

Coffee Break

Location: **Arion Bar**

-

4:30pm

4:30pm

S_Agri2: Agroforestry, Forests, Agriculture and Food Security

Location: **Adonis**

Chair: **Dr. Marios Tzouvaras**

-

5:30pm

Multi-annual Monitoring Of Mowing Dynamics In German Grasslands With Sentinel-2 Time Series

Sophie Reinermann¹, Sarah Asam², Ursula Gessner², Claudia Kuenzer^{1,2}

1: Department of Remote Sensing, Institute of Geography and Geology, University of Würzburg, Germany; 2: German Aerospace Center (DLR), Earth Observation Center (EOC), German Remote Sensing Data Center (DFD), Germany

Assessment of Growth and Mortality Rates in Canadian Boreal Forest using Landsat Time Series.

Alexandre Morin-Bernard¹, Alexis Achim¹, Nicholas C. Coops²

1: University Laval, Department of Wood and Forest Sciences, Canada; 2: University of British Columbia, Department of Forest Resources Management, Canada

Spectral Indices as a Tool to Assess the Moisture Status of Forest Habitats

Adam Młynarczyk¹, Monika Konatowska², Sławomir Królewicz¹, Paweł Rutkowski², Jan Piekarczyk¹, Wojciech Kowalewski³

1: Adam Mickiewicz University in Poznań, Faculty of Geographic and Geological Sciences, Poland; 2: Poznań University of Life Sciences, Faculty of Forestry and Wood Technology, Poland; 3: Adam Mickiewicz University in Poznań, Faculty of Mathematics and Computer Science, Poland

High-resolution Aerial RGB Imagery For Flowering Intensity Quantification: A Triennial Study In A High-density Apple Orchard

Chenglong Zhang¹, Lammert Kooistra¹, Joao Valente², Leifeng Guo³, Wensheng Wang⁴

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

6:30pm

IB: Icebreaker

Location: **Aphrodite Gardens**

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8:30pm

Date: Wednesday, 14/Sept/2022

9:00am	KS2: Keynote Speech Location: Aphrodite Hall	
-	Keynote and Panel Expert Discussion	
9:30am	Keynote: Monika Kuffer Experts: Caroline Geaert , Stefanos Georganos , Dana Hopkinson , Jonathan Sabine Vanhuyse Moderator: Jean-Christophe Schyns	
9:30am	SS_WR: Special Session - Water Resources Management Location: Adonis	WSDC_DUA1: Workshop on Developing Countries: Deprived Urban Areas I Location: Aphrodite Hall
-	Chair: Diofantos Hadjimitsis	Chair: Dr. Stefanos Georganos
10:30am	Chair: Dr. Christiana Papoutsas	Chair: Monika Kuffer
	Comparison Of Rainfall Rate Retrieval Algorithms Using Ground-Based Radar Data, Intended For Drought Monitoring In Cyprus Eleni Loulli^{1,2} , Johannes Bühl³ , Silas Michaelides¹ , Athanasios Loukas⁴ , Diofantos G. Hadjimitsis^{1,2} 1: ERATOSTHENES Centre of Excellence, Cyprus; 2: Cyprus University of Technology, School of Engineering and Technology, Department of Civil Engineering and Geomatics, Cyprus; 3: Leibniz Institute for Tropospheric Research (TROPOS), Germany; 4: Aristotle University of Thessaloniki, Greece	Deprived Area Mapping using Deep and Machine Learning on Sentinel-2 Imagery Ryan Engstrom¹ , Amir Jafari¹ , Arathi Nair¹ , Abdulaziz Gebri¹ , Mina Hanna¹ , Mojahid Osman¹ , Jake Lieberfarb¹ , Bradely Reardon¹ , Maxwell Owusu¹ , Dana Thomson² , Monika Kuffer² 1: George Washington University, United States of America; 2: University of Twente, Netherlands
	Remote Sensing-based Algorithm for Monitoring Water Quality of Inland Water Bodies Gordana Jakovljevic¹ , Miro Govedarica² , Flor Álvarez Taboada³ 1: Faculty of Architecture, Civil engineering and Geodesy, Bosnia and Herzegovina; 2: Faculty of Technical Science, Serbia; 3: University of Leone, Spain	The Diversity Of Deprived Areas: Applications Of Unsupervised Machine Learning And Open Geodata To São Paulo, Brazil Lorraine Trento Oliveira¹ , Monika Kuffer¹ , Nina Schwarz¹ , Julio Cesar Pedrassoli² 1: University of Twente, The Netherlands; 2: Federal University of Bahia, Brazil
	Deriving Strong Rain Hazard Risk Maps from Geomorphology Thomas Krauß , Veronika Gstaiger DLR - German Aerospace Center, Germany	Predicting Perceived Urban Deprivation Using Deep Learning Tais Grippa¹ , Angela Abascal^{1,2} , Sabine Vanhuyse¹ , Eleonore Wolff¹ 1: Université Libre de Bruxelles, Belgium; 2: Navarra Center for International Development, University of Navarra, 31009 Pamplona, Spain
	Use Of Remote Sensing For Assessing Water Quality In Open-Surface Water Systems In Cyprus Ioannis Varvaris¹ , Christiana Papoutsas^{1,2} , Marios Tzouvaras¹ , Felix Bachofer³ , Albert Ansmann⁴ , Johannes Bühl⁴ , Kyriacos Themistocleous^{1,2} , Kyriacos Neocleous^{1,2} , Chris Danezis^{1,2} , Nicholas Kyriakides^{1,2} , Georgios Komodromos⁵ , Charalampos Kontoes⁶ , Silas Michaelides¹ , Diofantos Hadjimitsis^{1,2} 1: Eratosthenes Centre of Excellence, Limassol, Cyprus; 2: Department of Civil Engineering and Geomatics, Faculty of Engineering and Technology, Cyprus University of Technology, Limassol, Cyprus; 3: Earth Observation Center, German Aerospace Center (DLR), Wessling, Germany; 4: Leibniz Institute for Tropospheric Research, Leipzig, Germany; 5: Department of Electronic Communications, Ministry of Transport, Communications and Works, Nicosia, Cyprus; 6: National Observatory of Athens, Athens, Greece	Mapping Slums Using Satellite Imagery: A Comparison of Image Processing Techniques Agatha Mattos , Gavin McArdle , Michela Bertolotto University College Dublin, Ireland
10:30am	Coffee Break Location: Arion Bar	
-		
11:00am		

<p>11:00am - 1:00pm</p>	<p>S_DRR1: Disaster Risk Reduction Location: Adonis Chair: Dr. Kyriacos Themistocleous</p> <p>Disaster Capitalism And Land Grabbing Revisited With Volunteered Geographic Information And Multi Sensor Earth Observation: The Case of Barbuda Andreas Rienow, Torben Dedring, Marcus Goebel, Valerie Graw Ruhr-University Bochum, Germany</p>	<p>WSDC_DUA2: Workshop on Developing Countries: Deprived Urban Areas II Location: Aphrodite Hall Chair: Dr. Stefanos Georganos Chair: Angela Abascal</p>
	<p>A Multi-Sensor Approach Towards A Disaster Risk Reduction Framework for Tailings Dam Failures Using the Example of Brumadinho Torben Dedring¹, Valerie Graw¹, Kristina Thygesen², Andreas Rienow¹ 1: Ruhr University Bochum, Germany; 2: GRID-Arendal, Norway</p>	<p>Urban Morphology For Mapping Deprived Urban Areas Across Cities In Sub-Saharan Africa Sabine Vanhuyse¹, Jiong Wang², Priscilla Kabiru³, Monika Kuffer², Stefanos Georganos⁴, Angela Abascal^{5,1}, Eléonore Wolff¹ 1: Université libre de Bruxelles (ULB), Department of Geosciences, Environment and Society, Belgium; 2: University of Twente, Faculty of Geo-Information Science and Earth Observation (ITC), The Netherlands; 3: Foresight Planners Limited, Kenya; 4: KTH Royal Institute of Technology, Division of Geoinformatics, Sweden; 5: University of Navarra, Navarra Center for International Development, Spain</p>
	<p>The Establishment of the CyCLOPS Integrated Strategic Research Infrastructure Unit for Geohazard Monitoring Activities: Considerations, Performance Assessment and Initial Results Chris Danezis^{1,2}, Dimitris Kakoullis^{1,2}, Kyriaki Fotiou^{1,2}, Marina Pekri^{1,2}, Christopher Kotsakis^{1,3}, Miltiadis Chatzinikos^{1,3}, George Melillos^{1,2} 1: Cyprus University of Technology, Cyprus; 2: ERATOSTHENES Centre of Excellence; 3: Aristotle University of Thessaloniki</p>	<p>Requirements to Model Slum Dynamics in Cities of the Global South John Friesen, Julius Breuer Technische Universität Darmstadt, Germany</p>
	<p>A Review Of Current GNSS Interference Detection And Localisation Techniques Towards The Development Of Resilient GNSS Strategic Infrastructure Nikolas Christoforou^{1,2}, Chris Danezis^{1,2} 1: Cyprus University of Technology, Cyprus; 2: ERATOSTHENES Centre of Excellence, Cyprus</p>	<p>The Varying Similarity In The Morphology Of The Urban Divide Jiong Wang¹, Sabine Vanhuyse², Stefanos Georganos^{2,3}, Monika Kuffer¹, Angela Abascal^{4,1} 1: University of Twente, Netherlands, The; 2: Université libre de Bruxelles (ULB), Department of Geosciences, Environment and Society, Belgium; 3: KTH Royal Institute of Technology, Division of Geoinformatics, Sweden; 4: University of Navarra, Navarra Center for International Development, Spain</p>
	<p>Assessing the Resilience of Flood Defense Structures via Radar MTI & Backscatter Analysis Dimitris Kouhartsiouk, Skevi Perdikou Geofem Ltd., Cyprus</p>	<p>IdeaMapSudan: Mapping Urban Deprivation In Khartoum Combining EO And Geospatial Data Monika Kuffer¹, Nuha Eltinay², Maysoon Badi², Wafa Sakhi², Inas M.M. Ali³, Asgad Gumamah⁴, Julia Kumi⁴, Ibrahim Kushieb⁴, Mosub Abdallah⁶, Taha Elzaki⁵, Mustafa Hamza⁶, Fatima Ahmed⁵, Marwa Ali⁶, Jon Wang¹, Caroline Margaux Gevaert¹, Charlotte Flasse⁷, Andre Da Silva Mano¹, Serkan Girgin¹, Francis Cheruiyot Onyambu⁸, Dana R. Thomson¹, Caroline Kabaria⁸ 1: University of Twente, Netherlands, The; 2: Sudan Urban Development Think Tank Organization, Sudan; 3: Independent consultant, Sudan; 4: Ministry of Social Development, Sudan; 5: Ministry of Transport, Sudan; 6: Ministry of Physical Planning-Khartoum State, Sudan; 7: Université Libre de Bruxelles, Belgium; 8: African Population & Health Research Center, Kenya</p>
	<p>Combined Use Of InSAR And FEA For The Monitoring Of Landslides Egli Michailidou, Styliana Stavrou, Christakis Iereidis, Iordanis Aloupas, Skevi Perdikou GEOFEM, Cyprus</p>	<p>Leveraging community-generated data in research: The KnowYourCity Campaign data set by Slum Dwellers International</p>

Slide-Map – a Platform for Landslide Risk Mapping in Near-real Time

Ionut Sandric^{1,2}, **Viorel Ilinca**^{3,2}, **Radu Irimia**^{1,2}, **Zenaida Chitu**^{4,5,2}, **Andrei Stefan**⁶

1: University of Bucharest, Faculty of Geography, Romania; 2: University of Bucharest, Institute for Research (ICUB); 3: Geological Institute of Romania, Caransebeş Street, no. 1, Bucharest, Romania; 4: National Meteorological Administration, 013686 Bucharest, Romania; 5: National Institute of Hydrology and Water Management, 013686 Bucharest, Romania; 6: ESRI Romania

Dana R. Thomson¹, **Hazem Mahmoud**², **Forrest R. Stevens**³, **Robert Chen**⁴, **Argyro Kavvada**⁵, **Andrea E. Gaughan**³

1: University of Twente, Faculty of Geo-Information Science & Earth Observation, Netherlands; 2: University of Texas at San Antonio, Department of Geological Sciences, USA; 3: University of Louisville, Department of Geography and Geosciences, USA; 4: Columbia University, Center for International Earth Science Information Network, USA; 5: National Aeronautics and Space Administration, Earth Sciences Division, USA

Remotely Sensed Early Warning Signals of Critical Transitions of Forest Ecosystems

Filippos Eliades^{1,2}, **Diofantos Hadjimitsis**^{1,2}, **Chris Danezis**^{1,2}, **Felix Bachofer**³

1: Cyprus University of Technology; 2: Eratosthenes Center Of Excellence; 3: German Aerospace Center/Deutsches Zentrum für Luft- und Raumfahrt DLR

Finding Biases in Geospatial Datasets in the Global South: Are we Missing Vulnerable Populations?

Caroline M. Gevaert

University of Twente, Netherlands, The

SkySat – Geometry and Effective Resolution

Karsten Jacobsen

Leibniz University Hannover, Germany

Garbage in/Garbage Out: Understanding Cities Through a Geospatial Analysis of Waste Management Processes

Isaac Oluoch¹, **Monika Kuffer**¹, **Michael Nagenborg**¹, **Kevin Pijpers**¹, **Dana Thomson**¹, **Stefanos Georganos**², **Angela Abascal**³, **Sabine Vanhuyse**⁴, **Nicera Wanjiru**⁵, **Eric Rovoga**⁵

1: University of Twente, Netherlands; 2: Royal Institute of Technology, Sweden; 3: University of Navarra, Spain; 4: Université libre de Bruxelles (ULB), Belgium; 5: Community Mappers, Kenya

1:00pm

Lunch Break

Location: **Pantheon Restaurant**

-

2:00pm

2:00pm

Poster Session (Exhibition)

Location: **Aphrodite Hall**

-

2:30pm

2:30pm

S_AI: Artificial Intelligence and Big Earth Data

Location: **Zeus**

Chair: **Dr. Nektarios Chrysoulakis**

Chair: **Dr. Ioannis Varvaris**

-

3:30pm

Machine and Deep Learning Tools Exploiting Earth Observation for Airport Geodata Production

Benjamin Beaumont, **Dimitri Graur**, **Eric Hallot**

Remote Sensing and Geodata Unit, Institut Scientifique de Service Public (ISSeP), Liège, Belgium

Exploring The Potential Of Future Satellite Imagers: Assessing The Hyperspectral Sensors' Soil Organic Carbon Predictive Capacity

Stylios Kokkas¹, **Nikolaos Tziolas**¹, **Nikolaos L. Tsakiridis**^{1,2}, **Konstantinos Karyotis**¹, **George Zalidis**¹

1: Aristotle University of Thessaloniki, Laboratory of Remote Sensing, Spectroscopy and GIS, Department of Agriculture, Greece; 2: Aristotle University of Thessaloniki, Automation and Robotics Laboratory, Department of Electrical and Computer Engineering, Faculty of Engineering, Greece

Optimizing Ground-Based Observations Of Global Precipitation Patterns

Johannes Bühl¹, Martin Radenz¹, Patric Seifert¹, Argyro Nisantzi², Rodanthi Mamouri², Ulla Wandinger¹, Albert Ansmann¹

1: TROPOS, Leipzig, Germany; 2: ERATOSTHENES Center of Excellence, Limassol, Cyprus

Copernicus for Urban Resilience in Europe: Intermediate results from the CURE project

Nektarios Chrysoulakis¹, Zina Mitraka¹, Mattia Marconcini², David Ludlow³, Zaheer Khan³, Brigitte Holt Andersen⁴, Tomas Soukup⁵, Mario Dohr⁶, Alessandra Gandini⁷, Jürgen Kropp⁸, Dirk Lauwaet⁹, Christian Feigenwinter¹⁰

1: FORTH (Foundation for Research and Terchnology Hellas), Greece; 2: Deutsches Zentrum für Luft- und Raumfahrt, Germany; 3: University of the West of England, Bristol, United Kingdom; 4: CWare ApS, Denmark; 5: Gisat S.R.O., Czech Republic; 6: GeoVille Informationssysteme und Datenverarbeitung GMBH, Austria; 7: TECNALIA, Fundacion Tecnalia Research & Innovation, Spain; 8: PIK, otsdam Institut fuer Klimafolgenforschung, Germany; 9: VITO, laamse Instelling voor Technologisch Onderzoek N.V., Belgium; 10: Universitaet Basel, Switzerland

2:30pm
-

4:00pm

SS_LCLU: Special Session - Land Use Land Cover

Location: **Adonis**

Chair: **Dr. Gregory Giuliani**

Chair: **Dr. Birgitta Putzenlechner**

WSDC_SDGs: Workshop on Developing Countries: SDGs urban sustainability , demographic and health modelling

Location: **Aphrodite Hall**

Chair: **Dr. Dana Renee Thomson**

Chair: **Sabine Vanhuysse**

An Automated Approach to Habitat Mapping on a Rehabilitation Peatland Using Google Earth Engine

Richa Marwaha¹, Stuart Green², Matthew Saunders¹

1: Trinity College Dublin, Ireland; 2: Ashtown Food Research Centre, Ireland

Vector-borne Disease Risk Mapping in Sub-Saharan African Cities: Challenges and Opportunities

Catherine Linard, Camille Morlighem

University of Namur, Belgium

Random Forest and Convolutional Neural Networks Classification of LULUCF Using Sentinel-2 Data in Czechia

Gabriel Antonio Carneiro^{1,2}, **Jan Svoboda³**, Přemysl Štych³, Joaquim João Moreira de Sousa^{1,2}, António Cunha^{1,2}

1: University of Trás-os-Montes e Alto Douro, Department of Engineering, Vila Real, Portugal; 2: INESC-TEC, Porto, Portugal; 3: Charles Universty - Faculty of Science, Czech Republic

"Making Urban Slum Population Visible: An Earth-Observation Based Approach"

Jorge Klinnert¹, Angela Abascal^{1,3}, Stefanos Georganos², Sabine Vanhuysse³, Monika Kuffer⁴, Eleonore Wolff³

1: Universidad de Navarra, Spain; 2: KTH Royal Institute of Technology, Sweden; 3: Department of Geosciences, Environment & Society, Belgium; 4: Faculty of Geo-information Science and Earth Observation, Netherlands

Performance Analysis of Pixel-Based and Object-Oriented LULC Classification in Google Earth Engine Using Multi-Temporal Sentinel-2 Imagery

Suzanna Cuypers¹, Korneel Hoebeke¹, Sander Bracke¹, Andrea Nascetti², Maarten Vergauwen¹

1: KU Leuven, Belgium; 2: Polytechnic University of Bari, Italy

Spatial And Temporal Urban Population Distribution Mapping In Sub-Saharan African Cities Using Earth Observation and Deep Learning

Stefanos Georganos¹, Sebastian Hafner¹, Theodimir Mugiraneza², Yifang Ban¹

1: Division of Geoinformatics, KTH Royal Institute of Technology, Sweden; 2: University of Rwanda, Centre for GIS and Remote Sensing, Rwanda

Agricultural Land Use Forecasting – Preliminary Results for a Case Study in the Paphos district, Cyprus

Stelios Neophytides^{1,2}, Christiana Papoutsas^{1,2}, Diofantos Hadjimitsis^{1,2}, Phaedon Kyriakidis^{1,2}

Fusing Earth Observation and Socioeconomic Data to Increase the Transferability of Large-scale Urban Land Use Classification

Job Fabian Rosier¹, Hannes Taubenböck^{2,3}, Peter H. Verburg¹, Jasper van Vliet¹

1: ERATOSTHENES Centre of Excellence, Cyprus; 2: Cyprus University of Technology

Adaptability of Inundation Mapping in Service of the Water Utilities: the Case of Giaretta Lake and Brenta River

Ioannis Manakos¹, Afroditi Kita¹, Francesco Zaffanella², Sofia Papadopoulou¹, Lisa Napolitano²

1: Centre for Research and Technology Hellas, Greece; 2: Autorità di bacino Distrettuale delle Alpi orientali, Italy

1: Vrije Universiteit Amsterdam, Netherlands, The; 2: German Aerospace Center (DLR), German Remote Sensing Data Center (DFD), Oberpfaffenhofen, 82234, Weßling, Germany; 3: Institute for Geography and Geology, Julius-Maximilians-Universität Würzburg, Würzburg 97074, Germany

Assessing the Utility of Open-Source Geo-Spatial Data for AI-Driven Estimation of Fire Spread Risk in Informal Settlements

Dagmara Panas¹, Sohan Seth¹, Gary Watmough², David Rush³

1: School of Informatics, University of Edinburgh, United Kingdom; 2: School of Geosciences, University of Edinburgh, United Kingdom; 3: School of Engineering, University of Edinburgh, United Kingdom

Mapping Access to Electricity and Urban Night Lights: Leveraging the Massive Repository of Astronaut Photography of the Earth

Monika Kuffer¹, Tobias Storch², Alejandro Sánchez De Miguel³, Franz Hölker⁴, Eleanor Stokes⁵

1: Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, The Netherlands; 2: Earth Observation Center (EOC), German Aerospace Center (DLR), 82234 Weßling, Germany; 3: Universidad Complutense de Madrid, Spain; 4: Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), 12587 Berlin, Germany; 5: Universities Space Research Association, USA

4:00pm **Coffee Break**

Location: **Arion Bar**

-

4:30pm

The coffee for the workshop participants will be at 04:00 pm - 04:15 pm due to practical reasons.

4:25pm **WSDC_EC: Workshop on Developing Countries: Environmental and Climatic applications**

Location: **Aphrodite Hall**

Chair: **Dr. Jiong Wang**

-

5:40pm

Chair: **Prof. Catherine Linard**

Characterising the Changes in Land Use and Land Cover amid Changing Climatic Conditions using Remote Sensing Techniques in the Muringato Basin, Kenya

Simon Wachira Muthee, Bartholomew Thiong'o Kuria, Charles Ndegwa Mundia

Dedan Kimathi University of Technology, Kenya

Evaluation Of The Dempster-Shafer Theory For Oil Palm Plantations Mapping: Application To Sumatra (Indonesia)

Carl Bethuel¹, Damien Arvor¹, Thomas Corpetti¹, Jérémie Gignoux², Samuel Corgne¹

1: UMR LETG 6554 CNRS, UNIVERSITY OF RENNES 2; 2: PSE - Paris School of Economics

Classification Features and Object-based Mapping for Heterogenous Tropical Highlands Using a Synergetic Multi-Sensor Approach Based on Sentinel-1, Sentinel-2, and GEDI Data - A Case Study of the Muringato Sub-catchment, Kenya.

Marcus Frederik Goebel¹, Kuria Thiong'o², Andreas Rienow¹

1: Ruhr-University Bochum, Germany; 2: Dedan Kimathi University of Technology, Kenya

A Universal Data Processing Method for Global Production of Water-quality Indicators in Support of SDG 6.3.2

Nima Pahlevan^{1,2}, **Akash Ashapure**^{1,2}, **Asen Radov**^{2,3}, **Navid Golpayegani**²

1: Science Systems and Applications Inc.; 2: NASA GSFC, United States of America; 3: University of Maryland

Assessing The Effectiveness Of Participatory GIS Tool For Environmental Conservation Of The Muringato Catchment Area.

Wisdom Kipkemboi, **Bartholomew Thiong'o Kuria**, **David Ndegwa Kuria**

Dedan Kimathi University of Technology, Kenya

4:30pm

CM: Council Meeting

-

Location: **Adonis**

6:00pm

Date: Thursday, 15/Sept/2022

9:00am **KS3: Keynote Speech**

-
Keynote Speaker: Prof. Gilberto Camara, National Institute for Space Research of Brazil
Title: "LUCC Classification with Big Earth Observation Data: Challenges and Current Status"

9:30am

9:30am **SS_ET1: Special Session - Education and Training**

-
Chair: **Alexander Siegmund**
Chair: **Dr. Premysl Stych**

10:30am

Around The Earth In Less Than 5 Minutes – Exploring Earth Observation Satellites In An Augmented Reality App

Claudia Lindner, Henryk Hodam, Annette Ortwein, Andreas Rienow
Ruhr-University Bochum, Germany

Developing and Testing Explainer Videos on Earth Observation

Henryk Hodam, Andreas Rienow, Carsten Juergens
Ruhr-Universität Bochum, Germany

PULCHRA Project: Earth Observation and Open Schooling

Přemysl Štych, Josef Laštovička, Jan Svoboda, Natalia Kobliuk, Daniel Paluba
Charles University, Faculty of Science, Department of Applied Geoinformatics and Cartography, EO4Landscape research team, Czechia

Potentials of the App BLIF: Explorer for Location-based Use of Satellite Imagery to Foster Remote Sensing in Schools

Johannes Keller¹, Mario Blersch¹, Christian Plass¹, 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

10:30am **Coffee Break**

-
Location: **Arion Bar**

11:00am

11:00am **SS_ET2: Special Session - Education and Training**

-
Location: **Aphrodite Hall**
Chair: **Alexander Siegmund**
Chair: **Dr. Premysl Stych**

11:45am

The European Perspective: Earth Observation for Education (EO4Edu)

Annette Ortwein, Kilian Staar, Claudia Lindner, Henryk Hodam, Andreas Rienow
University of Bochum, Germany

"From Space to Classroom" using ESA's Climate Change Initiative Educational and Training Resources

Eirini Politi¹, Suhyb Salama², Catherine Fitzsimons³, Norman Fomferra¹, Tonio Fincke¹, Carsten Brockmann¹
1: Brockmann Consult GmbH, Germany; 2: University of Twente, the Netherlands; 3: University of Leicester, United Kingdom

Promoting The Benefits Of Earth Observation In Secondary And Higher Education In Cyprus

Maria Prodromou^{1,2}, Eleni Loulli^{1,2}, Christiana Papoutsas^{1,2}, Christos Theocharidis^{1,2}, Antonis Hadjiantonis³, Diofantos Hadjimitsis^{1,2}

1: ERATOSTHENES Centre of Excellence, Limassol, Cyprus; 2: Department of Civil Engineering and Geomatics, Faculty of Engineering and Technology, Cyprus University of Technology, Limassol, Cyprus; 3: Cyprus Research and Innovation Centre (CyRIC), Nicosia, Cyprus

12:00pm

S_SP: Sponsors Session

Location: **Aphrodite Hall**

-

1:00pm

1. Long term changes identification and analysis of river deltas and riparian zones using time-series multispectral data - GEOSYSTEM HELLAS (Christos Kontopoulos, Dimitra Kitsiou, Stavros Chlorokostas, Vasiliki Charalampopoulou, Nikos Grammalidis, Anastasios Tzepenlis)

2. Addressing the use of EO and remote sensing technologies to assess economic indicators and identify economy trends - Monitoring CypRus ecOonomy by Space (MICROS) - GEOSYSTEM HELLAS (Christos Kontopoulos, Thomas Papakosmas, Vasiliki Charalampopoulou, Giovanni De Angelis, Stelios Zervos)

3. Nextland - Next Generation Land Management Services for Agriculture and Forestry (Nuno Grosso, Isabelle Piccard, Hervé Caumont, Luís Filipe Lages, David Cordeiro, Greg Robson, Radoslaw Guzinski, Jo Van Brusselen, Tord Sorensen, Ioannis Manakos, Christos Kalogeropoulos, Jim Wilson, Pieter Janssens, Alireza Taravat)

4. ArcGIS Imagery Solutions - MARATHON DATA SYSTEMS (John Kontos, Maria Pafi)

5. Importance of the ERATOSTHENES Centre of Excellence for the EMMENA region (Eleni Loulli)

1:00pm

Lunch Break

Location: **Pantheon Restaurant**

-

2:00pm

2:00pm

Poster Session (Exhibition)

Location: **Aphrodite Hall**

-

2:30pm

2:30pm

SS_GRS1: Special Session - Geological Remote Sensing

Location: **Aphrodite Hall**

-

4:00pm

Chair: **Prof. Konstantinos Nikolakopoulos**

Chair: **Aggeliki S. Kyriou**

Creation Of High-Precision 3D Reference Point Cloud Using UAV And TLS Data, Within "PROION" Project

Konstantinos Nikolakopoulos¹, Aggeliki Kyriou¹, Athanassios Ganas², Yiannis Maroufidis³, Vassiliki (Betty) Charalampopoulou³, Theodoros Athanasopoulos⁴

1: University of Patras, Greece; 2: National observatory of Athens; 3: Geosystems Hellas S.A; 4: ES Systems

SAR-based Automated Unsupervised Rapid Mapping of Land Surface Changes after Volcanic Eruptions in Indonesia

Aiym Orynbaikyzy¹, Simon Plank¹, Sandro Martinis¹, Arum Tjahjaningsih², Rido Dwi Ismanto², Farikhotul Chusnayah², Imam Santoso², Suwarsono⁻², M. Rokhis Khomarudin², Yenni Vetrita²

1: German Remote Sensing Data Center (DFD), German Aerospace Center (DLR), Germany; 2: Research Organization for Aeronautics and Space, National Research and Innovation Agency (BRIN), Indonesia

Satellite-based Monitoring of an Active and Fast-moving Landslide Using PSI and DINSAR Analysis: The Case Study of Pissouri Village in Cyprus

Kyriaki Fotiou^{1,2}, Dimitris Kakoullis^{1,2}, Marina Pekri^{1,2}, Diofantos G. Hadjimitsis^{1,2}, George Melillos^{1,2}, Chris Danezis^{1,2}

1: Cyprus University of Technology, Cyprus; 2: ERATOSTHENES Centre of Excellence, Cyprus

Seismic Activity Monitoring And Surveillance Of Active Geotectonic Region Vrancea In Romania Via In-Situ And Geospatial Data

Maria Zoran, Roxana Savastru, Dan Savastru, Marina Tautan

National Institute of R&D for Optoelectronics, Romania

Potentiality of Landslide Detection in Open-pit Mines Using Satellite-Based Techniques: The Case Study Of Vasiliko Open-Pit Mine In Cyprus

Marinos Avgousti¹, Kyriaki Fotiou^{1,2}, Dimitris Kakoullis^{1,2}, Chris Danezis^{1,2}

1: Cyprus University of Technology, Cyprus; 2: ERATOSTHENES CENTRE OF EXCELENCE, Cyprus

4:00pm

Coffee Break

-

Location: **Arion Bar**

4:30pm

5:00pm

GA: General Assembly

-

Location: **Aphrodite Hall**

6:00pm

8:30pm

SD: Symposium Dinner

-

Location: **Pantheon Ballroom**

11:59pm

Date: Friday, 16/Sept/2022

9:00am	KS4: Keynote Speech	
-		
9:30am	Keynote Speaker: Prof. Maria Antonia Brovelli, Politecnico Di Milano Title: "Openness in Geospatial Science and Earth Observation"	
9:30am	S_InnT: Innovative Technologies in Remotely Sensed & In-situ Data	SS_CNH: Special Session - Cultural and Natural Heritage
-		
10:30am	Location: Adonis Chair: Prof. Andreas Anayiotos Chair: Maria Zoran	Location: Aphrodite Hall Chair: Dr. Athos Agapiou
	UAV-based Glacier Monitoring: GNSS Kinematic Track Post-processing For Accurate Reconstruction In Challenging Environments Valeria Belloni¹, Davide Fugazza², Martina Di Rita³, Mattia Crespi¹ 1: University of Rome La Sapienza, Italy; 2: Università degli Studi di Milano; 3: Leica Geosystems AG	An Experimental Study For The Detection Of Surface Ceramics Through Unmanned Aerial Vehicles (UAV) Argyro Argyrou, Vasiliki Lysandrou, Michalis Christoforou, Athos Agapiou Earth Observation Cultural Heritage Research Lab, Cyprus University of Technology
	A Comparison Between Satellite Altimetry and Tide Gauge Observations in Monitoring Sea Level Changes in Cyprus Marina Pekri^{1,2}, Marios Nikolaidis^{1,2}, Dimitris Kakoullis^{1,2}, Chris Danezis^{1,2} 1: Cyprus University of Technology, Cyprus; 2: ERATOSTHENES CENTRE OF EXCELLENCE, Cyprus	Automated Mapping of Cultural Heritage in Norway from Airborne Laser Scanning Data Using Faster R-CNN Øivind Due Trier¹, Jarle Hamar Reksten¹, Kristian Løseth² 1: Norwegian Computing Center, Norway; 2: The Directorate for Cultural Heritage, Norway
	Assessment Of COVID-19 Impacts On Satellite-Observed Aerosol Loading Over Few European Metropolitan Cities Dan Savastru, Maria Zoran, Roxana Savastru, Marina Tautan National Institute of R&D for Optoelectronics, Romania	Optimal Selection Of Physiologically Distinct Periods To Detect Invasive Plant Robinia Pseudoacacia In Natura 2000 Sites Of The Danubian Lowland, Slovakia. Tomáš Rusňák, Andrej Halabuk, Juraj Lieskovský ILE SAS v.v.i., Slovak Republic
	Landsat 9 Data And GEE For Estimating Land Surface Albedo Over Southern Italian Cities Carlo Barletta, Alessandra Capolupo, Eufemia Tarantino Department of Civil, Environmental, Land, Construction and Chemistry (DICATECh), Politecnico di Bari, Italy	The Use of Digital Geomedia for Management of UNESCO Sites – Current State of Knowledge and Future Potential Lisa Dannwolf¹, Emmanuel Eze^{1,2}, Nicolás Zanetta-Colombo^{1,2}, Maïke Petersen¹, 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
		U-Net: A Deep Convolutional Encoder-Decoder Architecture to Discover Ancient Agricultural Terraces using LiDAR and Orthophoto Arti Tiwari, Micha Silver, Aviv Lee Cohen-Zada, Arnon Karnieli Ben Gurion university of Negev, Israel, Israel
10:30am	Coffee Break	
-		
11:00am	Location: Arion Bar	

11:00am
-
11:30am

S_EOC: Earth Observation Challenges: Open Science, Open Innovation, Digital Innovation Hubs, Sustainable Development Goals (SDGs)

Location: **Zeus**

Chair: **Prof. Mattia Crespi**

Chair: **Prof. Andreas Anayiotos**

Global Monitoring of Inland Water Surface With GEDI Geo Big Data Using Google Earth Engine: Preliminary Analysis, Potentials and Issues

Alireza Hamoudzadeh¹, Roberta Ravanelli¹, Isabel Coccozza¹, Virginia Coletta¹, Mattia Crespi^{1,2}

1: Sapienza University of Rome, DICEA, Geodesy and Geomatics Division, Italy; 2: Sapienza School for Advanced Studies, Sapienza University of Rome, Italy

Comparison of Copernicus Urban Atlas and HRL Imperviousness enhanced by administrative data in urbanization studies.

Wojciech Łachowski

Institute of Urban and Regional Development, Poland

11:30am
-
1:00pm

S_OT: Other Topics

Location: **Aphrodite Hall**

Chair: **Dr. Kyriacos Themistocleous**

Detection of Nature Interventions in Sentinel-2 Images of Norway Using U-Net

Øivind Due Trier¹, Arnt-Børre Salberg¹, Ragnvald Larsen², Ole T. Nyvoll²

1: Norwegian Computing Center, Norway; 2: Norwegian Environment Agency

Comparison of Digital Elevation Models by Chernoff faces

José Rodríguez-Avi, Francisco Javier Ariza-López

University of Jaén, Spain

Topographic Position Index and height error of Digital Elevation Models

José Rodríguez-Avi¹, Francisco Javier Ariza-López¹, Juan Francisco Reinoso-Gordo²

1: University of Jaén, Spain; 2: University of Granada, Spain

What Tell The Male and Female Testimonials From the Women in Copernicus Survey ?

Marine Nyssen¹, Caroline Closon¹, Eleni Loulli^{3,4}, Nathalie Stéphenne², Barbara Riedler², Marie Jagaille²

1: Université Libre de Bruxelles, Belgium; 2: Women in Copernicus; 3: ERATOSTHENES Centre of Excellence, Limassol, Cyprus; 4: Cyprus University of Technology, Limassol, Cyprus

The Implementation Of Forest Canopy Density Model In Cyprus Forests Using Landsat-8 and Sentinel-2 Satellite Data For The Assessment Of the Fire Impacts

Maria Prodromou^{1,2}, Kyriacos Themistocleous^{1,2}, Chris Danezis^{1,2}, Ioannis Gitas³, Diofantos Hadjimitsis^{1,2}

1: Department of Civil Engineering and Geomatics, Cyprus University of Technology, Limassol, Cyprus; 2: ERATOSTHENES Centre of Excellence, Limassol, Cyprus; 3: Department of Forestry, Laboratory of Forest Management and Remote Sensing, Aristotle University of Thessaloniki, Greece

Tack Project: Tunnel Automatic Crack Monitoring Using Deep Learning and Photogrammetry

Valeria Belloni¹, Andreas Sjölander², Roberta Ravanelli¹, Mattia Crespi³, Andrea Nascetti⁴

1: DICEA, University of Rome La Sapienza, Italy; 2: Division of Concrete Structures, KTH Royal Institute of Technology; 3: Sapienza University of Rome, DICEA - Sapienza School for Advanced Studies; 4: Geoinformatics Division, KTH Royal Institute of Technology

1:00pm

Lunch Break

-

Location: **Pantheon Restaurant**

2:00pm

2:00pm

P4: Poster Session (5-Slides Presentations)

-

Location: **Aphrodite Hall**

3:45pm

Chair: **Dr. Silas Michaelides**

The Valuable Usage Of The Multitemporal Data To The Rate of Shoreline Change Determination In Sandy Beaches

Dionysios Apostolopoulos, Konstantinos Nikolakopoulos

University of Patras, G.I.S & Remote Sensing Laboratory, Greece

Using Remote Sensing Data with Machine Learning to Predict Distribution of Red-listed Forest Species

Xi-Lillian Pang¹, Stefanos Georganos², Ulla Mörtberg¹, Yifang Ban²

1: Department of Sustainable Development, Environmental Science and Engineering, KTH Royal Institute of Technology, Sweden; 2: Department of Urban Planning and Environment, KTH Royal Institute of Technology, Sweden

Documentation and monitoring of the rehabilitation of the historic World War II US Air Force Base in Greenland

Karel Pavelka, Jaroslav Šedina, Karel Pavelka jr., Eva Matoušková, Martin Kýhos

Czech Technical University in Prague, FCE, Czech Republic, dept.of geomatics

Mapping Exposure to Landslides by Means of Artificial Intelligence and UAV Aerial Imagery in the Curvature Subcarpathians, Romania

Zenaida Chitu¹, Ionut Sandric^{2,1}, Viorel Ilinca^{3,1}, Radu Irimia^{2,1}

1: University of Bucharest, Institute for Research (ICUB); 2: University of Bucharest, Faculty of Geography, Romania; 3: Geological Institute of Romania, Caransebeş Street, no. 1, Bucharest, Romania

The Utilisation Of DInSAR For The Monitoring Of The Shuibuya's Concrete-Face Rockfill Dam (CDRF) In China

Styliana Stavrou, Egli Michailidou, Skevi Perdikou

Geofem Ltd., Cyprus

In Situ Topsoil Sensing System to Support Environmental Performance Monitoring

Konstantinos Karyotis¹, Nikolaos L. Tsakiridis^{1,2}, Nikolaos Tziolas¹, Eleni Kalopesa¹, Periklis Chatzimisios³, Georgios Zalides¹

1: Aristotle University of Thessaloniki, Laboratory of Remote Sensing, Spectroscopy and GIS, Department of Agriculture, Greece; 2: Aristotle University of Thessaloniki, Automation and Robotics Laboratory, Department of Electrical and Computer Engineering, Faculty of Engineering, Greece; 3: International Hellenic University, Department of Information and Electronic Engineering, Greece

Using the VENµS Super-Spectral Camera for Detecting Moving Vehicles

Arnon Karnieli, Manuel Salvoldi, Aviv Cohen-Zada

Ben Gurion University, Israel

Enhancing PRISMA and Sentinel 2 Capabilities for Marine Plastic Litter Detection Using Image Fusion Techniques, Spectral Signature Unmixing and Spectral Indexes

Maria Kremezi, Viktoria Kristollari, Vassilia Karathanassi, Pol Kolokoussis
National Technical University of Athens, Greece

Reference Target Extraction for Point Cloud Intensity Normalization in Scan to BIM

Rabia Rashdi^{1,2}, Zhouyan Qiu^{1,2}, Pedro Arias¹, Joaquín Martínez-Sánchez¹
1: University of Vigo, Spain; 2: ICT & Innovation Department, Ingeniería Insitu, Spain

Estimation of Solar Radiation at Ground Level using SENTINEL 3 data and machine learning techniques: a case study in Cyprus.

Diofantos Hadjimitsis^{1,2}, George E. Georghiou³, Silas Michaelides², Maria Prodromou^{1,2}, Argyro Nisantzi^{1,2}, Christiana Papoutsas^{1,2}, Rodanthe Mamouri^{1,2}, Eleni Loulli^{1,2}, Marina Pekri^{1,2}, Spyros Theocharides³, Javier Lopez Lorente³, George Makrides³, Konstantinos Fragkos²
1: Cyprus University of Technology, Department of Civil Engineering and Geomatics, Limassol, Cyprus; 2: Eratosthenes Centre of Excellence, Limassol, Cyprus; 3: 1PV Technology Laboratory, FOSS Research Centre for Sustainable Energy, Department of Electrical and Computer Engineering, University of Cyprus, Nicosia, 1678, Cyprus

Crowdsourced Observations and Geospatial Data for the Modelling of Butterfly Distribution using MAXENT in Styria, Austria

Daniel Kulmer¹, Manuela Hirschmugl^{1,2}
1: University of Graz, Austria; 2: Joanneum Research

Health-Related Disparities in the Metropolitan Region Ruhr – Large-Scale Spatial Model of Local Asthma Prevalence, Accessibility of Health Facilities and Socio-economic and Environmental Factors

Nicolai Moos¹, Annette Ortwein², Andreas P. Redecker¹
1: Ruhr University Bochum, Germany; 2: Philipps University Marburg, Germany

What is the Role of Aerosol to the Cloud Formation and Evolution?

Rodanthe Elisavet Mamouri^{1,2}, Argyro Nisantzi^{1,2}, Holger Baars³, Ronny Engelmann³, Diofantos Hadjimitsis^{1,2}, Albert Ansmann³
1: ERATOSTHENES Centre of Excellence, Cyprus; 2: Cyprus University of Technology, Department of Civil Engineering and Geomatics, Cyprus; 3: Leibniz Institut für Troposphärenforschung, Leipzig, Germany

Time Series Satellite Data For Urban Thermal Environment Changes Analysis Over Bucharest Metropolitan City

Maria Zoran, Roxana Savastru, Dan Savastru, Marina Tautan
National Institute of R&D for Optoelectronics, Romania

Novel Radargrammetric Approach for Capella Space Imagery

Karlheinz Gutjahr¹, Can Atalay², Roland Perko¹, Hannes Raggam¹, Janik Deutscher¹, Mathias Schardt^{1,3}, Umut Gunes Sefercik⁴

1: Joanneum Research, Austria; 2: Zonguldak Bülent Ecevit University, Turkey; 3: Graz University of Technology, Austria; 4: Gebze Technical University, Turkey

3:45pm
-
4:30pm

CC: Closing Ceremony
Location: **Aphrodite Hall**