

# International Conference of Environmental Remote Sensing and GIS (ICERS) – program



1<sup>st</sup> day – 11<sup>th</sup> July 2024

Time	Title and authors
8:00-9:00	Registration
9:00-9:45	Opening ceremony
9:45-10:30	<b>Keynote speaker Full. Prof. Geoffrey Henebry:</b> Characterizing Seasonalities: Land Surface Phenology at a Crossroads
10:30-10:45	Joint photography
10:45-11:00	Coffee break
11:00-13:00	<p><b>1<sup>st</sup> session – REMOTE SENSING FOR ENVIRONMENTAL MONITORING – Chair: Full. Prof. Geoffrey Henebry</b></p> <ul style="list-style-type: none"> <li>• Advancing Remote Sensing for Continuous Monitoring and Detection of Water Pollution Incidents (Gordana Kaplan, Fatma Yalcinkaya, Argyro Tsipa, Andrea Pietrell, Mieveville Fabien, Vincenzo Ferrara, Ioannis Ieropoulos)</li> <li>• Monitoring Changes in Channel Morphology on the Orłjava River Based on UAV and GNSS Surveys (Požega-Slavonia County, Croatia (Katarina Pavlek, Marin Mićunović, Ivan Čanjevac)</li> <li>• Utilization of USGS Spectral Signature Processing in Croatian Gypsum Exploration (Nikola Gizdavec, Erli Kovačević Galović, Marko Copic, Nikolina Ilijanić, Slobodan Miko)</li> <li>• Development of Croatian Land Information System (Vladimir Jelavić, Delfa Radoš, Marina Kukavica)</li> <li>• PlanetScope Imagery-based Monitoring of Annual and Seasonal Dynamics of Lakes in Tbilisi, Georgia (Mariam Tsitsagi, Zaza Gulashvili, Ana Palavandishvili)</li> <li>• Monitoring of Helheim Glacier Dynamics Using the Open-Source High-Resolution Satellite Imagery (Katarina Kolar, Fran Domazetović, Lovre Panđa, Rina Milošević)</li> <li>• The Relationship between Air Pollution and Sea Surface Temperature Anomalies in the Northern Adriatic Sea (Luka Mamić, Matea Tomić)</li> </ul>
13:00-14:00	Lunch
14:00-14:45	<p><b>SPONSOR PRESENTATIONS</b></p> <ul style="list-style-type: none"> <li>• Geomatika-Smolčak d.o.o.</li> <li>• Oikon Ltd. – Institute of Applied Ecology</li> <li>• GEOWILD d.o.o.</li> </ul>
14:45-15:30	<p><b>2<sup>nd</sup> session – DISASTER MANAGEMENT AND RESPONSE – Chair: Sergej Baričević, PhD</b></p> <ul style="list-style-type: none"> <li>• Processing Lidar Data for Geomorphological Mapping of Active Faults: A Case Study of Sveta Nedelja Fault (Žumberak Mt.) (Josipa Maslač, Branko Kordić, Petra Jamšek Rupnik, Bojan Matoš)</li> <li>• Pluvial Flood Hazard Analysis in the Sub-catchment of the Metković City (Lovre Panđa, Nino Krvavica, Ante Šiljeg, Fran Domazetović, Ivan Marić, Silvija Šiljeg, Rina Milošević)</li> <li>• Strategies for Civil-Military Geographical Support to Defence and Security Operations (Mladen Viher)</li> </ul>
15:30-15:45	Coffee break
15:45-17:00	<p><b>3<sup>rd</sup> session – GIS FOR SUSTAINABLE DEVELOPMENT – Chair: Assoc. Prof. Gordana Kaplan</b></p> <ul style="list-style-type: none"> <li>• Comparison of Two Solar Potential Methods on Rooftops Using LIDAR Data (Katarina Barnjak, Mario Miler, Luka Rumora, Damir Medak)</li> <li>• Advancing Land-Cover Classification in Croatia: Implementation of a Pilot Project for ARKOD+ and CROLIS LU Initial Layer Creation (Matjaž Štanfel, Dragan Vitas, Mladen Majcen, Dario Perešin)</li> <li>• Spatial Analysis of Infrastructure Types in Kızıldağ National Park Using Remote Sensing and GIS (E. Seda Arslan, Ömer K. Örucü)</li> <li>• Utilizing Remote Sensing Data for Species Distribution Modelling of Birds in Croatia (Andreja Radović, Sven Kapelj, Louie Thomas Taylor)</li> </ul>

Time	Authors and title
9:00-10:45	<b>4<sup>th</sup> session – INNOVATIONS IN SPATIAL DATA-ACQUIRING TECHNOLOGIES – Chair: Dino Dobrinić, PhD</b> <ul style="list-style-type: none"> <li>Enhancing Satellite-Derived Bathymetry Using the Different Sentinel-2 Spectral Bands in the Middle Adriatic (Ljerka Vrdoljak)</li> <li>Global Open Maps for the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast (Martina Baučić, Frane Gilić, Antonio Morić Španić, Daria Povh Škugor)</li> <li>A Deep Learning Algorithm for Water Body Mapping from Sentinel 2 Data (Gordana Jakovljević, Miro Govedarica)</li> <li>Application of Remote Sensing in Coastal Geomorphology: A Case Study of Zoraće Velo, Hvar Island, Central Adriatic (Marin Mićunović, Sanja Faivre)</li> <li>Comparative Analysis of Unmanned Aerial Vehicle Land Cover Classification of Two Study Sites in Serbia (Ivana Miličić, Nina Pajević, Bojana Ivošević)</li> <li>Testing the Performance of Hand-held Personal Laser Scanning Systems for Precision Forest Inventory (Andro Kokeza, Luka Jurjević, Fran Domazetović, Ivan Marić, Ante Šiljeg, Damir Medak, Krunoslav Indir, Danko Kuric, Ivan Balenović)</li> <li>Utilization of Underwater ROVs for the Evaluation and Research of the Underwater Environment-Example of Marine Outfalls Surveillance in the Wider Aquatorium of the City of Split (Konrad Kiš, Katja Franc)</li> </ul>
10:45-11:00	Coffee break
11:00-11:30	<b>Keynote speaker Imelda Somodi:</b> Potential distribution models in service of spatially explicit assessment of climate change impact on vegetation
11:30-13:00	<b>5<sup>th</sup> session – CONSERVATION AND BIODIVERSITY – Chair: Imelda Somodi, PhD</b> <ul style="list-style-type: none"> <li>Towards Detailed and Public Data on Croatian Soil as a Prerequisite for Sustainable Environmental Management and Nature Conservation (Josip Križan, Luka Antonić, Tomislav Hengl, Oleg Antonić)</li> <li>Shrub Encroachment and Shrinking of Pastures in Inner and Western Tien-Shan, Kyrgyzstan (Evgenii Shibkov)</li> <li>Forest Storm Damage Detection Using EO Data and Machine Learning (Damir Klobučar, Ivan Pilaš)</li> <li>Protecting Biodiversity: Empowering Engagement through Interactive Maps (Maja Maslač Mikulec, Karla Čmelar)</li> <li>Possibilities of the Utilization of UAS (Unmanned Aerial Systems) in the Preparation of Forest Management Plans for Private Forests (Konrad Kiš, Ema Svirčević)</li> </ul>
13:00-14:00	Lunch
14:00-15:30	<b>6<sup>th</sup> session – ARTIFICIAL INTELLIGENCE AND BIG DATA – Chair: Iva Gašparović, PhD</b> <ul style="list-style-type: none"> <li>Global Land Cover Mapping – Need for Discrete Global Grid System (Frane Gilić, Martina Baučić, Samah Termos)</li> <li>Quantifying Total Imperviousness from Building Footprint Area and Very High Resolution Air Photographs (Dennis M. Fox, Mostafa Banitalebi, Richard Fournie, Yacine Bouroubi)</li> <li>A Comparative Analysis of Pixel-Based and Object-Based Approaches Using Multitemporal PlanetScope Imagery for Land Cover Classification (Dino Dobrinić, Mario Miler, Damir Medak)</li> <li>The Role and Use of Big Data in Spatial Analysis of Touristification – Example of the Historic Core of Dubrovnik (Dino Bečić)</li> <li>Mapping Long-Term Trends in Actual Evapotranspiration in Data-Scarce conditions in Afghanistan (Fazlullah Akhtar, Christian Borgemeiste, Bernhard Tischbein)</li> </ul>
15:30-15:45	Coffee break
15:45-16:45	<b>7<sup>th</sup> session – CLIMATE CHANGE MITIGATION POLITICS – Chair: Assoc. Prof. Mateo Gašparović</b> <ul style="list-style-type: none"> <li>Adaptation of Croatian Wine-growing Zones to Climate Changes (Branimir Omazić, Maja Telišman Prtenjak, Jasminka Karoglan Kontić, Marko Karoglan, Darko Preiner, Ivan Prša)</li> <li>User-friendly Methodology and Prototype for Operational Deployment of a Satellite-based Monitoring System for EU – for More Resilient Territorial Management with Less Impact on Environment and Climate (Kristian Milenov, Viktor Milenov)</li> <li>Requirements for Georeferencing and Digitalization of Spatial Data in the New EU Legislation on Climate, Environment, and Biodiversity (Višnja Grgasović, Branimir Pavlinec, Domagoj Stjepan Krnjak, Vlatka Palčić, Tatjana Antolić, Hana Mesić, Vida Posavec Vukelić, Martina Pekčec)</li> </ul>
16:45-17:00	Closing ceremony

Online and poster sessions

Time	Authors and title
During the entire event	<p><b>Poster session</b></p> <ul style="list-style-type: none"> <li>• UAV-based Technologies for Remote Sensing in Environmental Monitoring and Physical Resilience Assessment (Veaceslav Sprincean, Marianna Savva, Ana Birsan, Ion Ganea, Alexei Leu, Marian Jalencu, Mihail Caraman, Alexandr A. Barsuk, Arcadi Chirita, Florentin Paladi)</li> <li>• Characterization of Valleys and Gullies of the North and Central Velebit Coastal Slope (Klara Grošanić, Marin Mićunović, Sanja Faivre)</li> <li>• A Review of Geospatial Prediction and Modelling Approaches in Biogas Plant Suitability Assessment (Đurđica Kovačić, Dorijan Radočaj, Mladen Jurišić)</li> <li>• Land Cover Changes and Conservation Effectiveness of Protected Area: Evidence from sub-Saharan Africa (Jeffrey Chiwiukem Chiaka, Gengyuan Liu)</li> <li>• CMIP6 and Climate Change: A Global Analysis of Research and Collaborations on the Water Budget (Sayed Ishaq Deliry, Uğur Avdan)</li> </ul>
During the entire event	<p><b>Online session</b></p> <ul style="list-style-type: none"> <li>• Validation of Near-surface Wind Speed Monthly Averages from CHELSA Climate Data in Croatia (Dorijan Radočaj, Mateo Gašparović, Mladen Jurišić)</li> <li>• Effective Spatial Planning of Watchtowers for the Detection of Wildfire Hotspots in Thasos Island, Greece (Stavros Sakellariou, Christos Christakis, Stergios Tampekis, Olga Christopoulou, Athanasios Sfougaris)</li> <li>• Forecasting Atmospheric Air Pollution in Tehran Using Random Forest Model (Nilufar Makky, Zahra Eghrari)</li> <li>• RS-GIS Monitoring of Afghanistan-Kazakhstan-Pakistan Cities Unsustainable Development (Gaukhar Meldebekova, Sholpan Kulbekova, Noor Nabi Dahar, Chakalov Andrey, Muhammad Ilyas, Syed Imran Moazzam Shah, Janay Sagin)</li> <li>• RS and GIS Application for the Alternative Scenarios and Regions for Hydrogen Exploration (Janay Sagin, Dani Sarsekova, Raushan Amanzholova, Rebecca King, Kairat Amanzholov, Baktybek Duisebek, Muhammad Ilyas, Noori Dahar, Syed Shah)</li> <li>• Declining Sea Surface Height in the Caspian Sea Based on Sentinel-3A Data (Nilufar Makky, Khalil Valizadeh Kamran)</li> <li>• Automated Plant Species Identification Using 3D LiDAR Point Clouds: A Case Study Using Cabbage and Maize Plants (Mukesh Kumar Verma, Manohar Yadav)</li> <li>• Data Augmentation with Generative Adversarial Network for Solar Panel Segmentation from Remote Sensing Imagery (Justinas Lekavičius, Valentas Gružasuskas)</li> <li>• Geomatics Applications for Farm's Sustainability (Amanzholova Raushan, Amanzholov K., Murat Daulet, Dani Sarsekova, Syed Shah, Rebecca King, Baktybek Duisebek, Janay Sagin)</li> <li>• Simulation of Land Use and Land Cover Change and Urban Sprawl Prediction in Lucknow Metropolitan Area Using Markov Chain Model (Vijay Kumar Singh Rathore, Sudhir Kumar Singh, Anjani Kumar Singh)</li> </ul>

The poster session and golden sponsors exhibition will be presented in the showroom during the entire event. Lunch and coffee breaks are included for all participants. For all other details, visit the ICERS website: <https://alcar.geof.hr/icers/>

The conference is organized by the University of Zagreb Faculty of Geodesy as part of the project Assessment of the Long-term Climatic and Anthropogenic Effects on the Spatio-temporal Vegetated Land Surface Dynamics in Croatia using Earth Observation Data (ALCAR, IP-2022-10-5711) funded by the Croatian Science Foundation.



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