

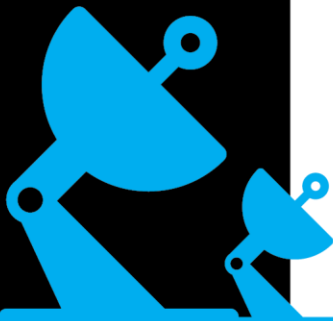


October 2023-March 2024 **NEWSLETTER** ISSUE #9

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EXCELSIOR



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Hyperspectral Research Campaign in Cyprus 9-14 October 2023

From 9 to 14 October 2023, the DLR's Dornier 228-212 research aircraft flew over Cyprus for a hyperspectral research campaign. The aircraft arrived in Cyprus on 8 October 2023 at Paphos airport, which was its base for the campaign days. On 9 October 2023, the ERATOSTHENES Centre of Excellence (CoE) team welcomed the aircraft crew and held a meeting at Paphos airport.

This campaign took place in the framework of the EXCELSIOR H2020 Teaming Project (EXCELSIOR Project) and during the flights, several groups from our team were simultaneously taking in-situ measurements at different areas of interest, such as archaeological sites, agricultural sites, forests, dams, coastal areas, including water, urban areas, etc. In-situ measurements included among others spectro-radiometric measurements, soil and/or water samples, temperature, humidity and atmospheric data. This was a unique opportunity to gather hyperspectral measurements to be exploited during DLR's training as part of the Centre's capacity building.



EXCELSIOR Review Meeting and Infrastructure Visit 16-17 January 2024

The 3rd Review Meeting of the EXCELSIOR Project brought together all key stakeholders of the Project, including representatives of the European Commission, the project's corporate structure, members of the Board of Directors, and the international advisory committee of the ERATOSTHENES CoE.

During the two-day meeting, which took place on 16 and 17 January 2024, at the premises of the Cyprus University of Technology (CUT), the participants had the opportunity to visit the CYTA infrastructure at the "Makarios" Satellite Station in Kakoratzia, where the Earth Observation Satellite Station will be hosted (Data Acquisition Station for Earth Observation). **Find out more:** <https://tepak.org/47Vmkkv>



New Members in the Board of Directors of the ERATOSTHENES CoE

The ERATOSTHENES CoE is pleased to announce the revised composition of its Board of Directors (BoD), which consists of seven new members. Notably, three out of the seven members are women, constituting a 43% representation. This percentage aligns with the Gender Equality Plan implemented of the Centre, reflecting its commitment to achieve inclusive excellence.



The president of the new BoD is Dr. Nektarios Chrysoulakis, Director of Research at the Foundation for Research and Technology (Forth), Greece, and holder of an ERC Synergy Grant 2019 in Earth Observation and Remote Sensing. The rest of the BoD consists of the following members: Mr. Marios Demetriades, Former Cyprus Minister of Transport, Communications, and Works; Ms. Barbara Ryan, Former Executive Director, World Geospatial Industry Council (WGIC) and Former Director of GEO (Group on Earth Observations); Dr. Rosa Lasaponara, Italian Research Council, Institute for Environmental Monitoring (CNR); Prof. Lena Halounova, Head of the Remote Sensing Laboratory, Faculty of Civil Engineering, Czech Technical University in Prague / ISPRS Secretary General; Prof. Tasos Georgiades, Department of Mechanical Engineering and Materials Science and Engineering, CUT; and Dr. Efthymoulos Kyriacou, Assistant Professor, Department of Electrical, Computer Engineering and Informatics, CUT.



HIGHLIGHTS

Building Bridges - Our Partnership Mission in Tunisia 26 February – 1 March 2024

From 26 February to 1 March 2024, team members of the ERATOSTHENES CoE visited Tunisia to promote the research and business activities, aiming to expand the network in the Eastern Mediterranean Middle East and North Africa (EMMENA) region. The delegation included Prof. Andreas Anayiotos, Dr. Kyriakos Themistocleous and Dr. Constantinos Panagiotou. They met with the National Agronomic Institute of Tunisia (INAT) and the Water Research and Technology Centre (CERTE) to identify common research interests and draft a two-year roadmap. Additionally, they met with regional and national water and agricultural authorities, the Tunisian Union of Agriculture and Fishery, and the Regional Centre of Remote Sensing for North Africa to enhance their activities in North Africa. The Centre shared with the hosts of the mission successful practices, including the Agri-Nexus Hub for irrigation management and advanced methods for groundwater assessment.



InSAR Time-Series Analysis Training, 28 -29 September 2023

From 28 to 29 September 2023, a two-day hands-on training was organized and conducted at the premises of ERATOSTHENES CoE by our strategic partner, Beyond EO Centre NOA. Dr. Stavroula Alatza from NOA transferred her knowledge and skills and provided our staff with helpful information in the field of remote sensing. The training focused on InSAR time-series analysis using Sentinel-1 images and ISCE software.



Expert Lectures on Geoinformatics and Earth Observation 18 October 2023

On 18 October 2023, Dr. Haris Kontoes from the National Observatory of Athens, Mr. Gunter Schreier, and Dr. Thomas Krauss from Deutsches Zentrum für Luft-und Raumfahrt (DLR) gave lectures to the Master's degree students of the MSc in Geoinformatics and Earth Observation of the CUT. The MSc in Geoinformatics and Earth Observation is accredited by the Cyprus Agency of Quality Assurance and Accreditation in Higher Education (CYQAA).



ERATOSTHENES CoE at PHAETHON Kick-Off Ceremony

12 of October 2023

On 12 October 2023, team members representatives from the ERATOSTHENES CoE attended the Kick-Off Ceremony for the PHAETHON CoE for Research and Innovation in the field of Intelligent, Efficient and Sustainable Energy Solutions at the University of Cyprus.

After the end of the PHAETHON Kick-Off Ceremony, Prof. Diofantos Hadjimitsis and Dr. Marios Tzouvaras participated in the roundtable discussion “Brainstorming on Synergies Potential–Cyprus Teaming for

Excellence”.

There, they had the opportunity to present the synergies of EXCELSIOR Project and the ERATOSTHENES CoE with other Cypriot Teaming projects.



Prof. Ioannis Gitas Visits the ERATOSTHENES CoE and the CUT

12 October 2023

On 12 October 2023, Prof. Ioannis Gitas from the Aristotle University of Thessaloniki visited the premises of the Remote Sensing and Geo Environment Lab at the CUT and the ERATOSTHENES CoE. His lab participates in the EXCELSIOR Project as a committed organization. Prof. Gitas participated in supervising PhD students at the CUT under the EXCELSIOR Project. Prof. Diofantos Hadjimitsis and Prof. Ioannis Gitas are the coordinators of the Mediterranean Regional Information Network of NASA (National Aeronautics and Space Administration).



41st GAWTEC Training Course – Aerosols

15-29 October 2023

Our team member, Ms. Georgia Charalampous attended the 41st GAWTEC Training Course on Aerosols, which took place from 15 to 29 October 2023 at the Environmental Research Station Schneefernerhaus in Germany. The course highlights included in-situ aerosol measurement methods, human health aspects of aerosols, GAW quality management framework, aerosol remote sensing, a visit to the Meteorological Observatory Zugspitze, and a presentation at the Summit Observatory Station.



Participation in CEOS 2023

16-18 October 2023



CEOS 2023 PARTICIPANTS

Our team member, Ms. Kyriaki Fotiou, a PhD student, attended CEOS 2023, which took place from 16 to 18 October 2023 at DLR Campus in Oberpfaffenhofen, Weßling, Germany.

Ms. Fotiou actively participated by giving a presentation entitled "CyCLOPS: The Establishment of an Integrated GNSS/ SAR Geohazards Monitoring and Cal/Val Infrastructure in the Southeastern Mediterranean Region."

ERATOSTHENES CoE and Cyprus Civil Defense Meeting 2 November 2023



On 2 November 2023, our team members met with representatives from the Cyprus Civil Defense. During the meeting, we presented the various activities of the ERATOSTHENES CoE and discussed the specific needs of the Civil Defense. We explored potential areas of cooperation and collaboration between our organizations to enhance mutual capabilities and support.



Launch of Cyprus Solar Network at ERATOSTHENES CoE 2 November 2023



On 2 November 2023, the ERATOSTHENES CoE achieved another significant milestone by establishing the Cyprus Solar Network. The Xylofagou station was completed with the support and expertise of the Cyprus Department of Meteorology technicians.

ERATOSTHENES CoE meets the Chief Scientist for Research and Innovation of the Republic of Cyprus 3 November 2023

On 3 November 2023, our team members met with Mr. Demetris Skourides, Chief Scientist for Research and Innovation of the Republic of Cyprus. During this meeting, our team members, Prof. Andreas Anayiotos, Dr. Michalis Mavrovouniotis, Dr. Christiana Papoutsas, and Mr. Stelios Neophytides, presented the applications developed by the ERATOSTHENES CoE and discussed their potential.



ERATOSTHENES CoE meets with Water Development Department 3 November 2023

On 3 November 2023, our team members met with representatives from the Water Development Department in Nicosia. The meeting focused on understanding the Department's needs, exploring how the ERATOSTHENES CoE can address these requirements, and identifying potential ways for collaboration between the two entities.



Hands-On Training by ERATOSTHENES CoE and Beyond EO Centre 6-7 November 2023

On 6 and 7 November 2023, a two-day hands-on training was organized by the Resilient Society Department of the ERATOSTHENES CoE and conducted by our strategic partner, Beyond EO Centre NOA, specifically by researcher Mrs. Stella Girtsou. Mrs. Stella Girtsou provided valuable insights and skills to our staff. The training course focused on developing automatic processing chains for data collection and preprocessing for fire applications.



Installation of Kyperounda Station by Cyprus Solar Network 8 November 2023

On 8 November 2023, the Cyprus Solar Network successfully installed the Kyperounda Station with the guidance and support of technicians from the Cyprus Department of Meteorology (CYMET), Mr. Kypros Charalambous, and Mr. Christoforos Pissarides. This installation was facilitated with the support of Mr. Minas Mina from Kyperounda Winery, Photos Photiades Group.





Lectures and hands-on demonstrations for understanding the spread of wildfires 8 November 2023

On 8 November 2023, our team members, Dr. Christodoulos Mettas, Mr. Evagoras Evagorou, and Mrs. Maria Prodromou, were invited to participate in the training seminar organized by the Centre of Excellence in Risk & Decision Sciences-CERIDES in the framework of the SEMEDFIRE project. The seminar included Lectures and hands-on demonstrations for understanding the spread of wildfires by Professor Guillermo Rein and his team from Imperial Hazelab.



GIS Day 2023 13 November 2023

On the occasion of International GIS Day, the Department of Civil Engineering and Geomatics at CUT, in collaboration with the ERATOSTHENES CoE, the EXCELSIOR Project, and the Cyprus Association of Rural and Surveying Engineering, organized a Conference featuring distinguished speakers from Cyprus and abroad.



The Conference took place on 13 November 2023, at the Senate Hall, Rector's Buildings, CUT and was broadcast online.



Participation at the 6th World Landslide Forum 20 November 2023

On 20 November 2023, our team member, Dr. Marios Tzouvaras, participated in the 6th World Landslide Forum in Florence, Italy, and presented a study titled: "Towards a systematic update of the Cyprus landslide inventory using Copernicus satellite data." This study was conducted by the Disaster Risk Reduction sector of the ERATOSTHENES CoE in collaboration with colleagues from Beyond EO Centre NOA and the National Technical University of Athens (NTUA).



ERATOSTHENES CoE at the 2nd Pan-Cypriot Conference "Agricultural Development: From Research to Practice" 16 November 2023

On 16 November 2023, our team members participated in the 2nd Pan-Cypriot Conference "Agricultural Development: From Research to Practice". The conference was organized in cooperation with the National Agricultural Network, the Department of Agriculture, the Agricultural Research Institute, and the Cyprus University of Technology. Dr. Christiana Papoutsas participated in the discussion titled "Living labs as a tool for agricultural applications".



Smart Cyprus 18 January 2024

On 18 January 2024, our team members Dr. Michalis Mavrovouniotis and Dr. Maria Anastasiadou attended the event for the project "Smart Cyprus" at the premises of the Ministry of Economics in Nicosia. The general scope of the project is the procurement, installation, maintenance, and operation of a CY Smart City platform that will be able to connect devices, people, processes, and applications in a broad and open approach.



Participation in the 16th European Space Conference 24 January 2024

On 24 January 2024, our team members Dr. Kyriacos Themistocleous and Mr. Nikos Christoforou participated in the event "Exploring the future of space business with Europe's leaders at the 16th European Space Conference in Brussels."



ERATOSTHENES CoE meets with Strovolos Municipality 13 February 2024

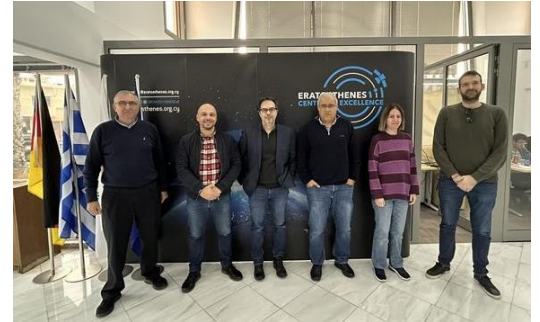
On 13 February 2024, we had the opportunity to meet with Mr. Nasos Kolyvas, Municipal Engineer, and representatives from Strovolos Municipality. We discussed future collaboration between the ERATOSTHENES CoE and Strovolos Municipality.





ERATOSTHENES CoE hosts experts from the Public Works Department 13 February 2024

On 13 February 2024, we had the opportunity to host Mr. Stelios Zervos, Senior Executive Engineer, and Mrs. Maria Ermogenous, Engineer, from the Public Works Department/Coastal Sector. Mr. Zervos and Mrs. Ermogenous were invited as experts on "Coastal Zone Management in Cyprus". During their visit, we presented the ERATOSTHENES CoE, the EXCELSIOR Project, and the AI-Observer Project.



Secondment on Data analysis of LIDAR observations 20 February to 8 March 2024

Researcher Ms. Maria Poutli attended a secondment at Leibniz Institute for Tropospheric Research (TROPOS) from 20 February 2024 to 8 March 2024. The main objective of the training was introducing pollynet data processing utilizing software and tools used in Lidar Networks. The main topics of her secondment were the Automated lidar quality analysis software and the manual retrieval of reliable lidar optical properties profiles.



Capacity Building Session on Synergizing Street-Level Data with Satellite Imagery, 14 March 2024

On 14 March 2024, the Big Earth Data Analytics Department of ERATOSTHENES CoE, had a Capacity Building from our advanced partner the National Observatory of Athens - NOA about "Synergizing Street-Level Data with Satellite Imagery". We explored deep learning and data fusion techniques in an agriculture use case.



Participation in Solar Winter School 2024 11-15 March 2024

From 11 to 15 March 2024, our team member Ms. Georgia Charalambous of the ERATOSTHENES CoE, participated in the Solar Winter School, which took place at Campus Pierre Laffitte in Sophia Antipolis, France. During the event, there were meetings with ATARI project partners and meetings and ideas exchanges with researchers from France, the UK, and Morocco.



ERATOSTHENES CoE meets with the Department of Meteorology on Radar Data Processing 12 March 2024

On 12 March 2024, our team members of the ERATOSTHENES CoE, Dr. Silas Michaelides, COM (Chief Operating Manager) of the Center and former Director of the Department of Meteorology, and Ms. Eleni Loulli, Researcher C', held a meeting at the Department of Meteorology. During the meeting, Eleni presented the processing of meteorological radar data at the Department of Meteorology, which is carried out as part of her doctoral thesis. A discussion followed regarding the opportunities for cooperation between the Centre and the Department of Meteorology.



ERATOSTHENES CoE Research team meets with Research and Innovation Foundation 15 March 2024

On 15 March 2024, our team members had the opportunity to be informed by Ms. Katerina Karakasidou from the Research and Innovation Foundation, about the funding opportunities through various European Research Council (ERC) calls. Ms. Katerina Karakasidou is the Scientific Officer in the European Programmes Department of #RIF and the National Contact Point (NCP) of Cyprus. She is also a Programme Committee Member for the European Research Council (ERC) for Cluster 2 “Culture, Creativity and Inclusive Society” of Horizon Europe.



ERATOSTHENES CoE Research Team Secondment PMOD-Zurich 18-28 March 2024

From 18 to 28 March 2024, our team member Ms. Georgia Charalambous participated in events at PMOD in Davos, Switzerland, and ETH Zurich, Switzerland. During the event, there was an introduction to solar instrumentation, a demonstration of calibration activities, a presentation of our station to the PMOD members, and general integration and discussions with different PMOD/WRC scientists.



Participation of Prof. Diofantos Hadjimitsis in the 1st Greek Space Tech Forum 2024

The 1st Greek Space Tech Forum 2024 was held with great success in Athens on 21 March 2024, featuring a parallel webcast. The event was co-organized by the Hellenic Space Technology & Applications Industry Association (EVIDITE) and the Hellenic Cooperative Formation of Space Technologies and Applications (si-Cluster) of Corallia.

The Greek Space Tech Forum 2024 aimed to highlight aspects of the Space market, specifically Space 4.0, or the emerging "New Space," in which a dynamic Greek Space ecosystem is active.

Prof. Diofantos Hadjimitsis participated in a debate on the "Use of Advanced Space-Based Solutions for the Environment and Climate" and "Use of Advanced Space-Based Solutions for Environmental & Climate Change Monitoring and Applications," under the coordination of journalist Kostas Ketsietzis. In addition to Professor Hadjimitsis, the discussion included Yannis Gekas, PhD, Data & AI Managing Director and Space Analytics Lead at Accenture, Emmanuel Pajot, PhD, Secretary-General of the European Association of Remote Sensing Companies (EARSC), and Konstantinos Stavrinidis, IABG Technical Director and HyImpulse Head of Management Board.



ERATOSTHENES CoE attends the CUT Career Day 2024 28 March 2024

On 28 March 2024, our team members Prof. Diofantos Hadjimitsis, Ms. Eleni Loulli, Ms. Eliana Iliofotou, Mr. Theofilos Antoniou, Ms. Eleftheria Kalogirou, Ms. Iosifina Kountouri, and Ms. Marianna Hadjichristodoulou represented the ERATOSTHENES CoE for the Career Day 2024 that took place at the CUT premises in Limassol.



Glitss Cost Action Workshop 29 February - 1 March 2024

On 29 February to 1 March 2024, our team members Mr. Christos Theocharidis, Mr. Christodoulos Demetriou, Dr. Christodoulos Mettas, Dr. Dante Abate, Ms. Despoina Makri, Mr. Georgios Leventis, Dr. Georgios Melillos, Ms. Iosifina Kountouri, Ms. Maria Prodromou, and Dr. Marios Tzouvaras, participated in the GLITSS COST Action Workshop “Vision and language-based technologies for the detection of illicit trade”, held at the premises of the ERATOSTHENES CoE. During the workshop, the potential of technology in the fight against illicit trade, including legal and other aspects, was discussed.





Invited talks

On 12 March 2024, the EXCELSIOR Project and the ERATOSTHENES CoE organized a virtual invited talk by Dr. Xinwei Wang.

Topic: "Invited talk: Agile Earth Observation Satellite Scheduling: Formulations, Methods, and Future Directions“.

Abstract: Agile satellites with advanced attitude manoeuvring capability are the new generation of earth observation satellites (EOSs). To efficiently employ the increasing orbiting Agile EOSs (AEOSs), the AEOS scheduling problem (AEOSSP) aiming to maximise the entire observation profit while satisfying all complex operational constraints, has received much attention over the past 20 years. In this talk, general formulations of AEOSSP with operational constraints are introduced initially, followed by some solution methods, including exact method, heuristic, metaheuristic, and machine learning. Finally, we discuss a number of topics worth pursuing in the future.

Bio: Xinwei Wang is a Lecturer (Assistant Professor) at Queen Mary University of London (QMUL), UK. He was a Postdoc at TU Delft, The Netherlands from 2020 to 2022 and at QMUL from 2019 to 2020, respectively. He obtained a PhD degree from Beihang University, China in 2019. Over the years, he has integrated computational intelligence, machine learning and systems engineering for risk assessment and decision making in intelligent systems. He is an Associate Editor of Advances in Space Research, member of Young Editorial Board of Astrodynamics, and member of AIAA Space Operations and Support Technical Committee. He is a recipient of the Marie Skłodowska-Curie Actions Co-Fund Fellowship (2022), and IEEE ITSS Young Professionals Travelling Fellowship (2022). He has authored over 40 papers, including those in TR Part C, IEEE T-ITS, IEEE T-SMC, IEEE T-FS, IEEE T-VT, IEEE T-AES, etc.

Watch the invited talk:

<https://www.youtube.com/watch?v=kM317wKY4Eo&t=530s>





MoU Agreements of the ERATOSTHENES CoE

On 12 December 2023, an MoU was signed between the ERATOSTHENES CoE and the FORTH Institute of Mediterranean Studies. On behalf of the ERATOSTHENES CoE, the protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis, and on behalf of FORTH by Professor Gelina Harlaftis.



On 18 December 2023, an MoU was signed between the ERATOSTHENES CoE and the State Health Services Organisation. On behalf of the ERATOSTHENES CoE, the Protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis, and on behalf of OKYPI by Ms. Riana Constantinou.



On 30 January 2024, an MoU was signed between the ERATOSTHENES CoE and Miden. On behalf of the ERATOSTHENES CoE, the protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis, and on behalf of Miden by its founder, Mr Nikolas Stratis.





MoU Agreements of the ERATOSTHENES CoE

On 31 January 2024, an MoU was signed between the ERATOSTHENES CoE and the Community Council of Koili. On behalf of the ERATOSTHENES CoE, the Protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Community council of koili by Mr. Michalakis Efthimiou.



On 31 January 2024 an MoU was signed between the ERATOSTHENES CoE and the Community Council of Stroumpi. On behalf of the ERATOSTHENES CoE, the Protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Community Council of Stroumpi by Mr. Dimitrakis Palas.



On 11 February 2024, an MoU was signed between the ERATOSTHENES CoE and the Community Council of Innia. On behalf of the ERATOSTHENES CoE, the Protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Community Council of Innia by its President, Mr. Yiangos Tsivikos.



On 12 February 2024, an MoU was signed between the ERATOSTHENES CoE and the Community Council of Argaka. On behalf of the ERATOSTHENES CoE, the protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis, and on behalf of the Community Council of Argaka by its President, Mr. Spiros Pelopidas.



MoU Agreements of the ERATOSTHENES CoE

An MoU was signed between the ERATOSTHENES CoE and the Department of Geoinformatics (Z_GIS) with the Paris Lodron Universität Salzburg. On behalf of the ERATOSTHENES CoE, the protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Paris Lodron Universität Salzburg by Associate Prof. Dirk Tiede, Deputy Head of Z_GIS.



An MoU was signed between the ERATOSTHENES CoE and the Ministry of Agriculture, Rural Development and Environment of Cyprus. On behalf of the ERATOSTHENES CoE, the protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Ministry of Agriculture, Rural Development and Environment of Cyprus by the Minister, Mr. Petros Xenophontos.



An MoU was signed between the ERATOSTHENES CoE and the Mandria Community of Paphos District. On behalf of the ERATOSTHENES CoE, the protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf and on behalf of the Community Council of Mandria, by the President of the Community, Mr. Kypros Michaelidis.





MoU Agreements of the ERATOSTHENES CoE

On 4 March 2024, an MoU was signed between the ERATOSTHENES CoE and the Municipality of Agios Athanasios. On behalf of the ERATOSTHENES CoE, the protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Municipality of Agios Athanasios by the Mayor Mr. Marinos Kyriakou.



On 13 March 2024, an MoU was signed between the ERATOSTHENES CoE and Spectrum. On behalf of the ERATOSTHENES CoE, the Protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of Spectrum by Mr. Dimitris Dimitriou.



An MoU was signed between the ERATOSTHENES CoE and the Development CO Paphos Aphrodite. On behalf of the ERATOSTHENES CoE, the Protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Development CO, Paphos Aphrodite, by Mr. Marios Ioannou.



An MoU was signed between the the ERATOSTHENES CoE and the Computation-based Science and Technology Research Center (CaSToRC) of The Cyprus Institute (Cyi). On behalf of the ERATOSTHENES CoE, the Protocol was signed by the Managing Director, Prof. Diofantos Hadjimitsis and on behalf of the Cyl, by its president Prof. Stavros Malas.



Journal Publications

New joint publication with our advanced partner Beyond EO Centre NOA titled: "Synergy of Advanced Processing Techniques Using Copernicus SAR and Optical Satellite Imagery to Detect Ground Displacements: The Case Studies of Pyrgos and Parekklesia Villages in Cyprus".

The article results from the first Geohazards demonstration project and is published in The International Archives of the Photogrammetry Remote Sensing and Spatial Information Sciences. **You can access it online at:**
<https://isprs-archives.copernicus.org/.../XLVI.../1581/2023/>

New joint publication with our advanced partner Beyond EO Centre NOA titled: "Surface Displacements Monitoring in Cyprus via InSAR and Field Investigation: The Case Studies of Pyrgos-Parekklesia and Pedoulas Villages".

The article results from the first Geohazards demonstration project and is published in the Special Issue "Mapping and Monitoring of Geohazards with Remote Sensing Technologies II." **You can access it online at:**
<https://www.mdpi.com/2072-4292/16/6/960>



remote sensing

an Open Access Journal by MDPI



Surface Displacements Monitoring in Cyprus via InSAR and Field Investigation: The Case Studies of Pyrgos-Parekklesia and Pedoulas Villages

Stavroula Alatzia; Constantinos Loupasakis; Alexis Apostolakis; Marios Tzouvaras; Kyriacos Themistocleous; Charalampos Kontoes; Chris Danezis; Diofantos G. Hadjimitsis

Remote Sens. 2024, Volume 16, Issue 6, 960



Conference Publications

Our studies, presented at IGARSS 2023 in Pasadena, California, have been published as conference papers on IEEE XPLORE.

Please feel free to visit the links below to read our work.

Rapid Landslide Mapping Using Multi-Temporal Image Composites from Sentinel-1 and Sentinel-2 Imagery Through Google Earth Engine. This study was conducted in collaboration with our strategic partner NOA and was a part of the Geohazards Demonstration project.

Read the paper here: <https://doi.org/10.1109/IGARSS52108.2023.10283426>

The Use of Sentinel-2 Satellite Data for Burn Severity Mapping for Arakapas Fire Event in Cyprus. This is a PhD study conducted under the guidance of Prof Ioannis Gitas from the Aristotle University of Thessaloniki and Mr. Vincent G. Ambrosia from NASA, a member also of EXCELSIOR External Advisory Board.

Find out more: <https://doi.org/10.1109/IGARSS52108.2023.10282048>

Conferences > IGARSS 2023 - 2023 IEEE Inter...

Rapid Landslide Mapping Using Multi-Temporal Image Composites from Sentinel-1 and Sentinel-2 Imagery Through Google Earth Engine

Publisher: IEEE [Cite This](#) [PDF](#)

Maria Prodrromou; Christos Theodoridis; Kyriaki Fotiou; Athanasios V. Argyriou; Thomaïda Polydorou; Slavroula Alatza; Zampela Pittaki; ... [All Authors](#)



Abstract

Document Sections

1. INTRODUCTION

Abstract:

Landslides are a significant geohazard with global implications, causing fatalities, infrastructure damage, and economic consequences. Cyprus, located over the Mediterranean fault zone in the Eastern Mediterranean region, experiences active landslides and slope instabilities due to its unique geodynamic regime and seismic activity. Monitoring ground displacements caused by landslides is crucial for early detection and response and can be performed using many techniques like ground-

Conferences > IGARSS 2023 - 2023 IEEE Inter...

The Use of Sentinel-2 Satellite Data for Burn Severity Mapping for Arakapas Fire Event in Cyprus

Publisher: IEEE [Cite This](#) [PDF](#)

Maria Prodrromou; Ioannis Gitas; Kyriacos Themistocleous; Chris Danezis; Vincent Ambrosia; Diofantos Hadjimitsis [All Authors](#)



Abstract

Document Sections

1. INTRODUCTION

2. MATERIALS AND METHODS

4. PRELIMINARY RESULTS

5. CONCLUSIONS

Abstract:

This study focused on burned area mapping and burn severity estimation for the Arakapas fire event in Cyprus. For the purpose of the study Sentinel-2 images, before and after the fire event were used for the development of the dNBR and the RdNBR spectral indices, which are the most common spectral indices for assessing the burn severity and burned area estimation. For the validation of the fire severity map, field data were collected for the CBI and GeoCBI index calculation. The fire severity maps were compared with the field measurements of the CBI and GeoCBI. Based on Pearson Correlation the RdNBR map has a very high correlation with GeoCBI (PC=83%) and high correlation with CBI (PC=71%) in contrast with the dNBR spectral index which has a moderate correlation (PC=59% and PC=54%) with CBI and GeoCBI respectively. Based on these results the RdNBR spectral index is better for the burned severity mapping.

Published in: IGARSS 2023 - 2023 IEEE International Geoscience and Remote Sensing Symposium

Authors

Figures

References

Keywords

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Date Added to IEEE Xplore: 20 October 2023

Publisher: IEEE

► ISBN Information:

Conference Location: Pasadena, CA, USA



School / University visits

Promoting Science Education: Prof. Diofantos Hadjimitsis Presents EXCELSIOR Project and ERATOSTHENES CoE at Lyceum of Agios Neofitos

On 1 November 2023, Prof. Hadjimitsis presented the EXCELSIOR Project, the ERATOSTHENES CoE and the study curricula of the Department of Civil Engineering and Geomatics of the CUT at the Lyceum of Agios Neofitos in Paphos.



Prof. Diofantos Hadjimitsis introduces Eratosthenes CoE at G. Taliotis High School

On 9 February 2024, Prof. Diofantos Hadjimitsis presented the ERATOSTHENES CoE at G. Taliotis High School in Geroskipou. The presentation included the technological professions of CUT, Engineering branches, and projects of EXCELSIOR.



ERATOSTHENES CoE celebrates “International Day for Girls and Women in Science” at Gymnasium of Agios Athanasios, 12 February 2024

On 12 February 2024, on the occasion of the International Day for Girls and Women in Science, four female researchers from our team, namely, Ms. Eleni Loulli, Ms. Maria Prodromou, Ms. Despina Makri and Ms. Josefina Kountouri, visited the Gymnasium of Agios Athanasios and informed around 100 students. The students had the opportunity to learn about the ERATOSTHENES CoE, explore the academic backgrounds of the researchers and find out what led them to engage with the exciting world of Space, Satellites, and Earth Observation.



ERATOSTHENES CoE celebrates “International Day for Girls and Women in Science” at 3rd Primary School of Limassol, 13 February 2024

On 13 February 2024 on the occasion of the International Day for Girls and Women in Science, four female researchers from our team Dr. Iro Nisantzi, Ms. Eleni Loulli, Ms. Maria Poutli and Ms. Athina Savva, visited the 3rd Primary School of Limassol. The 150 students had the opportunity to learn about the Lidar Atmospheric Remote Sensing Station located near their school, which they see every day from their yard, where in the evenings the green beam of light emitted towards the sky can be seen.

Find out more: <https://rb.gy/ub57z4>



ERATOSTHENES CoE celebrates Group Day celebration, at the thematic area of Space at Secondary School of Egkomi, 13 February 2024

On 13 February 2024, on the occasion of the Group Day celebration, at the thematic area of Space at the Gymnasium of Engomi in Nicosia district, our team members Ms. Despina Makri and Ms. Eleni Neofytou, gave a presentation and a hands-on training for Earth Observation Browser.



Prof. Diofantos Hadjimitsis Presents at the 11th Conference on Sciences 1 March 2024

On 1 March 2024, Prof. Diofantos Hadjimitsis delivered an engaging talk at the 11th Conference on Sciences at Coral Beach Hotel in Paphos. Presenting on EXCELSIOR Project, ERATOSTHENES CoE and Remote Sensing Applications and Services, the event endorsed by Minister of Education Athena Michaelidou, drew over 300 participants from different schools across Cyprus.



ERATOSTHENES CoE hosts Technical School of Larnaca Students 14 March 2024

On 14 March 2024, 30 students from the Technical School of Larnaca, visited our premises at the CUT, and our team Ms. Despina Makri, Ms. Marianna Hadjichristodoulou, Ms. Maria Poutli and Ms. Athina Savva delivered a presentation about remote sensing techniques and for the ERATOSTHENES CoE actions and activities.



Technical School of Paphos Students Engage with Remote Sensing Concepts and Applications 22 March 2024

On 22 March 2024, our team members Ms. Marianna Hadjichristodoulou and Ms. Maria Poutli presented to 30 students from the Technical School of Paphos the activities and actions of the ERATOSTHENES CoE and the EXCELSIOR project.



EXCELSIOR Project in Media

ERATOSTHENES CoE Explores Wildfire Impact with Remote Sensing

Smoke from California's 2020 wildfires made its way to Cyprus, triggering the creation of wispy cirrus clouds! Our team members Dr. Rodanthi-Elisavet Mamouri and her team, together with our partners at TROPOS, tracked the journey using remote sensing technology. Check out the details in this Nature article: <https://www.nature.com/articles/d41586-023-03560-y>



ERATOSTHENES CoE Launches the New UV Radiation Monitoring App: Interview with Kostas Fragkos 20 December 2024

On 20 December 2023, Dr. Kostas Fragkos was interviewed by journalist Ms. Despina Roussou during the program "Morning Itinerary", of the Third Program of the RIK, about a new application that will provide information on the levels of Ultraviolet Solar Radiation in Cyprus and how to protect the public. This application will soon be available from the EXCELSIOR Project and the ERATOSTHENES CoE.

More: <https://www.youtube.com/watch?v=hfhR34fbFv4>





Dr. Rodanthi-Elisavet Mamouri Discusses Observations from Atmospheric Remote Sensing Station on ALPHA News 14 February 2024

Dr. Rodanthi- Elisavet Mamouri was hosted at the news broadcast of "ALPHA News" and talked about the unprecedented storm that occurred in Limassol between 02:30 and 03:30 a.m. on 14 February 2024. The storm was recorded by the Atmospheric Remote Sensing Station of the ERATOSTHENES CoE and the EXCELSIOR Project that is based in Limassol.



Dr. Argyro Nisantzi Discusses Observations from Atmospheric Remote Sensing Station on RIK's 'Morning Itinerary' Show, 14 February 2023

Dr. Argyro Nisantzi, spoke on the topic of the unprecedented storm that occurred in the early hours on the 14 February 2024, between the hours of 02:30-03:30 am. in Limassol and this was recorded by the Atmospheric Remote Sensing Station during the "Morning Itinerary", of the Third Program of RIK. The storm was recorded by the Atmospheric Remote Sensing Station of the ERATOSTHENES CoE and the EXCELSIOR Project that is based in Limassol.



Prof. Diofantos Hadjimitsis Presents at HellasGIs Event 23rd of February 2024



On the 23 February 2024, Prof. Diofantos Hadjimitsis participated in the online presentation of the Hellenic Society of Geographical Information Systems (HellasGIs), entitled: "Cyprus in Space through the project EXCELSIOR and the Eratosthenes CoE the & innovation - road to excellence"

Καθηγητής Διόφαντος Χατζημιτσής
- Τμήμα Πολιτικών Μηχανικών και Μηχανικών Γεωπληροφορικής, Εργαστήριο Τηλεακρόασης και Γεωπεριβάλλοντος- Τεχνολογικό Πανεπιστήμιο Κύπρου
- Διευθύνων Σύμβουλος Κέντρου Αριστείας Ερατοσθένης & Συντονιστής του έργου 'EXCELSIOR H2020 Teaming'
- Τέως Αντιπρόεδρος Ακαδημαϊκών Υποθέσεων-ΤΕΠΙΑΚ & Αντιπρόεδρος του φορέα Διασφάλισης και Πιστοποίησης της Ποιότητας της Ανώτερης Εκπαίδευσης (ΔΙΠΑΕ)





Prof. Diofantos Hadjimitsis Discusses ERATOSTHENES CoE and EXCELSIOR Project on “LimassolToday” portal

Interview of Prof. Diofantos Hadjimitsis in «LimassolToday» portal. The Managing Director of the ERATOSTHENES CoE and coordinator of the EXCELSIOR Project, explains that space technologies are becoming technologies that can and should be integrated into the everyday life of citizens.



Prof. Hadjimitsis says that “the ERATOSTHENES CoE was established in 2020, based in Limassol, through the EXCELSIOR Project and provides the highest quality of Space, Earth Observation and Geoinformation services at National, Regional, European and International level”. He notes also that ERATOSTHENES CoE aims to attract around 120 researchers by 2026.

More: <https://limassoltoday.com.cy>

Prof. Diofantos Hadjimitsis Highlights Limassol's Inclusion in EU Cities Mission Program in 'En oiko' Magazine

The Managing Director of the ERATOSTHENES CoE Prof. Diofantos Hadjimitsis, talks in the magazine of the Limassol Municipality "En oiko". He stated that “The inclusion of Limassol in the EU Cities Mission program is of great value both for the Municipality and for Cyprus. The research activity of the ERATOSTHENES CoE is fully harmonized with the objective of the Municipality of Limassol. Our research team will focus on several important areas for achieving climate neutrality. Our role is to provide expertise and know-how in the field of planet observation and sustainable technologies, promoting research, innovation and collaboration among stakeholders. Achieving a climate-neutral, sustainable and smart Limassol by 2030 is ambitious but achievable”.

More: <https://rb.gy/qtq460>



Distinctions

ERATOSTHENES CoE Members Recognized in Stanford University's Top Scientist Lists

The Stanford University team lists the world's top 100,000 scientists from all scientific fields and the top 2% of researchers in their scientific subfield.

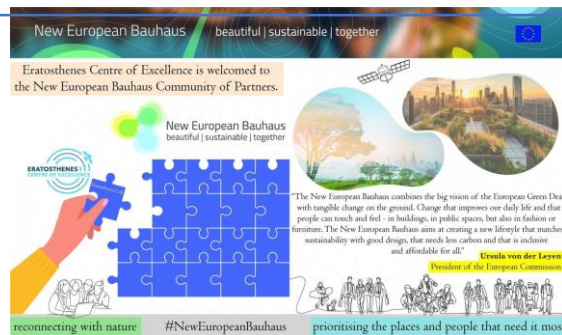
The members of the ERATOSTHENES CoE that included in the list are: Prof. Diofantos Hadjimitsis (included in the 2 lists: list throughout their academic career and in the 2022 list), Dr. Michalis Mavrovouniotis (2022 list) and Dr. Kyriakos Themistokleous (2022 list).

[More: https://rb.gy/7gzbob](https://rb.gy/7gzbob)



ERATOSTHENES CoE Joins the New European Bauhaus Community

ERATOSTHENES CoE was welcomed into the New European Bauhaus (NEB) Community. It is committed to responsibly joining its forces in transformative actions to achieve a reshaped, sustainable, inclusive, and beautiful future.



Prof. Diofantos Hadjimitsis Nominated for Scientist of the Year 2023 Award

We are proud that our Managing Director and EXCELSIOR Project Coordinator, Prof. Diofantos Hadjimitsis, has been nominated for the Man of the Year 2023 Award in the category "Scientist"!



SPPMEDIA.COM
MAN OF THE YEAR | SPPMEDIA GROUP
 Το έργο της τετραμελούς κυπριακής ομάδας Brute Force κατάφερε να ξεχωρίσει διεθνώς κατακτώντας τη χρονιά που πέρασε το τιμητικό

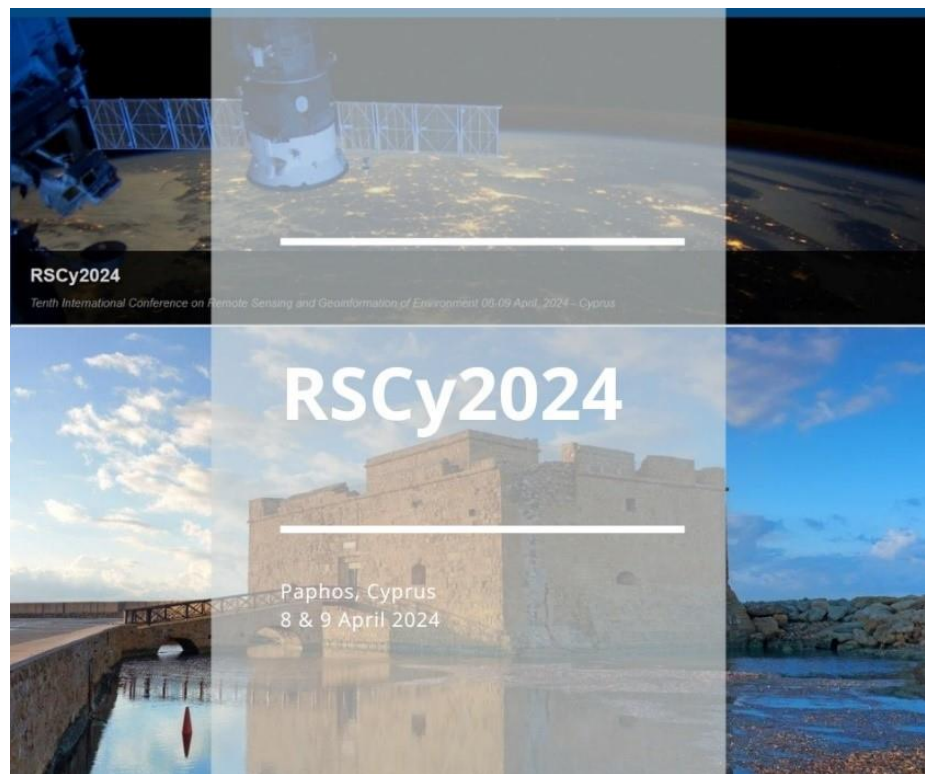




Upcoming Events in Issue #10

Eratosthenes Centre of Excellence will organize the Tenth International Conference on Remote Sensing and Geoinformation of Environment, which will be held at Aliathon Hotel, Paphos, Cyprus, from 8 to 9 April 2024. For further information visit our website:

<https://rscy2024.cyprusremotesensing.com/>





Upcoming Events in Issue #10

The 5th Excelsior Annual Workshop titled "AI and Big Data: Trends and Challenges" will take place on 8 April 2024 at RSCy2024, with speakers lined up Dr. Mihalis Nicolaou, Dr. Zachos Anthis, Dr. Giorgos Spathoulas, Dr. Alexia Tsouni, Mr. Stelios Neophytides, Dr. Charalambos Chrysostomou, Prof. Fabio Del Frate, Dr. Gerd Reis, and Mr. Giorgos Tsapparellas.

The banner features a satellite in space on the left with the 'EXCELSIOR' logo. The title '5th EXCELSIOR Annual Hybrid Workshop in AI and Big Data: Trends and Challenges' is centered at the top. Below the title is a grid of nine circular speaker portraits. On the right, event details are listed: 'Monday April 08, 2024', '13:00 – 19:00 EEST / 10:00 – 16:00 UTC', and 'ZOOM'. A QR code and the URL 'http://rsr11j/saybd' are also present. The bottom of the banner contains logos for funding sources: the Government of Cyprus, the European Union (Horizon Europe), and the Cyprus University of Technology. It also lists the consortium members (CYRAC, pmad, iwc) and affiliated entities (CYRAC, pmad, iwc).





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CONSORTIUM



AFFILIATED ENTITIES



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