October 2024 - September 2025

A OBSERVER

Scientific excellence and innovation capacity through Artificial Intelligence in the field of Earth Observation on environmental hazards

ERATOSTHENES CENTRE OF EXCELLENCE

DFKI Deutsches Forschungszentrum für Künstliche Intelligenz GmbH

TOR VERGATA UNIVERSITY OF ROME

CELLOCK POWER OF INNOVATION AND TECHNOLOGY

AI OBSERVER

FIND OUT IN THIS ISSUE

AI OBSERVER

FIND OUT IN THIS ISSUE

AI OBSERVER

FIND OUT IN THIS ISSUE

AI OBSERVER

24 October 2024

🛰️ **Assoc. Prof. Anis Chekirbane** from the **National Institute of Agronomy of Tunisia** (INAT) visited ERATOSTHENES CoE to discuss possible collaborations in the field of Disaster Risk Reduction. Among others, the **AI-OBSERVER project and its outputs** were showcased, and ways that the **methodologies under development can be applied in Tunisia** were discussed.

30 October 2024

🛰️ During his **Expert Visit (AI-EV1)**, **Dr. Dimitris Sykas** delivered a presentation to ERATOSTHENES Centre of Excellence researchers, on the latest developments about the **EU Artificial Intelligence Act**, **regulatory requirements for AI systems**, and practical implications for organizations and researchers. The session also introduced a tool for assessing **data quality and compliance** in line with the forthcoming regulatory framework.

12 November 2024

🛰 A new **joint Horizon Europe project** titled: **"Community-Led Creation of Living Spaces in Shifting Landscapes for Climate-Resilient Land Use Management and Supporting the New European Bauhaus"** officially kicked-off with **the ERATOSTHENES Centre of Excellence** as project coordinator and the **University of Rome Tor Vergata** as a partner.

14 November 2024

🛰 The **AI-OBSERVER project** participated in the **Open/Info Day** organized by the in **ERATOSTHENES Centre of Excellence** in Limassol, Cyprus. The event attracted over **200 students** from **7 High Schools and Lyceums** across Cyprus, offering them the opportunity to engage with cutting-edge research on **Artificial Intelligence** and **Earth Observation**.

4 December 2024

🛰️ On **4 December 2024,** a meeting between the AI-OBSERVER partners (ERATOSTHENES CoE, DFKI and University of Rome Tor Vergata), with the **Italian Space Agency** (ASI), the **German Aerospace Center** (DLR) and the **Romanian Space Agency** (ROSA), partners in EXPERT twinning project, took place. **Ways of collaboration** between the organisations either on individual basis, and/or through the Twinning projects AI-OBSERVER and EXPERT were investigated. There were also discussions for **signing of MoUs** between the ERATOSTHENES CoE, ASI and ROSA.
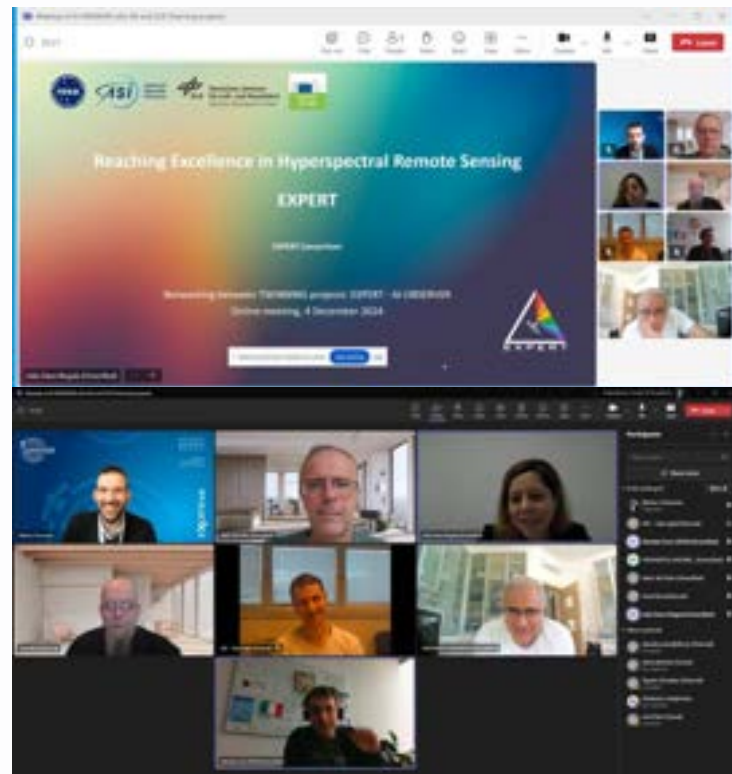
17 December 2024

🛰️ **ERATOSTHENES CoE** researchers participated in the United Nations SPIDER Regional Support Offices virtual meeting. Discussions between UN-SPIDER Regional Support Offices were discussed on the topics of **disaster preparedness and disaster management**. Activities of the ERATOSTHENES CoE were presented including the AI-OBSERVER project and its findings. ERATOSTHENES CoE has started the process for signing an MoU with UN to be established as **UN-SPIDER Regional Support Office for Cyprus**.
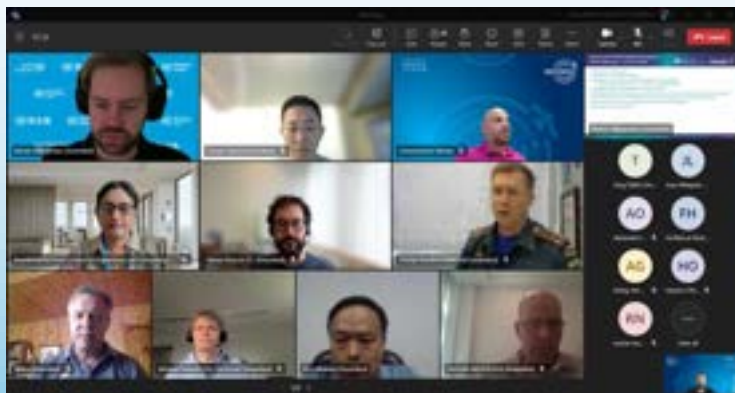
AI OBSERVER

13 January 2025

🛰️ A meeting with the **Department of Fisheries and Marine Research** was carried out online in the framework of CEOPS (ESA) project. During the meeting, the **AI-OBSERVER project** was presented, and the **user requirements** were collected concerning the marine pollution model under development.

15 January 2025

🛰️ A online meeting was carried out with the **Cyprus Scientific and Technical Chamber** (ETEK) in the framework of CEOPS (ESA) project. As the association of Engineers of various professions, they showed great interest to **AI-OBSERVER and its expected products and results**.

16 January 2025

🛰️ A meeting with the **Cyprus Civil Defence** was carried out online in the framework of CEOPS (ESA) project. During the meeting, the **AI-OBSERVER project** was presented, and the **user requirements** were collected by the Civil Defence, that will be eventually used for the **development of the AI-EO risk assessment models**.

AI OBSERVER

8
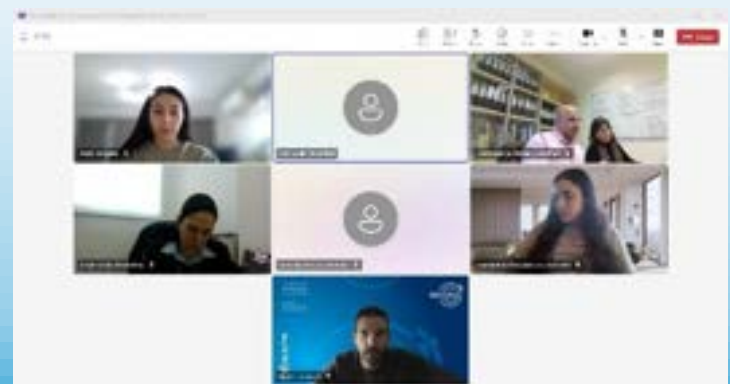
17 January 2025

🛰️ ERATOSTHENES CoE researchers met with the **Department of Environment** at their offices in Nicosia in the framework of CEOPS (ESA) project. Among other topics, **AI-OBSERVER project**, and its results towards the protection of the environment were presented in detail. Moreover, user requirements were collected that will be used in the products' development.

17 January 2025

🛰️ A meeting with the **Department of Meteorology** was carried out in Nicosia in the framework of CEOPS (ESA) project. During the event, the **AI-OBSERVER** project was presented along with the models that will be developed to monitor **extreme meteorological events**. User requirements were also collected.

20 January 2025

🛰️ A meeting with the **Cyprus Geological Survey Department** was conducted at their offices in Nicosia in the framework of CEOPS (ESA) project. The attendees showed great interest to the **AI-OBSERVER project** and its potential products on **earthquake and landslide risk assessment**.

11 February 2025

🛰️ On **11 February 2025,** the yearly project coordination meeting of the AI-OBSERVER Project took place, led by the coordinator, ERATOSTHENES Centre of Excellence. Partners from **Deutsches Forschungszentrum für Künstliche Intelligenz (DFKI)**, **Università di Roma Tor Vergata**, and **CELLOCK Ltd** participated in the meeting**.** The discussion focused on the **progress of the project activities, milestones achieved, next steps,** updates on the **AI-OBSERVER** platform, and key aspects related to the **commercialization** of project outcomes.
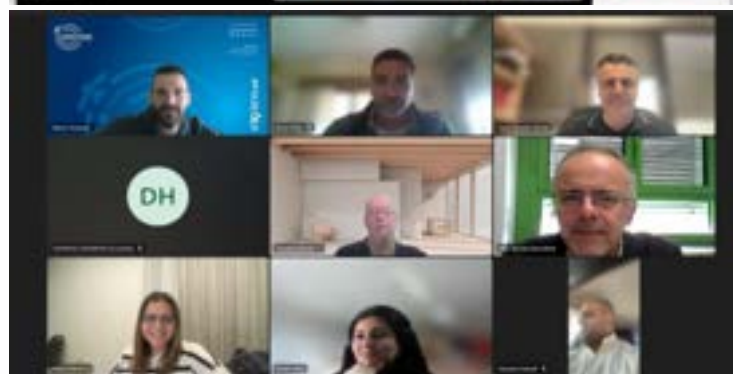
12 February 2025

🛰️ We had the pleasure of holding a **virtual meeting** with **Mr. Alfonso Laurent,** Senior Advisor at **Jordan Civil Defense**, Embassy of France. During the discussion, the **ERATOSTHENES CoE** presented its activities and explored the needs of **Civil Defense**, identifying **common areas of interest** for potential **future collaboration** in the fields of **disaster prevention, management, and mitigation.** The exchange also focused on **leveraging advanced infrastructure** and the provision of **high-end services** to support civil protection operations.

14 February 2025

🛰 An invited talk titled: "**AI and Earth Observation for Environmental Hazards**" was provided by **Dr. Marios Tzouvaras** during the first of the two guest speaker seminars that were conducted in the framework of the EXPERT Twinning project.

The event was organized by the Italian Space Agency (ASI) that participates in the EXPERT Twinning project as advance partner, along with the German Aerospace Center (DLR), and the Romanian Space Agency (ROSA) that is the project coordinator.

During his talk, Marios had the opportunity to present a variety of activities that we carry out at ERATOSTHENES Centre of Excellence in all 3 research departments, with a main focus on EXCELSIOR H2020 Teaming, AI-OBSERVER project, as well as other funded projects, such as CyCLOPS+, Green HIT and STEPS.

Address : 82 Franklin Roosevelt, 3012 Limassol, Cyprus   Email: d.hadjimitsis@eratosthenes.org.cy/ marios.tzouvaras@eratosthenes.org.cy   Phone : +35725002908

17 February 2025

🛰️ The **United Nations Office for Outer Space Affairs** (UNOOSA) and the **ERATOSTHENES Centre of Excellence** signed a **Memorandum of Understanding** (MoU) to create **a Regional Support Office** (RSO) of UNOOSA's programme '**United Nations Platform for Space-Based Information for Disaster Management and Emergency Response (UN-SPIDER)' in Cyprus**. The network allows UN-SPIDER to take advantage of the significant experience/capabilities of the Member States to promote the use of space tools for disaster risk reduction all over the world.

The new RSO will be located at the ERATOSTHENES Centre of Excellence. Its addition adds significant expertise on satellite technology to the UN-SPIDER network, and especially in the Eastern Mediterranean, Middle East and North Africa region. Through the MoU, UNOOSA and ERATOSTHENES CoE will work together in areas including emergency response, disaster risk reduction and management, capacity-building on space-based technologies for disaster management, technical advisory support, and the dissemination of methods and results from Earth Observation. The agreement is effective from 17 February 2025 for a period of 3 years. For more information: https://www.un-spider.org/network/regional-support-offices/eratosthenes-centre-excellence-coe.

Dr Marios Tzouvaras, Research Coordinator of the ERATOSTHENES CoE and Coordinator of the newly established UN-SPIDER Cyprus Regional Support Office, stated: "This is a great opportunity for the ERATOSTHENES CoE to make its long-term research scientific knowledge available to support emergency response, disaster risk reduction and management efforts when needed. Earth Observation and the analysis of complex satellite imagery from a variety of sensors provide substantial benefits in risk reduction from various disasters, such as earthquakes, landslides, coastal/soil erosion, forest fires, floods, drought, etc.

17 - 19 March 2025

During the **11th International Conference on Remote Sensing and Geoinformation of Environment RSCy25** that took place on **17-19 March 2025** in Paphos, Cyprus, the **AI-OBSERVER project** was represented with two posters and one oral presentation jointly with project partners:

- **"Artificial Intelligence and Earth Observation Towards Disaster Risk Reduction: The AI-Observer's Research Exploratory Project"** by _Marios Tzouvaras_, _Renos Votsis, Kyriaki Fotiou, Constantinos Panagiotou Eleftheria Kalogirou, Demetris Christofi, Gerd Reis, Fabio Del Frate, Lorenzo Giuliano, Papale, Haris Zacharatos and Diofantos Hadjimitsis. (Poster)_

- **"A GIS-based multi-criteria decision analysis framework for landslide risk assessment: a case study in Amathounta, Limassol, Cyprus."** by _Marina Doukanari_, _Marios Tzouvaras, Kyriaki Fotiou, Neofytos Stylianou, Christodoulos Mettas, Diofantos Hadjimitsis (Poster)_

- **"Spatio-Temporal Diffusion model for satellite Imagery"** by Pratap Nagaraj Kashyap, **Alireza Javanmardi**, Pragati Jaiswal, Alain Pagani, and Gerd Reis (Oral presentation)

Two research studies from the AI-OBSERVER project team received distinctions at the **RSCy2025 Conference**

🏆 **Best Presentation Award**
Spatio-Temporal Diffusion Model for Satellite Imagery
by **Pathap Nagaraj Kashyap and Alireza Javanmardi | Deutsches Forschungszentrum für Künstliche Intelligenz**

🏆 **Best Poster Award**
Artificial Intelligence and Earth Observation Towards Disaster Risk Reduction: The AI-Observer's Research Exploratory Project
by **Marios Tzouvaras | ERATOSTHENES Centre of Excellence**

These achievements highlight the project's commitment to **excellence in Earth Observation, artificial intelligence, and disaster risk reduction**.

RSCy2025

'Eleventh International Conference on Remote Sensing and Geoinformation of Environment' 17-19 March 2025- Cyprus

18 March 2025

🌊 During the **RSCy2025**, a parallel session was carried out on 18 March 2025, chaired by **Dr. Constantinos Panagiotou**, titled "**Building synergies among researchers, decision makers and first responders: From flood risk assessment to operational flood risk reduction services**". The workshop brought together representatives from the Municipality of Polemidia, Cyprus, the Vice-Governor of the Attica Region, Elite Special Missions Team of Vilia community, Bank of Cyprus SupportCY Volunteers Corps, and the Water Development Department of Cyprus. The event was organised in the framework of EXCELSIOR project, by ERATOSTHENES Centre of Excellence and the National Observatory of Athens, and several disaster risk reduction related projects were presented among which was the **AI-OBSERVER project**.

18 March 2025

🛰️ During the **RSCy2025**, a dedicated workshop was carried out on 18 March 2025 titled "**Advancing Climate Action, Environmental Sustainability, and Food Security through Synergies**". The workshop was co-organized by various projects funded by the European Commission (H2020, Horizon Europe) and the Cyprus Research and Innovation Foundation to provide the opportunities to existing consortia to meet together and explore synergies will take place. Among the projects that participated, were EXCELSIOR, **AI-OBSERVER**, LandShift, Nostradamus, AfroGrow, ATARRI, ENFIELD, Carbonica, etc.
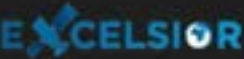
21 March 2025

🛰️ On **21 March 2025**, the **AI-OBSERVER project** had a great opportunity to showcase its objectives, progress and results to wide audience of organizations from **Europe, the Middle East, and the North African Region.** Discussions were conducted to investigate possibilities for further collaboration towards disaster risk reduction and management in the region.

20 - 24 March 2025

🛰️ From **20 to 24 March 2025**, a **three-day hands-on workshop** on **forest fire monitoring and management** using **Earth Observation** and **Artificial Intelligence** was successfully held at the **Eratosthenes Centre of Excellence**. The workshop was organized by the **Università di Roma Tor Vergata**. Participants explored key techniques including **feature extraction**, **feature selection**, and **fuel map development**. Special thanks to the trainers **Giorgia Guerrisi**, **Ilaria Petracca**, **Davide De Santis**, and **Lorenzo Giuliano Papale**, and to **Prof. Fabio Del Frate** for his excellent coordination.

6 - 11 April 2025

🛰️ During the **International Society for Photogrammetry and Remote Sensing (ISPRS)** that took place on **6 -11 April 2025** in Dubai, UAE, the **AI-OBSERVER project** was represented with one poster and one presentation jointly published with project partners:

Oral presentation:

- **«Remote Sensing of Grasslands: Performance Comparison of Radar and Optical Data in Machine Learning Classification»** by **_Konstantinos Christofi_**, Charalambos Chrysostomou, Iason Tsardanidis, Michalis Mavrovouniotis, Giorgia Guerissi, Charalampos Kontoes, and Diofantos G. Hadjimitsis.

Poster:

- **«Oil Spill Detection using Convolutional Neural Networks and Sentinel-1 SAR Imagery»** by **_Eleftheria Kalogirou_**, Konstantinos Christofi, Despoina Makri, Muhammad Amjad Iqbal, Valeria La Pegna, Marios Tzouvaras, Christodoulos Mettas and Diofantos Hadjimitsis.
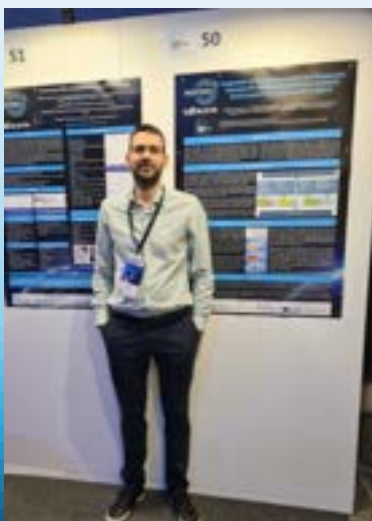
05 May 2025

🛰 On 5 May 2025, a meeting was carried out between ERATOSTHENES Centre of Excellence and the **Union for the Mediterranean (UfM)** to discuss opportunities for collaboration. The UfM is an intergovernmental organisation bringing together 43 countries to promote dialogue and cooperation in the Euro-Mediterranean region. The **AI-OBSERVER**, the EXCELSIOR and other **Disaster Risk Reduction related projects** were showcased during the meeting.
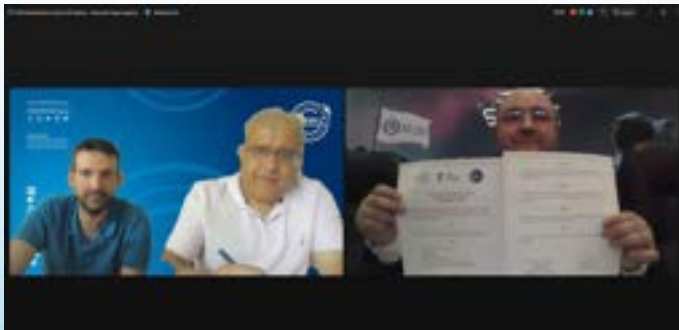
12 May 2025

🛰 An MoU was signed between **ERATOSTHENES Centre of Excellence** and the **Romanian Space Agency**, marking the beginning of a strategic collaboration that is expected to offer new opportunities for researchers, students, and scientists from both countries. The signing took place online on 12 May 2025, in the context of "**SpaceFEST 2025**," a major scientific festival focused on space technology, held in Bucharest from 9 to 12 May.

28 May 2025

🎓 Today, Ms. Eleni Loulli, Ms. Maria Prodromou, and Ms. Kyriaki Fotiou passed the **PhD viva and exam** at the Department of Civil Engineering and Geomatics of the Cyprus University of Technology.

🔬 **Ms. Kyriaki Fotiou** – "Monitoring Dynamic Landslides Using an Integrated InSAR and GNSS-Based Approach".

🌿 **Ms. Maria Prodromou** – "Post-fire Management in Mediterranean Ecosystems using Earth Observation".

🌧️ **Ms. Eleni Loulli** – "Integration of Ground and Satellite Radar Data for Precipitation Estimation and Monitoring".

All three researchers are working at the Eratosthenes Centre of Excellence, the **AI-OBSERVER Twinning** and the EXCELSIOR H2020 Teaming projects.

2 - 4 June 2025

🛰️ **Dr. Giorgia Guerrisi and Dr. Davide De Santis** from **Università di Roma Tor Vergata** conducted a hands-on workshop on The workshop was held from "**Floods and Extreme Meteorological Events using Earth Observation and Artificial Intelligence".** On 2–4 June 2025 at the **ERATOSTHENES Centre of Excellence** premises in Limassol, Cyprus, combining theoretical sessions with practical applications for enhanced environmental monitoring.

A·I OBSERVER

Funded by the European Union

23 - 27 June 2025

🛰️ The **AI-OBSERVER project** took the international stage at the **ESA – European Space Agency Living Planet Symposium 2025 (#LPS25)** in Vienna, Austria, following an invitation from Dr Deodato Tapete from the **Italian Space Agency** (ASI) and Dr Danielle Cerra from the **German Aerospace Center** (DLR) to submit an abstract in session "F.02.05 - POSTER -Capacity Building and Technology Transfer in Earth Observation" chaired by them.
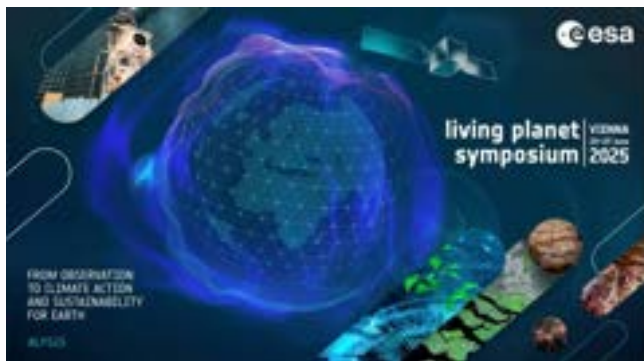
Dr. Marios Tzouvaras delivered a poster presentation titled: "*Capacity Building Towards Raised Excellence on Artificial Intelligence and Earth Observation for Disaster Risk Reduction in the Framework of the AI-OBSERVER Project*"

We also had the opportunity to discuss and exchange ideas with representatives from the **Joint Research Council** (JRC) and the **European Commission**. Last but not least, we networked with representatives from two other projects, the **EXPERT** and the **AI4AGRI** twinning projects.

Funded by the European Union

2 July 2025

🛰️ A very interesting **webinar** was delivered by **Ms. Flavia La Colla from APRE – Agenzia per la Promozione della Ricerca Europea**, as part of the Research Management and Administration capacity building activities of the AI-OBSERVER project. The session focused on **Intellectual Property protection within the context of Horizon Europe projects.**

7 July 2025

🎓 **Dr. Lorenzo Giuliano Papale** successfully defended his PhD thesis in "**Physical Models and Artificial Intelligence for Geophysical Parameters Retrieval and Weather Predictions**". He explored hybrid approaches combining physical models that have a robust foundation in physical laws, with AI, which excels at handling highly nonlinear problems, towards a physics-informed approach. His work focuses on thunderstorm detection and soil moisture estimation.

AI OBSERVER

8 - 11 July 2025

🛰️ UN-SPIDER has released a new publication entitled "Mapping Disaster Resilience: GeoAI Best Practices from the UN-SPIDER Network". The compendium compiles practical case studies on the use of Geospatial Artificial Intelligence (GeoAI) to enhance disaster risk reduction and emergency response across diverse geographic and institutional contexts. The compendium features selected case studies submitted by twenty-seven Regional Support Offices (RSOs) working across Asia, Africa, Latin America, and Europe.

🛰️ The AI-OBSERVER project with some case studies and AI-based models developed for various environmental hazards were selected and showcased in this publication, presented also during the AI for Good Global Summit in Geneva, Switzerland.

26 July 2025

🎓 On 26 July 2024, the PhD thesis "**Application of AI Algorithms for Satellite On-Board Image Processing**" was defended by **Dr. Giorgia Guerrisi**, addressing the challenge of processing massive data from Earth Observation satellites. The work focused on optimized AI models for change detection and image compression, including an AI-based compression algorithm successfully deployed onboard the Φsat-2 mission to reduce data volume sent to Earth.

28 - 30 July 2025

🛰️ A **three-day hands-on** workshop titled "**AI and Earth Observation for Water Quality Monitoring**" was successfully conducted at the **ERATOSTHENES Centre of Excellence**. The training was led by **Dr. Fabio del Frate and Dr. Valeria La Pegna from Università di Roma Tor Vergata**, and covered a wide range of topics combining satellite remote sensing and artificial intelligence for aquatic environmental monitoring.

A**I** **OBSERVER**

28 July 2025

🛰 On 28 July 2025, **two new conference papers** were published in **The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLVIII-G-2025 ISPRS Geospatial Week 2025 "Photogrammetry & Remote Sensing for a Better Tomorrow"** proceedings as part of the **AI-OBSERVER project** in collaboration with our esteemed partners:

- "**Remote Sensing of Grasslands: Performance Comparison of Radar and Optical Data in Machine Learning Classification**" authored by *Konstantinos Christofi, Charalambos Chrysostomou, Iason Tsardanidis, Michalis Mavrovouniotis, Giorgia Guerrisi, Charalampos Kontoes, and Diofantos G. Hadjimitsis.* Available at: **10.5194/isprs-archives-XLVIII-G-2025-295-2025, 2025**

- "**Oil Spill Detection using Convolutional Neural Networks and Sentinel-1 SAR Imagery**" authored by *Eleftheria Kalogirou, Konstantinos Christofi, Despoina Makri, Muhammad Amjad Iqbal, Valeria La Pegna, Marios Tzouvaras, Christodoulos Mettas, and Diofantos Hadjimitsis.* Available at: **10.5194/isprs-archives-XLVIII-G-2025-757-2025, 2025**

These papers highlight the collaboration between **ERATOSTHENES Centre of Excellence, Deutsches Forschungszentrum für Künstliche Intelligenz (DFKI), University of Rome Tor Vergata, and Cellock Ltd.**

A**I** **OBSERVER**

AI OBSERVER

3 - 5 August 2025

🛰️ The **AI-OBSERVER project** participated in the **International Geoscience and Remote Sensing Symposium (IGARSS 2025)** in **Brisbane,** Australia, between **3 and 5 August 2025.** The project showcased its work through both poster and oral presentations given by University of Rome Tor Vergata researchers.

- A Data Fusion Approach To Enhance Satellite Precipitation Product Using Ground-based Radar by **Cappelli, D**.; Petracca, I.; Del Frate, F.; Tzouvaras, M

- Identifying Unhealthy Islands in Urban Areas due to Spatial Overlap of High Temperatures and Air Pollution by **De Santis,** D; Settembre, D; Cappelli, C; Tzouvaras, M; Schiavon, G; Del Frate, F.

AI OBSERVER

Funded by
the European Union
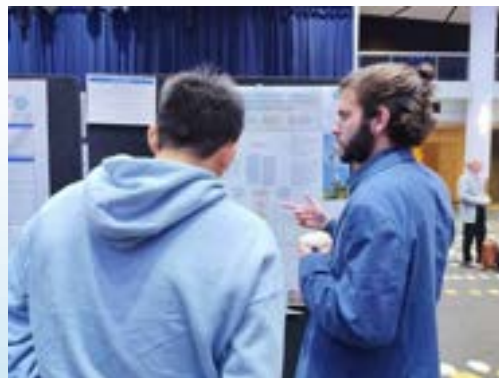
25 August 2025

🛰️ On 25 August 2025, **DFKI** and **UNITOV jointly** organised the **webinar AI-WEB4**, titled **"Fusion of Multiple Sensors in Geospatial Analysis"**, presenting:

- Introduction to Sensor Fusion and its key concepts
- Illustrative oy examples of Sensor Fusion
- AI applications in Sensor Fusion (e.g., Scene Flow estimation, Optical Flow estimation, 3D Object Detection).
- Sensor Fusion in Earth Observation
- Data fusion approaches in EO image processing
- Practical examples of SAR and optical data fusion.
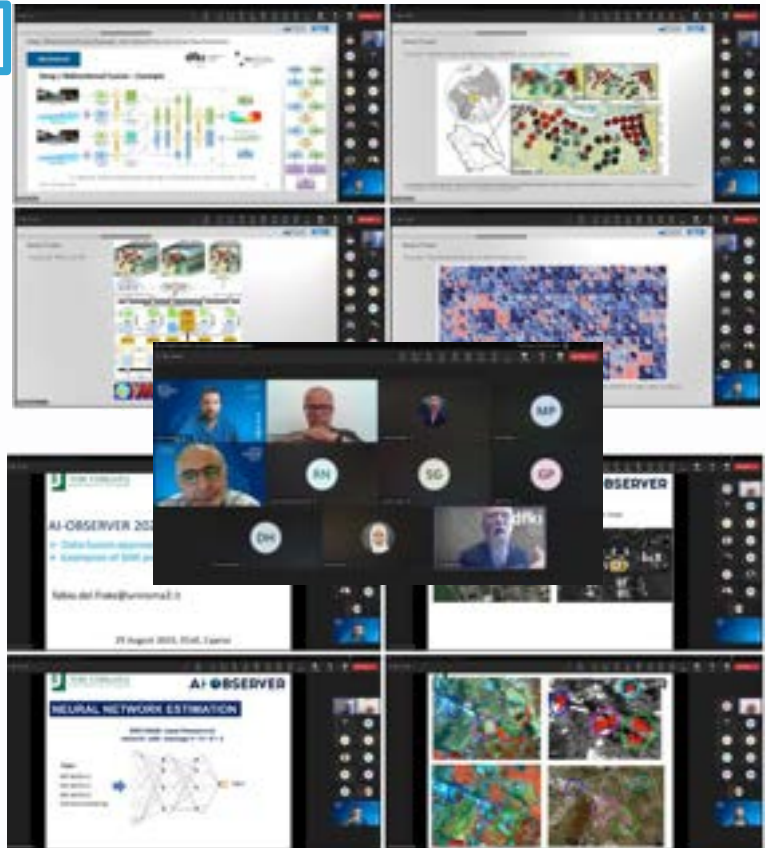
2 - 4 September 2025

🛰️ **Dr. Muhammad Amjad Iqbal** participated and presented his study (online) titled **"Comparison of Novel, Classical and Developed AI Techniques for SAR Oil Spill Detection"** at the International Conference on Machine Intelligence for GeoAnalytics and Remote Sensing (**MIGARS 2025**) that took place in Bucharest Romania, on 2-4 September 2025.

15 September 2025

🛰 On **15 September 2025**, the researchers of the **ERATOSTHENES Centre of Excellence** attended a presentation by **Mr. Marcello Maranesi (GMATICS)** as part of the **AI-EV2 Initiative.**

The lecture, titled **"Future EO Missions and Challenges",** provided valuable insights into the evolving landscape of Earth Observation (EO). Key topics included:

- The role of **hyperspectral satellite data** and its applications in agriculture, forestry, environment, and disaster management.
- The **IRIDE Program**, a strategic European initiative shaping future EO capacities.
- The integration of **Artificial Intelligence with EO data**, highlighting both the opportunities and challenges ahead for robust and scalable applications.

This knowledge-sharing session reinforced the importance of **next-generation EO missions**, while underlining how technological advances combined with AI can contribute to addressing environmental and societal challenges.

Funded by the European Union

16 - 18 September 2025

🛰️ Between **15–19 September 2025**, the **ERATOSTHENES Centre of Excellence** hosted a **Staff Exchange** in Limassol, bringing together partners from **DFKI** (Germany) and **the University of Rome Tor Vergata** (Italy). The sessions focused on advancing **AI and Earth Observation applications** for disaster risk reduction, covering topics such as fuel map development, flood susceptibility, marine pollution monitoring, coastal erosion, landslide and earthquake risk assessment, as well as applications in agriculture and atmospheric sciences. The exchange fostered knowledge transfer, hands-on collaboration, and set the basis for new joint research initiatives.

19 September 2025

✂️ On **19 September 2025**, the **ERATOSTHENES Centre of Excellence** organised the Final Workshop of the **AI-OBSERVER project** at the Limassol Municipality Blue Innovation Centre. Project researchers presented to key stakeholders the main outcomes of AI-OBSERVER, including:

- An overview of the project achievements.
- Capacity building activities in collaboration with DFKI (Germany) and Tor Vergata University (Italy).
- AI and Earth Observation models for disaster risk reduction (earthquakes, landslides, coastal erosion, wildfires, floods, marine pollution).
- The AI-OBSERVER platform developed by CELLOCK Ltd.

The event concluded with discussion, closing remarks, and networking opportunities.

19 September 2025

✖ On **19 September 2025**, following the Final Workshop, the **AI-OBSERVER consortium meeting** was held in Limassol. Partners from **ERATOSTHENES Centre of Excellence, DFKI, the University of Rome Tor Vergata, and CELLOCK** gathered to review the project's results, discuss future collaboration opportunities, and explore pathways for sustaining the impact of the AI-OBSERVER initiative.

19 September 2025

🛰️ On **19 September 2025**, three **new conference papers were published** and made available **for open access in the SPIE Digital Library as part of the AI-OBSERVER project** in collaboration with our esteemed partners.

- **Tzouvaras, M.**, Votsis, R., Fotiou, K., Prodromou, M., Panagiotou, C., Kalogirou, E., Christofi, D., Reis, G., Del Frate, F., Zacharatos, H., Hadjimitsis, D. G. *"Artificial intelligence and Earth observation towards disaster risk reduction: the AI-OBSERVER's research exploratory project."* Eleventh International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2025), Proc. SPIE 13816, 138161W, 19 September 2025. https://doi.org/10.1117/12.3075493.

- **Doukanari, M.**, Tzouvaras, M., Fotiou, K., Stylianou, N., Mettas, C., Hadjimitsis, D. G. *"A GIS-based multi-criteria decision analysis framework for landslide risk assessment: a case study in Amathounta, Limassol, Cyprus."* Eleventh International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2025), Proc. SPIE 13816, 138161Q, 19 September 2025. https://doi.org/10.1117/12.3075513.

- Kashyap, P. N., **Javanmardi, A.**, Jaiswal, P., Reis, G., Pagani, A., Stricker, D. Spatiotemporal *diffusion model for satellite imagery. Eleventh International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2025),* Proc. SPIE 13816, 1381614, 19 September 2025. https://doi.org/10.1117/12.3073127.

These papers highlight the collaboration between **ERATOSTHENES Centre of Excellence, Deutsches Forschungszentrum für Künstliche Intelligenz (DFKI), University of Rome Tor Vergata, and Cellock Ltd.**

26 September 2025

The **European Researchers' Night 2025,** themed "Mission: Possible – The Sequel," was held on **26 September 2025** in Nicosia, attracting over **2,000 students**, researchers and public. The event featured more than **65 booths** where researchers, universities, and companies showcased high-tech experiments and scientific equipment.

The **ERATOSTHENES Centre of Excellence** from the **Cyprus University of Technology** participated with **two booths: Earth Explorers: The ERATOSTHENES Centre of Excellence in Action – Play – Learn – Observe Our Planet from Space.**

A central focus of the event was the **AI-OBSERVER project**, which was highlighted to demonstrate how **Artificial Intelligence can revolutionize Earth Observation, particularly for Disaster Risk Reduction**.

During the presentation, the purpose of AI-OBSERVER was explained in detail, outlining its **aim to enhance Earth Observation capabilities using AI**, ultimately **improving the detection and monitoring of environmental hazards.**
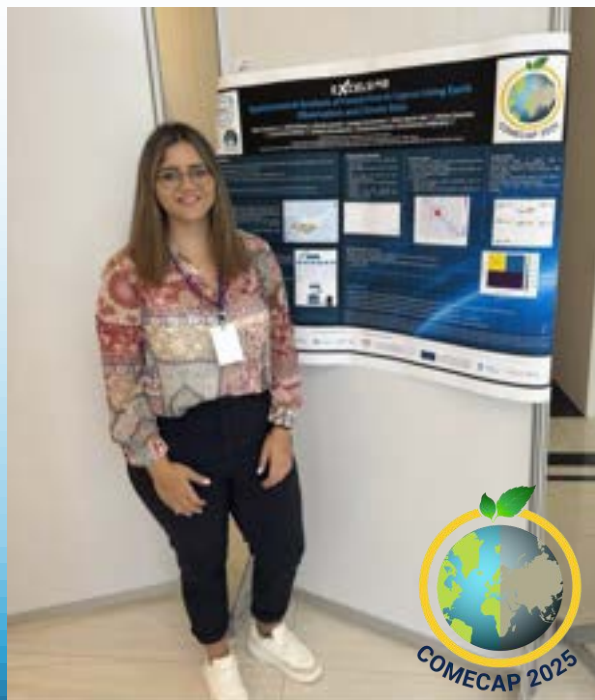
29 September 2025

🛰 The **AI-OBSERVER project** was showcased during **Kanali 6 radio show**, where **Dr. Marios Tzouvaras** highlighted the st**rategic importance of the project** and its developed products for **protecting the environment** and **improving the quality of life of citizens**.
https://kanali6.com.cy/ethnikis-simasias-gia-tin-kypro-i-axiopoiisi-toy-ergoy-ai-observer-gia-tin-prolipsi-fysikon-katastrofon/

29 September 2025

🛰 **Dr. Maria Prodromou** presented a study titled **"Spatiotemporal Analysis of Forest Fires in Cyprus Using Earth Observation and Climate Data"** at the 17th International Conference on Meteorology, Climatology, and Atmospheric Physics (**COMECAP 2025**) co-organized by ERATOSTHENES Centre of Excellence on 29 September – 1 October 2025 in Nicosia, Cyprus.

October 2024 - September 2025

A OBSERVER

Scientific excellence and innovation capacity through Artificial Intelligence in the field of Earth Observation on environmental hazards

A OBSERVER

Funded by
the European Union