

EDUCATION AND TRAINING IN THE SPACE SECTOR: NEW TRENDS, PARTNERSHIPS, AND OPPORTUNITIES



– NEREUS – Presentation:
Network of European Regions
Using Space Technologies

Margarita Chrysaki, Communication/Project officer

- **Practical Instructions for the teleconference:**
 - Please note the meeting is recorded for follow-up purposes
 - In order to ensure a good acoustic, please mute yourself, otherwise the moderator will mute you
 - You may at any time comment or ask questions at any time, please write a message addressed to everyone in the chat which we monitor continuously



OUR MISSION

USING SPACE ON
EARTH
for the benefits of
citizens and
territories

SPREAD THE **USE AND UNDERSTANDING** OF SPACE TECHNOLOGIES

ADVOCATE MATTERS OF REGIONAL SPACE USES

STIMULATE THE DEVELOPMENT OF SPACE **APPLICATIONS**



NEREUS pillars of action

ADVOCACY/POLITICAL
DIALOGUE

INTERREGIONAL
COLLABORATIONS and
PARTNERSHIPS

TECHNOLOGICAL
TRENDS/
PUBLIC
OUTREACH



NEREUS members

MEMBER REGIONS (Full members)



Associate Members



**Our vivid
research/academia
community!**



Within our Network (non-members)

Fondazione politecnico di Milano, Lab#ID (dept. of LIUC University), UCSC, Ulg - University of Liège, UniFI - Università degli Studi di Firenze, Unimi, Università Cattolica del Sacro Cuore, Università degli Studi di Milano, Università degli Studi di Milano-Dipartimento di Bioscienze, University of Brescia, University of Milan, University of Milan, Department of Biosciences, University of Pisa, University of Basilicata (UNIBAS), University of Chieti "Gabriele D'Annunzio", University of Bari, University of Stuttgart, UNIVERSITY OF AZORES, University of Leicester, University of Toulouse, University of Padua, CRAFT - Centro Ricerca Analisi geoSpaziale e Telerilevamento Università Cattolica del Sacro Cuore

**MoUs and partnerships
with university
stakeholders: EUROAVIA
(European Association of
Aerospace Students), etc**

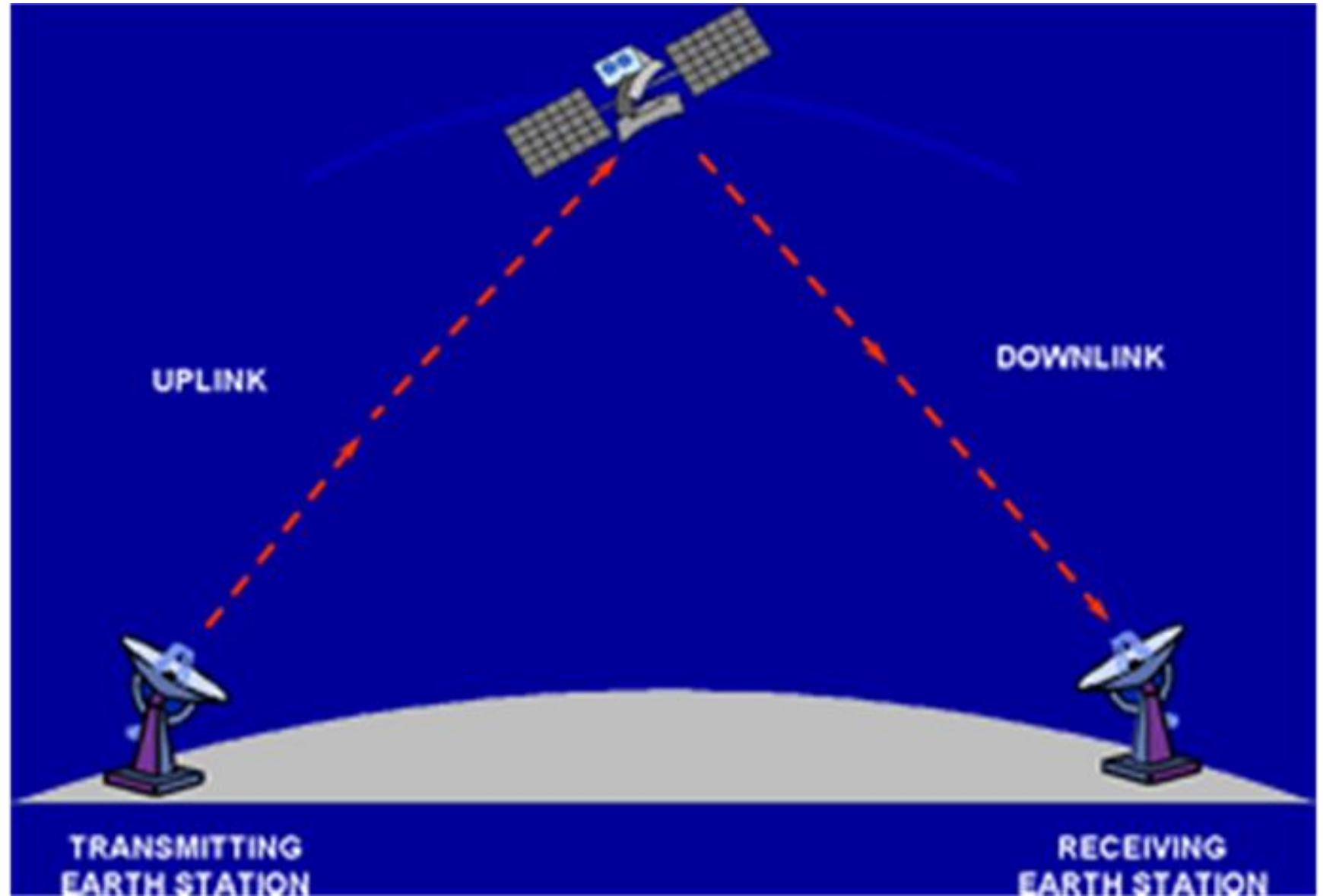
Within our Network (members)

Centro Interdipartimentale Studi e Attività Spaziali, CISAS, Cyprus University of Technology, University of Patras, Politecnico di Milano, Politecnico di Torino, University of Bologna, University di Torino, Instituto de Investigacao em Vulcanologia e Avaliacao de Riscos, Institute for Electromagnetic Sensing of the Environment, IREA CNR UOS, Milan, IEST (Istituto Europeo per lo Sviluppo Tecnologico- European Institute for Technological Development), Centre d'Etudes et d'Expertise sur les Risques, l'Environnement, la Mobilité et l'Aménagement

Outside our Network

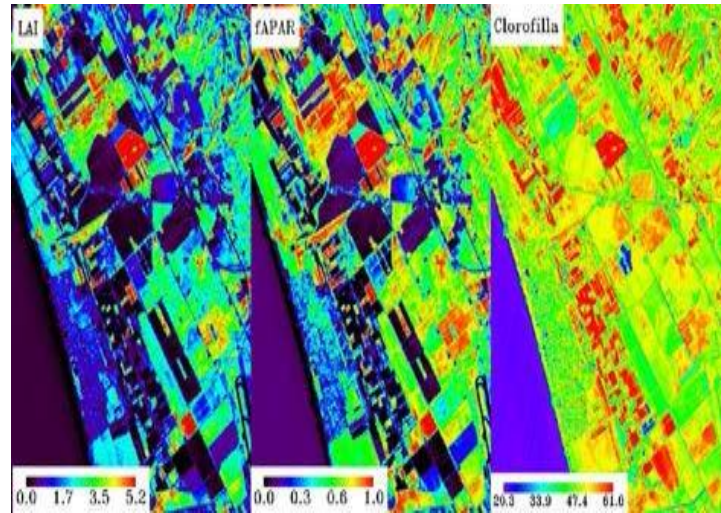
Aix Marseille University, Aristotle University of Thessaloniki, Budapest University of Technology and Economics, HUNAGI - Hungarian Association for Geoinformation, ESPI - European Space Policy Institute, National Center for Scientific Research "Demokritos"/ Institute of Informatics and Telecommunications, Szent István University, Université catholique de Louvain – CTMA, Goethe-Institut Brüssel, ULB – University, University of Bonn, University of Parma, KU Leuven (Belgium)...

The use of Space



NEREUS is
about
Using Space

NEREUS is about Using Space



Data from satellite imagery



Useful Information for
people, companies and
organisations

Bridging the skills gap in the
Earth Observation sector

Reinforcing the existing training
and education ecosystem in the
Earth Observation sector

Fostering the uptake of
space/geospatial data and
services in end-user
applications

www.eo4geo.eu



Education/training
project



**SHAPING THE
EO*GI SKILLS OF
THE FUTURE**

EO4GEO final conference

Join us in a discussion with key European actors
from the Earth Observation and Geographic
Information domain and stakeholders from the
education and training sector.

Save the date!

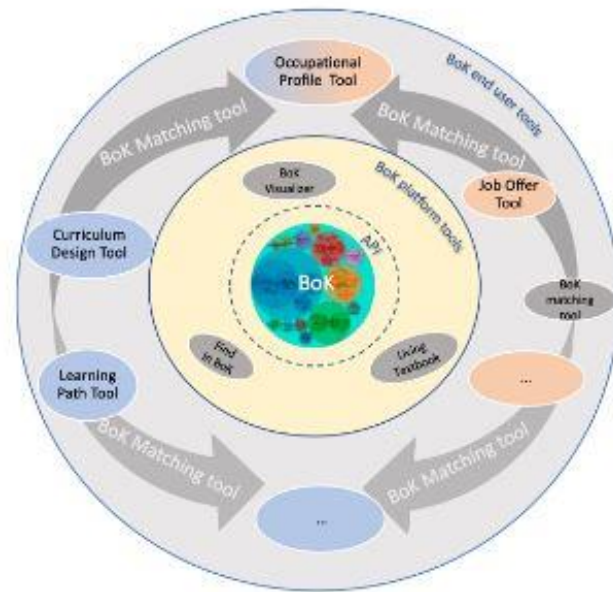
📅 17-18th May 2022

📍 Brussels and online

Organized by
the EO4GEO alliance

Co-funded by the
Erasmus+ Programme
of the European Union








Three main trends in the development of Earth observation systems

The Earth observation industry is at the crossroads of two revolutions: Big Data /Artificial Intelligence (AI) and the commercialisation of space

The first trend is to solve the problem of images collected from multiple users, by developing 'base detectors' that can then be tuned to include different combinations of resolution, viewing angle, sun angle, etc. to meet the different needs of different customers.

The second trend is the increasing automation of monitoring - including developing models that can provide better change detection by taking and analysing historical data and training the detector to detect a certain type of object - for example, parked cars - and, for example, automatically analyse the latest images every day and generate a report with the information needed.

The third trend is to develop models that can analyse different types of data, e.g. from infrared (IR) and synthetic aperture radar (SAR) sensors, which are collected by many EO satellites currently in orbit, and from digital elevation models (DEM). This is because many of the satellite image analysis methods currently in use have been developed to analyse only optical red-green-blue (RGB) data.

Regional roll-out

NEREUS regional workshops and online sessions with over **500 hundred** participants!

Brussels, Nouvelle Aquitaine, The Azores, Podkarpackie and Mazovia

Biggest EU Erasmus+ education/training project





UNIVERSEH is an alliance of five young and mature universities from five European countries to develop a new way of collaboration in the field of Space, within the new “European Universities” initiative promoted by the European Commission



NEREUS is a member of the Advisory Board



**SPACE GIRLS/
SPACE WOMEN
Mobile Photo-
exposition
(1)**



- 40 photo portrays of girls and women of three different generations and different continents with their heads in the stars who choose space as a career, work or study option
- Supported by Sipa-Press and ESA (NEREUS is together with CNES, Cité de l'Espece, Universpace and GSA sponsoring partner);
- Following events in Brussels and Paris exhibition tours through NEREUS-regions





« **SPACE4OurPlanet** » -
features portraits of
17 Women, men, boys and
girls from
17 Countries explaining
how **space technologies**
contribute to the
accomplishment of
**17 Sustainable
Development Goals (SDGs)**

<https://www.space4ourplanet.org/>

**Bring SPACE4OUR Planet to your
region**



Launched on 28th September 2021 in
Brussels/Belgium in front of the European
Parliament

**New exhibition:
Space4OurPlanet
(1)**

Space
sustainability



NEREUS activities on education/training in the space sector

Newspace economy forum: Round table on Education and STEM, Rome, December 2022



Annual visits to universities



Webinars on education in 2023



Future Perspectives

<p>Investment</p> <ul style="list-style-type: none"> • 112 Personnel in 7 years, 132 in 15 years • 2000m² offices and Research Laboratories • State-of-the-art-Remote Sensing, Research Infrastructure <p>Skills Development</p> <ul style="list-style-type: none"> • Technical excellence • Innovation Uptake • Entrepreneurial mentality <p>Achievement</p> <ul style="list-style-type: none"> • World class Research, Innovation, Education • Digital Innovation Hub • Living Labs Ecosystem (Atmospheric, Water, Irrigation) <p>Engagement</p> <ul style="list-style-type: none"> • Networking Hub • Liaison Office • Regional Exploitation Platform 	<p>Infrastructure</p> <p>Satellite Data Acquisition Station DAS (TBA Nov 2022)</p> <ul style="list-style-type: none"> • Cyprus: location for access station for satellite data • Direct operations European (i.e. EUI/Copernicus) station • Near Real Time (NRT) coverage of the Eastern Mediterranean • NRT visibility of the Middle East including coverage of the Red Sea and Persian Gulf <p>Ground-based Atmospheric Remote Sensing Station (tender procurement procedure completed)</p> <ul style="list-style-type: none"> • Limassol, Cyprus: ideal natural laboratory for advanced and comprehensive field studies of climate change, aerosol/cloud interaction, weather-precipitation-dryness complex • Representative for typical Mediterranean, even for middle East meteorological conditions and for coastal areas in the EMMENA-region
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The project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 805107.

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This project is co-funded by the Cyprus University of Technology.

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ERASMUS+ PROGRAMME

Programme

Erasmus+ Programme (ERASMUS)

Call

Partnerships for Innovation - Alliances (ERASMUS-EDU-2023-PI-ALL-INNO)

Type of action

ERASMUS-LS ERASMUS Lump Sum Grants

Type of MGA

ERASMUS Lump Sum Grant [ERASMUS-AG-LS]

Deadline model

single-stage

Opening date

29 November 2022

Deadline date

03 May 2023 17:00:00 Brussels time

[Link
to the call](#)



Marie Skłodowska-Curie Actions



[Link](#)

Reference
**HORIZON-MSCA-
2024-SE-01-01**

FORTHCOMING **Deadline 5 March 2025**

MSCA Staff Exchanges 2024

MSCA Staff Exchanges provide funding for international, inter-sectoral and interdisciplinary staff mobility and collaborative projects.

[Opportunity details](#)



CNES – Centre National d’Etudes Spatiales Ph.D. Grants

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Details

Deadline	16 March 2023	Link
Research Field	Formal sciences Natural sciences Professions and applied sciences	
Funding Type	Funding	
Career Stage	First Stage Researcher (R1) (Up to the point of PhD)	
European Research Programme	Not funded by an EU programme	

CNES – Centre National d’Etudes Spatiales Postdoctoral Fellowships

[Link](#)

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Details

Deadline	16 March 2023
Research Field	Formal sciences Natural sciences Professions and applied sciences
Funding Type	Funding
Career Stage	Recognised Researcher (R2) (PhD holders or equivalent who are not yet fully independent)
European Research Programme	Not funded by an EU programme



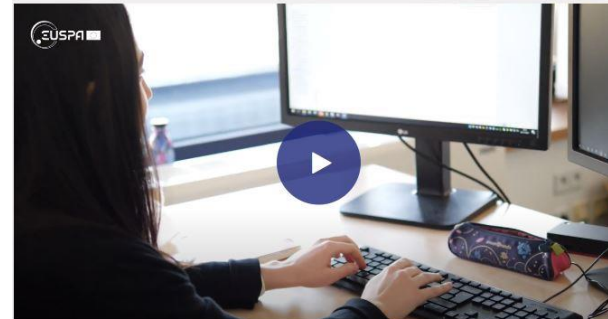
**EUSPA
traineeships,
deadline 31/5**

Traineeship

TEMPORARY AND
CONTRACT AGENTS

SECONDED
NATIONAL EXPERTS

TRAINEES



[Link](#)

**ESA
Traineeships,
28/2 deadline**



[Link](#)

THANK YOU!

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Network of European Regions Using Space