



Summer
SCHOOL
2023

23-27
OCT
2023

ERA CHAIR MNEMOSYNE

Summer School 2023
Limassol, CYPRUS

**Re-envisioning Cultural
Heritage Documentation
in the Metaverse Age**



DIGITAL
HERITAGE
RESEARCH
Lab



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ERA CHAIR MNEMOSYNE Summer School 2023

Re-envisioning Cultural Heritage Documentation in the Metaverse Age

Welcome

This Summer School brings together international, regional and local experts in the field of Digital Cultural Heritage, focusing on the holistic documentation, preservation and promotion of cultural heritage – the Mnemosyne methodology ‘Memory Twin’.

In line with the EU’s recommendation on a common European data space for cultural heritage and the standards set by UNESCO, ICOMOS, and ICOM the event aims to develop and enhance participants’ knowledge and digital skills through knowledge-sharing and collaborative work, strengthening, and augmenting cross-disciplinary partnerships and inter-university networking.

The Summer School will consider topics including:

- the transversal role of digital culture for sustainable development
- methods to protect universal cultural heritage via science, technology and innovation
- inclusive and resilient societies through the promotion of cultural diversity
- global citizenship and technological environments for humankind and its Memory of the Past.

This one-week full immersion program combines lectures, workshops, practical lab sessions and hands-on field training at heritage sites, to develop practical and theoretical skills in Cultural Heritage studies. The programme accommodates new and established practitioners who wish to pursue research, training, and professional development.

Drawing from a wide range of experts, stakeholders and policy-makers the school’s leaders’ capacities to identify, record, protect and manage heritage assets will be selectively showcased to attendees, enabling the active engagement of communities – including women, youth and civil society.

Acknowledgement

This project has received funding from the European Union’s H2020 Framework. Programme for research and innovation under Grant agreement no. 810857

Mnemosyne Summer School 2023 Programme

Monday 23 October 2023

EET Time	Monday 23 October 2023	
08:00-09:00	Delegate Registration	
09:00-10:30	<i>Opening Address</i>	
	Dr Kyriakos Efstathiou	<i>Cyprus University of Technology, H2020 ERA Chair MNEMOSYNE</i>
	Dr Panayiotis Zafiris	<i>Rector of Cyprus University of Technology</i>
	Mr Nicos Nicolaides	<i>Mayor of Limassol City Council</i>
	Mr Harri Mäki-Reinikka	<i>His Excellency the Ambassador of Finland in Cyprus</i>
	Mr Ioannis Papameletiou	<i>His Excellency the Ambassador of Greece in Cyprus</i>
	Mr Philippos Hadjizacharias	<i>Deputy Minister of Research & Innovation of the Republic of Cyprus</i>
	Dr Vasiliki Kassianidou	<i>Deputy Minister of Culture of the Republic of Cyprus</i>
10:30-11:15	Dr Trilce Navarrete Hernandez	<i>Museums, Documentation, & AI</i>
11:15-11:30	Coffee	
11:30-12:15	Dr Kyriakos Efstathiou	<i>The Holistic Documentation of Cultural Heritage Assets</i>
12:15-13:00	Dr Marinos Ioannides	<i>The Complexity of Data Acquisition</i>
13:00-13:45	Dr Kyriacos Themistocleous	<i>Why and How to Digitise Monuments</i>
13:45-14:45	Lunch	
14:45-15:30	Mr Chrysanthos Pissaridis	<i>Methods for Documenting Architectural Heritage</i>
15:30-16:15	Mr Nicholas Demetriou	<i>Aerial Data Acquisition in Cultural Heritage</i>
16:15-17:00	Coffee	
17:00-17:15	Discussion	
17:15-18:00	Dr Anna Reeve*	<i>Tracing provenance through digitized archives</i>
18:00-18:45	Ms Sabine Klaus	<i>3D Terrestrial Laser Scanning</i>
18:45-19:00	Close	

* Online presentation

Tuesday 24 October 2023

EET Time	Tuesday 24 October 2023	
09:00-09:45	Dr Costas Papadopoulos	<i>Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation</i>
09:45-10:30	Dr Costas Papadopoulos	<i>Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation</i>
10:30-11:15	Dr Costas Papadopoulos	<i>Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation</i>
11:15-11:30	Coffee	
11:30-12:15	Dr Costas Papadopoulos	<i>Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation</i>
12:15-13:00	Dr Costas Papadopoulos	<i>Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation</i>
13:00-13:45	Dr Costas Papadopoulos	<i>Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation</i>
13:45-14:45	Lunch	
14:45-15:30	Mr Ronald Haynes	<i>IIIF 3D - Challenges in Evolving 3D Standards, Sustainable XR and Metaverse(s)</i>
15:30-16:15	Dr Pavlos Fafalios*	<i>From Cultural Heritage Assets to Cultural Linked Data: Holistic Data Management and Semantic Interoperability in Cultural Heritage Documentation, Research and Promotion</i>
16:15-17:00	Dr Antonela Fresa*/Dr Marinos Ioannides	<i>The EU Digital Europe Project EUreka3D: Implementing the Data Cloud on Cultural Heritage</i>
17:00-17:15	Coffee	
17:15-18:00	Dr Athos Agapiou	<i>Earth Observation for Cultural Heritage: an overview of applications</i>
18:00-18:45	Dr Mersilia Anastasiadou*	<i>Soft power tools in contemporary diplomatic practice</i>
18:45-19:00	Close	

* Online presentation

Wednesday 25 October 2023

EET Time	Wednesday 25 October 2023	
08:00-08:30	Setup	
08:30-10:30	Fieldwork Session 1	Friendship Square, Limassol
10:30-11:00	Break	
11:00-13:00	Fieldwork Session 2	Friendship Square, Limassol
13:00-13:45	Take-down & Return	
13:45-14:45	Lunch	
14:45-17:00	Lab Session 1	Pefkos City Hotel, Limassol
17:00-17:15	Coffee	
17:15-18:45	Lab Session 2	Pefkos City Hotel, Limassol
18:45-19:00	Close	

Thursday 26 October 2023

EET Time	Thursday 26 October 2023	
09:00-09:45	Dr Cecilia Bolognesi*	<i>Cultural Heritage as landmarks for preserving the landscape</i>
09:45-10:30	Dr Maria Angela Pellegrino*	<i>Bring into view cultural heritage (knowledge graphs)</i>
10:30-11:15	Mr Michael Klein*	<i>Digitization pipeline for Cultural Heritage Sites, Buildings and Monuments in preparation for the usage within VR 3d real-time environments like Metaverse.</i>
11:15-11:30	Coffee	
11:30-12:15	Dr Kenneth Silver*	<i>The Archaeological Importance of the Swedish Cyprus Expedition in 1927-1931. The Digital Reunification of the Collections of Stockholm & Nicosia: Benefits & Challenges</i>
12:15-13:00	Dr Ioanna Hadjicosti	<i>The quest of Museums / Cultural Foundations: Finding one's digital or other way to the audiences</i>
13:00-13:45	Dr Minna Silver*	<i>Archaeological Remote Sensing & GIS: Data, Application & Experiences</i>
13:45-14:45	Lunch	
14:45-15:30	Group project work	Pefkos City Hotel, Limassol
15:30-16:15	Group project work	Pefkos City Hotel, Limassol
16:15-17:00	Group project work	Pefkos City Hotel, Limassol
17:00-17:15	Coffee	
17:15-18:00	Group project work	Pefkos City Hotel, Limassol
18:00-18:45	Group project work	Pefkos City Hotel, Limassol
18:45-19:00	Close	

* Online presentation

Friday 27 October 2023

EET Time	Friday 27 October 2023	
09:00-09:45	Dr Jongwook Lee* & Dr Jeongmin Yu*	<i>KNUCH Digital Heritage Research Korean National University of Cultural Heritage</i>
09:45-10:30	Ms Maria Paphiti	<i>Three case studies that underline the pivotal role of digital imaging in reclaiming pieces of art</i>
10:30-11:15	Mr Anthony Cassar	<i>Digital Tools for Cultural Heritage Preservation & Interpretation</i>
11:15-11:30	Coffee	
11:30-12:15	Dr Petros Siegkas	<i>The future of manufacturing applied on our past</i>
12:15-13:00	Dr Ljubo Lah	<i>Romanesque architecture in Burgundy: experiences of research and recording workshops</i>
13:00-14:00	Lunch Break	
14:00-14:45	Group Presentations	Pefkos City Hotel, Limassol
14:45-15:30	Group Presentations	Pefkos City Hotel, Limassol
15:30-16:15	Group Presentations	Pefkos City Hotel, Limassol
16:15-17:00	Discussion	Pefkos City Hotel, Limassol
17:00-17:15	Coffee	
17:15-18:00	Presentation of Awards	Pefkos City Hotel, Limassol
18:00-18:45	Closing Remarks & Thanks	Pefkos City Hotel, Limassol
18:45	Close	

* Online presentation



Kyriakos Efstathiou

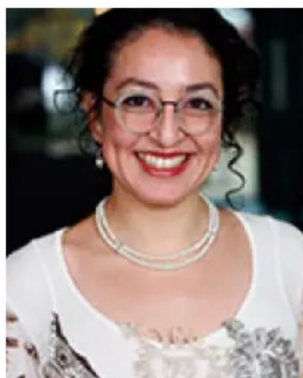
EU ERA Chair on Digital Cultural Heritage
The Cyprus University of Technology
Limassol, Cyprus

Professor Kyriakos Efstathiou since 2019 has been the Chair Holder of the EU ERA (European Research Area) Chair on Digital Cultural Heritage, in the Cyprus University of Technology. From 1982 – 2019 was Professor of Mechanical Engineering at the Aristotle University of Thessaloniki, Greece. His main research focuses on the holistic digital documentation of the cultural heritage. He is well known for using innovative technologies and tools in the investigation and re-construction of several archaeological findings. He has authored several dozens of publications in excellent international scientific journals and conference proceedings and his work is well known and cited.

The holistic documentation of the Digital Heritage lifecycle.

The main goal of the holistic documentation is the definition and creation of end-to-end documentation “pipelines” for monuments and CH objects, aiming at increasing outreach (awareness, participation, and engagement) to specific user communities. To achieve this goal, holistic documentation ‘pipelines’ were defined and created, the “Mnemosyne methodology”. The main developed elements of the “Mnemosyne methodology” are: a system for the determination of the complexity and quality of a digitisation project, a classification system of tangible assets and a classification system of users. The methodology includes research approach and techniques for the creation of the memory twin of seventeen selected case studies.





Trilce Navarrete Hernandez

**Chair of the International Committee of
Documentation of the International Council of
Museums (CIDOC)**

**Assistant Professor the Erasmus Rotterdam
University**

Rotterdam, The Netherlands

Navarrete is Assistant Professor Digital Cultural Economics at the Erasmus University Rotterdam. Her research merges theories of economics, heritage, and information science to support an understanding of the changes in digital heritage production, distribution and consumption brought about by the adoption of digital technology.

Navarrete is currently the Interim Director of the Society Strategic Objective at EIT Culture & Creativity, and she is the project coordinator of RECHARGE, a Horizon project that aims to develop participatory business models for future-proof museums (2022-2025).

Museums, Documentation, and AI

The museum sector is in transition. Besides the new definition of museums adopted by ICOM, the current social and environmental context requires museums to rethink their role in the greater social transformations. Digital technology has accelerated a series of processes which provide a new crossroad: embrace technology and become part of AI developments. Or embrace materiality and remain critical of the digital twin? This session will present a series of questions regarding the role of museums and their documentation activities in the face of digital transformation.





Marinos Ioannides

UNESCO Chair on Digital Cultural Heritage
Director of the Digital Heritage Research Lab
The Cyprus University of Technology
Limassol, Cyprus

Dr Marinos Ioannides is the director and founder of the Cyprus University of Technology's Digital Heritage Research Lab and holds the UNESCO Chair on Digital Cultural Heritage (DCH). Receiving his BSc., MSc in Computer Science and PhD in Mechanical Engineering from the University of Stuttgart, his pioneering work on 3D Volumetric Reconstruction secured awards totalling 5M DM from the State of Baden-Württemberg and IBM (1993). He received the European Commission's EU KIT award (1995), the Spanish Association of Virtual Archaeology's Tartessos prize (2010), the EU Innovation Award (2018), nomination to Associated Member of the German Archaeological Institute (2020) and the EU ERA Chair on DCH.

The Complexity of Data Acquisition

The digital acquisition and representation of Cultural Heritage tangible objects, structures, and environments is essential for analysis, conservation, interpretation and long-term preservation. Selecting the optimum technology and workflow for the 3D digitisation of tangible movable and immovable CH objects is a complicated procedure and one that requires careful consideration:

If the aim is to achieve high-quality results during the 2D and 3D recording process of CH tangible assets, what are the "standards" needed? How much are they going to cost how long will they take, and will they meet multidisciplinary needs? Are the expertise and technology available and reliable? Which formats should be used to record the results, enabling long-term preservation is provided? What kinds of knowledge can be embedded in 3D records and how can models be shared interoperable? Can the quality be objectively defined?

This presentation will focus on all current open issues for the definition of Complexity in the Data Acquisition in Cultural Heritage with special attention to the Quality of the end results.





Sabine Klaus

**Support Specialist
Zoller & Fröhlich GmbH
Wangen im Allgäu, Germany**

Sabine Klaus is a Support Specialist at Zoller+Fröhlich GmbH with 7 years of experience helping Z+F users with all kinds of Hardware and software-related problems and questions. Specializing in Training, Sabine uses that experience to teach users in the ways to scan and prepare them for their projects to come.

3D Terrestrial Laser Scanning

Laser scanning has evolved profoundly over the recent decades. This is not only due to technical progress as well as developments but has also resulted in a vast increase in applications. However, new opportunities are often accompanied by new challenges. Z+F has continuously set new standards and introduced innovative solutions in laser scanning for almost three decades. This presentation will feature an insight into current applications, some basics in Laser scanning and how Z+F can help users to solve challenges in the field of laser scanning with its high-quality product portfolio.





Kyriacos Themistocleous

**External Affairs & Business Development
Director**

**ERATOSTHENES Centre of Excellence
Project Manager the EXCELSIOR project**

Senior Researcher

**The Cyprus University of Technology
Limassol, Cyprus**

Dr. Kyriacos Themistocleous is a Senior Researcher at the Cyprus University of Technology. He is the Project Manager of the EXCELSIOR project for the creation of the Centre of Excellence in Earth Observation (H2020). As well, he is the national representative for the Copernicus User Forum, the Copernicus Cultural Heritage Task Force, the Copernicus Relay Network and the Copernicus Academy as well as the expert-representative for ICIP (Interpretation and Presentation of Cultural Heritage Sites)

Why and How to Digitise Monuments

This workshop will provide an overview of a discussion regarding the survey requirements from the perspective of the architectural point of view. What, why and how we survey a cultural heritage monument will be presented and the different methods and reasoning will be discussed. Nowadays, using digital methods can provide advantages to the traditional way of survey but we need to be knowledgeable and experienced, respecting the history and characteristics of the specific monuments being surveyed.





Chrysanthos Pissaridis

Architect – Conserver
President ICOMOS – Cyprus Section
Nicosia, Cyprus

Chrysanthos Pissarides was born in Nicosia, Cyprus. He obtained his degree in Architecture from the Venice University Institute of Architecture (IUAV) in Italy. His postgraduate specialization studies were undertaken in the University of Padova, Italy, in the field of restoration (1997), and Rome (2009), where he completed the Architectural Records, Inventories & Information Systems for Conservation Course, an advanced course in architectural conservation sponsored by the Getty Conservation Institute & ICCROM. In 2015, he was elected President of the Cyprus Branch of ICOMOS.

He maintains a close association over many years with the Cyprus Centre of Cultural Heritage as well as with the Cyprus Department of Antiquities. He has worked for the UNDP either as Supervisor & Project Engineer on inter-communal conservation projects or as Architect/Designer.

Methods for Documenting Architectural Heritage

Architectural Heritage constitutes an essential aspect of human development, an irreplaceable source of life & inspiration for all humankind that substantiates & certifies our identities, as it exists in time & space &, subsequently, bears inestimable witness to past generations

Appropriate, scientific recording & documentation of our heritage buildings in all their forms & periods signifies, first & foremost, a possession of the community, a rich & common inheritance, a treasure in itself that can be passed on, even in the event of threats to the properties concerned, for the benefit of present & future generations. Through fostering & coordinating properly executed heritage recording activities of all buildings of historical & architectural significance, all specialists involved in the conservation process of historic resources as well as official bodies shall undoubtedly benefit. More specifically, we as architects shall be facilitated in our conservation interventions & restoration activities, while politicians shall have a greater chance of better managing, supporting and promoting our cultural and built heritage.



ICOMOS
international council on monuments and sites

**Anna Reeve**

**Early Career Research Associate
Institute of Classical Studies
London, The United Kingdom**

Dr Anna Reeve is a material culture historian whose research focuses on Cypriot antiquities in UK museums. She explores the changing ways in which Cypriot antiquities were interpreted, collected and displayed from the mid-19th century onwards, and the use of archives in Cyprus and the UK to investigate collection histories. She is an Early Career Research Associate at the Institute of Classical Studies, London, and an Associate Lecturer in Classics for the Open University.

Tracing provenance through digitized archives

Exploration and excavation in Cyprus in the 19th century led to the movement of huge numbers of antiquities to the UK, through the auction market and into private and public collections. Tracing the histories of the collections which remain today is essential for understanding their changing contexts through time, and for making connections with museum audiences. In this session I will discuss the ways in which digitization of archives and historical records enables us both to follow individual objects and also to get an overview of the multiple ways in which they have been interpreted, valued and exchanged. I will examine methods and approaches for working with this kind of digitized data, and explore what it can tell us, the gaps and uncertainties which inevitably remain, and the contribution it can make to restoring object itineraries. Recovering these histories allows museums to go beyond the materiality of the object in their interpretation, and to explore its multivalent contribution to wider issues of colonialism, the development of archaeology, and changing attitudes towards cultural heritage.



ICS INSTITUTE OF
CLASSICAL
STUDIES



Costas Papadopoulos

**Assistant Professor in Digital Humanities &
Culture Studies
Maastricht University
Maastricht, The Netherlands**

Costas Papadopoulos is an Assistant Professor in Digital Humanities and Culture Studies at Maastricht University. His work has its roots in archaeology, digital humanities, and museum and heritage studies, exploring three-dimensional modelling, digitisation, and representation at the intersections of the physical and the digital. Through his two projects PURE3D and OPER3D, he is developing an Infrastructure for the Publication and Preservation of 3D Scholarship as well as processes and workflows for the open publication and peer-review of 3D-based research. He is co-founder and coordinator of The Plant: Playground and Laboratory for New Technologies at the Faculty of Arts & Social Sciences at Maastricht University.

Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation

In this half-day seminar, we will explore the opportunities and challenges that 3D technologies bring to the (re)construction, analysis, and representation of cultural heritage. The session will cover different aspects of 3D scholarship, including the politics of 3D digitisation; authorship, ownership, and copyright of 3D work; the challenges of mass digitisation; the use of 3D (re)constructions for research and interpretation; as well as different 2D, 2.5D, and 3D technologies for digitisation and analysis. During this interactive session, participants will have ample opportunities to reflect on and discuss different case studies and scenarios and ask questions.





Ronald Haynes

**Co-Chairman of the IIF 3D Community
University of Cambridge
Cambridge, The United Kingdom**

Ronald Haynes is a University Senior Computer Officer and Regent at the University of Cambridge. He is the Strategic Relationship Manager for the 31 Colleges, University Library, University Church, Continuing Education, Fitzwilliam Museum and other University GLAM institutions, and IT Community Development Manager. He was Bristol University's first Webmaster, Computing Service Information Officer, and Philosophical Theology researcher. He researches and presents collaborative XR and immersive technologies for cultural heritage, leads a Darwin 3D project, partner for proposed UK national 3D repository and complex data service, and co-chairs IIF 3D Community and Technical Specification Groups. He holds ACM, BCS, Computer Society, IEEE membership.

IIF 3D - Challenges in Evolving 3D Standards, Sustainable XR and Metaverse(s)

Increasing the global impact of IIF use for 2D and Audio/Video (A/V) data, work is underway to draft similar standards for 3D content, with the developments of the 3D Technical Specification Group. The 3D Technical Specification Group (TSG), is collaboratively considering common challenges and solutions, with major 3D developers and researchers, and engaging with specialists and representatives across international user communities and standards bodies. The TSG is working to suitably extend IIF into the 3rd dimension, exploring opportunities for better data sharing across collections and institutions, to help overcome barriers to sustainable sharing. The group also is exploring options for incorporation of 2D and A/V with 3D data, to form digital dioramas, scene and soundscape reconstructions, and the potential to help build an inclusive metaverse.





Pavlos Fafalios

**Postdoctoral Researcher
Centre for Cultural Informatics
The Information Systems Laboratory (ISL)
FORTH-ICS
Heraklion, Greece**

Dr. Pavlos Fafalios is a postdoctoral researcher at the Centre of Cultural Informatics of FORTH-ICS (Heraklion, Greece), working as a group leader in several national and international research projects. His research interests fall in the areas of information retrieval, knowledge representation, and knowledge engineering, with a special interest on interdisciplinary research in these areas and the application of his research findings in different disciplines, including Cultural Heritage and the Humanities.

From Cultural Heritage Assets to Cultural Linked Data: Holistic Data Management and Semantic Interoperability in Cultural Heritage Documentation, Research and Promotion

The lecture will describe and demonstrate a workflow model and a set of IT tools for the holistic management of data and knowledge in the cultural heritage sector: from recording and documenting (meta)data about both tangible and intangible cultural assets, to modelling and integrating the data using a standard ontology, in particular the ISO standard CIDOC CRM, and finally exploiting the documented and integrated data both in outreach activities (e.g. data publication on the Web) and in research (e.g. through data exploration and analysis services). The focus of the overall approach in semantic interoperability and the production of data of high value and long-term validity.





Antonella Fresa

**Vice-President of Photoconsortium
Thematic aggregator on photography for
Europeana
Pisa, Italy**

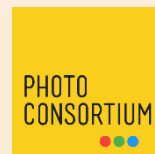
ICT expert, Director of Design at Promoter SRL & vice-president of PHOTOCONSORTIUM association, she has been worked on European collaborative projects since the 1990s. From 2002, she has been Technical Coordinator and Communication Manager of national & European projects in the digital cultural heritage, creativity, citizen science, smart cities, digital preservation and e-Infrastructures.

The EU Digital Europe Project Eureka3D: Implementing the Data Cloud on Cultural Heritage

The Eureka3D project addresses the growing need to enable the digital transformation of the Cultural Heritage (CH) sector. Museums, galleries, libraries, archives and archaeological sites need to review and modernise their internal processes from digital capture to end-user access and reuse. They need to retrain personnel to cope with new digital responsibilities and roles, to review infrastructure capacity, in particular with regard to the ability to process 3D contents and generate novel holistic documentation of digital objects. The existing services of the Europeana platform are a good starting point to support sharing and reuse, but an integration with more advanced, powerful and safe services is needed to answer to the demands of small institutions. To achieve this goal, the project will:

- set-up dedicated cloud-based services for the management and preservation of cultural contents in a safe and IP-mindful environment
- generate high-quality 3D digitization of selected items and related para/metadata ready to be harvested to Europeana
- perform aggregation of the new content to the Europeana platform.

The presentation will illustrate the current achievements of Eureka3D and how the delegates can use its infrastructure can harvest the results of the Summer School training to Europeana.





Athos Agapiou

Assistant Professor
Head of the Earth Observation Geoinformatics
Lab
The Cyprus University of Technology
Limassol, Cyprus

Dr Athos Agapiou is currently an Assistant Professor at the Department of Civil Engineering and Geomatics of the Cyprus University of Technology, holder of the position of Earth Observation and Geoinformatics. He is also the Deputy Director of the UNESCO Chair on Digital Cultural Heritage. His work is focused on remote sensing and earth observation for heritage studies. Dr Agapiou work has been internationally recognized as his name is included among others in the list of the “Top 10 most cited authors in heritage-4th industrial revolution research” and in the “World’s Top 2% Scientists List”. He is currently the coordinator of the Horizon Europe programme ENGINEER.

Earth Observation for Cultural Heritage: an overview of applications

Today, we often find that we have more geospatial- information than we know what to do with. Today we have more digital data, than ever before. The hard part is not getting the data, but to take advantage of this flood of geospatial information and make it worth it and valuable to end users and the society”. This short communication aims to present an overview of earth observation remote sensing methods used to explore and understand archaeological landscapes. Applications are particularly extended from observations of single monuments to archaeo-landscapes and their diachronic changes. For these applications, we used both optical and radar images, including Copernicus and other high-resolution sensors, supported by UAV campaigns and ground measurements.





Mersilia Anastasiadou

**Junior Research Fellow
University of Buckingham
Buckingham, The United Kingdom**

Mersilia Anastasiadou is a Junior Research Fellow of the University of Buckingham, UK and a Special Scientist at the Department of Social and Political Sciences of the University of Cyprus. Previously, she had served as a Lecturer in Diplomacy and International Relations at Neapolis University Pafos. She holds a PhD in International Relations from Panteion University in Greece and postgraduate degrees in Diplomacy and International Law from Lancaster University and in Cultural Management (specialisation: Cultural Diplomacy) from Panteion University. Mersilia has been a scholar of prestigious institutions, such as the European Academy Research in Italy, the University of Innsbruck and the College of Europe at the University of Hamburg. Her research interests and experience lie in diplomacy and federalism as means of addressing protracted conflicts and security challenges

Soft power tools in contemporary diplomatic practice

Soft power describes the ability of a political body to build, enhance, communicate, and promote a positive image of itself through persuasion and attraction, rather than by employing hard power means, such as militarised aggression, or other coercive measures. The main objective of this presentation is to examine various tools of soft power used by governments towards establishing a particular narrative, impression, cultural footprint, or national brand abroad and thus expanding their influence and impact on foreign societies and peoples. The conceptual framework of soft power supplemented by case studies will be used to exemplify innovative aspects of contemporary diplomatic practice.





Cecilia Bolognesi

**Scientific Director of Labora
Physical & Virtual Modelling Laboratory
Politecnico di Milano
Milan, Italy**

She belongs to the ABC Department, Architecture and Building Construction in Politecnico where she is responsible for the implementation of Digital Skills in the Master's degree of the School, Scientific Director of LaborA (Physical and Virtual Modelling laboratory of the Campus), part of the Scientific Committee of the SaperLab Laboratory (Computational Modelling Laboratory).

She has experimented with operational and methodological applications in a national context, mainly related to tangible and intangible case studies, focusing on the relationship between survey, and representation in the field of digital heritage and BIM environments. She has worked in several public and private contexts dedicated to modelling from the territorial scale to construction scale to finalize BIM and Virtual Environments. She has held conferences and curated some monographs and several papers on different topics: modelling, BIM, HBIM, Virtual environments and representation. She is responsible for projects on Virtuality and Digitalization, Digitalization and BIM and HBIM.

Cultural Heritage as landmarks for preserving the landscape: St. Augustine's path

The maintenance of Cultural Heritage can become a way to structure moments of landscape enhancement; trails are an opportunity for slow tourism through often abandoned places, which can become a resource for the distribution of interest in lesser but equally rich and interesting episodes of history. In the proposed case we will look at some of the routes around 50 monasteries in the Lombard territory of the walk; we will illustrate digitization processes, semantic attribution, benchmark study for the best representation analysis of 3D processes for the best digitization and establishment of experiences in VR. In the end we propose an immersive experience of parts of the path is proposed.



**POLITECNICO
MILANO 1863**



Maria Angela Pellegrino

Researcher
ISISLab, Dipartimento di Informatica
Università degli Studi di Salerno
Salerno, Italy

Maria Angela Pellegrino is a university researcher affiliated with ISISLab, which is part of the “ICT Center for Cultural Heritage” of the University of Salerno. She mainly works in Semantic Web and Data Quality by proposing technological solutions to move lay users into the position of active contributors of data heritage, both in the data authoring and the data exploitation stages

Bring into view cultural heritage (knowledge graphs)

The Cultural Heritage community heavily invested in digitization campaigns, mainly modelling data as Knowledge Graphs, but the complexity of query languages and poor data quality threatens data exploitation. This lesson details my research group efforts in designing and prototyping engaging exploitation tools to let lay users actively use and re-use Knowledge Graphs limiting required technical skills and dealing with data quality concerns





Michael Klein

**Chief Executive Officer
7reasons Medien GmbH
Wien, Austria**

Michael Klein has been active as CEO of 7 Reasons in the fields of virtual archaeology and digital cultural heritage for over two decades with a special interest to disseminate scientific knowledge to a broader audience. The media agency 7reasons is specialized in producing multimedia content for print and films, interactive applications as well as mobile applications and a broad range of other digital productions.

Digitization pipeline for Cultural Heritage Sites, Buildings and Monuments in preparation for the usage within VR 3d real-time environments like Metaverse.

The complete pipeline of digitalized Cultural Heritage Sites and Buildings through image-based modelling (IBM) will be presented. Moreover, the 2D and 3D results (models) will be processed for use within 3D real-time mixed and augmented environments like Metaverse. The Saint Antonio and Ibrahim Aga Mosque case study will be presented and discussed.

Key examples from other key case studies of VR/AR experiences on various sites within Europe will give an insight to the useful application to cultural tourism within the digital cultural domain.





Kenneth Silver

Curator
The Museum of Mediterranean & Near Eastern
Antiquities
Stockholm, Sweden

Dr. Kenneth Silver is currently the Curator of the Mediterranean and Near Eastern Antiquities in Stockholm (The Mediterranean Museum), and Head of Department of the Greek, Roman, Cypriot, and Near Eastern artefacts. Silver has a background in Classical, Mediterranean and Near Eastern archaeology as well as ancient numismatics. He has participated in, co-directed, or headed many archaeological, archaeometallurgical or satellite mapping projects in Israel, Greece, Italy, Syria, and lastly in Turkey. The author has published, or has in press, ten monographs, and more than a hundred scientific articles most of which are peer-reviewed.

The Archaeological Importance of the Swedish Cyprus Expedition in 1927-1931. The Digital Reunification of the Collections of Stockholm and Nicosia: Benefits and Challenges

This paper discusses the archaeological importance of the most extensive excavations ever conducted in Cyprus in 1927-1931 by the Swedish Cyprus Expedition. The bulk of the archaeological finds are presently housed in the Museum of Mediterranean and Near Eastern Antiquities in Stockholm, Sweden, and are scheduled for reorganization in the near future. In particular, we explore the recently developed cooperation proposal to digitize the most important part of the archaeological collections of the Swedish Cyprus Expedition. This would enable the national museums digitally to “reunite” their collections. No doubt, this would have a huge impact on the present possibilities to document and record the original archaeological material in new ways, but also enable future studies in unprecedented detail and make the collections as an entity publicly accessible in ways never seen before.



MEDELHAVSMUSEET



Ioanna Hadjicosti

Coordinator ReInherit H2020 The Bank of Cyprus Cultural Foundation Nicosia, Cyprus

Since November 2016, she serves as the Director of the Bank of Cyprus Cultural Foundation, having the responsibility to design and implement the new strategy, organize the yearly program of events and supervise the research programs of the Museums and Collections. She is currently the coordinator of the project “Redefining the future of cultural heritage, through a disruptive model of sustainability” funded by the European Union’s Horizon 2020 research and innovation programme under grant agreement No 101004545

The quest of Museums/Cultural Foundations: Finding one’s digital or other way to the audiences

The paper will discuss the differences between theory and practice regarding museum management and audience development and suggest ways to fill the gap, on the one hand, considering the fact that Cultural Sustainability is the new international momentum. On the other hand, the paper will be using the experience of the Bank of Cyprus Cultural Foundation, during its survival efforts these last challenging years for the sector.





Mina Silver

**Adjunct Professor in Archaeology
CIPA Heritage Documentation Executive
Committee
University of Oulu
Oulu, Finland**

Minna Silver (PhD) is Adjunct Professor of Near Eastern Archaeology in Finland with a GIS expert certificate and has worked as a researcher and professor in Archaeology in the Mediterranean region and the Near East for years. She has been President of ICOMOS Finland and currently chairs the CIPA Commission I on recording and documentation. She has authored books and articles on remote sensing, GIS and 3D modelling in archaeology. She belongs to the editorial board of The Virtual Archaeology Review.

Archaeological Remote Sensing & GIS: Data, Application & Experiences

Archaeological remote sensing using space-borne or air-borne devices and platforms has become a common way to carry out prospecting archaeological sites in recent decades. GIS (Geographic Information Systems) offers means to study, map, analyse and monitor the sites based on the captured data. Here we present available data, ways and benefits to carry out remote sensing and GIS studies for research as well as for preservation of cultural heritage sites and landscapes.





Jongwook Lee

**Professor in Cultural Heritage
Chair of the Dept. of Cultural Heritage Industry
Korea National University of Cultural Heritage
Seoul, South Korea**

Jongwook Lee is a department chair of the Dept. of Cultural Heritage Industry, Korea National University of Cultural Heritage. He received Ph.D. in the Graduate School of Culture Technology (GSCT), Korea Advanced Institute of Science and Technology (KAIST) and was a researcher at the Electronics and Telecommunications Research Institute (ETRI). He received his Bachelor's degree at Korea National University of Cultural Heritage and received a Master's degree in GSCT, KAIST. He has been involved in digital heritage at various academic societies, has published relevant research results and has been actively involved in the community. He was involved in many projects on digital heritage with the support of the Korean government. His research interests are topics on digital archives, digital museums, heritage data platforms, heritage data visualization, and heritage ontology.

KNUCH Digital Heritage Research

This study aims to enable users of digitized cultural heritage artefacts to understand the correlation between artefacts and their context and discover new knowledge. We have developed visualization technologies specific to cultural heritage so that users, such as curators, cultural heritage experts, and museum visitors, can easily and quickly access the information that they want through the correlation between artefacts. We invented a web-based visualization tool that converts lists of attribute information into visualized content and edits the attributes. This study will contribute to vitalizing GLAM (galleries, libraries, archives, museums) which aims to improve accessibility to knowledge resources of institutions, including collections, through the preservation, management, and utilization of cultural heritage data by supporting intelligent digital curation of cultural heritage data.





Jeongmin Yu

**Professor in Cultural Heritage
Dept. of Cultural Heritage Industry
Korea National University of Cultural Heritage
Seoul, South Korea**

Jeongmin Yu is an associate professor in Dept. of Cultural Heritage Industry, Korea National University of Cultural Heritage. He received Ph.D. in school of Information and Communications at Gwangju Institute of Science and Technology (GIST) and involved as a research associate of school of Culture Technology in Korea Advanced Institute of Science and Technology (KAIST)

He has been involved in digital heritage at various academic societies and published the papers and have been actively involved in the community (Digital heritage congress, EuroMed, so on). In addition, he conducted many digital heritage projects with the supports of the Korean government.

His research interests are digital heritage, XR (extended reality) digital heritage contents, artificial intelligence (AI) for management of cultural heritage applications.

KNUCH Digital Heritage Research

This study aims to enable users of digitized cultural heritage artefacts to understand the correlation between artefacts and their context, and discover new knowledge. We have developed visualization technologies specific to cultural heritage so that users, such as curators, cultural heritage experts, and museum visitors, can easily and quickly access the information that they want through the correlation between artefacts. We invented a web-based visualization tool that converts lists of attribute information into visualized content and edits the attributes. This study will contribute to vitalizing GLAM (galleries, libraries, archives, museums) which aims to improve accessibility to knowledge resources of institutions, including collections, through the preservation, management, and utilization of cultural heritage data by supporting intelligent digital curation of cultural heritage data.





Maria Paphiti

**Art Historian and Art Consultant.
Founder, The Collective Heritage Cultural
Management
Goodwill Ambassador of the UK-Cyprus
Enterprise Council
Nicosia, Cyprus**

Maria Paphiti is an art historian. A graduate of the Courtauld Institute of Art, University of London (MA distinction), she specializes in Byzantine Art and the Early Works of El Greco. She headed the international department of Icons at Christie's Auctioneers. She contributed to the repatriation of several looted artefacts from Cyprus, the most important of which was the 6th century mosaic of Apostle Andrew from the church of Panagia Kanakaria.

Three case studies that underline the pivotal role of digital imaging in reclaiming pieces of art

The 1974 Turkish invasion of Cyprus was followed by the greatest plundering of artefacts in the history of the island. Most of them were channelled in the art market worldwide. Their resale, in combination with the raised global awareness about art trafficking, the updated legal frame and the new technologies have enabled the location and repatriation of several looted artefacts. There are still many more to be traced and digital imaging is an extremely useful means in the process of doing so.





Anthony Cassar

**Head of Digitisation.
Heritage Malta
Kalkara, Malta**

With over 25 years in IT and multimedia, Tony Cassar is a visionary leader committed to using technology for cultural heritage preservation. As Head of Technology and Experience Development at Heritage Malta, the nation's cultural heritage agency, he spearheads the digitization of the national collection, increasing its accessibility. His unit also serves as the national data aggregator for cultural heritage. Mr. Cassar actively participates in EU digitization and cultural heritage projects and is a member of the Commission Expert Group on the common European Data Space for Cultural Heritage (CEDCHE). His work bridges the past with the future through technology and collaboration.

Digital Tools for Cultural Heritage Preservation and Interpretation

In two compelling case studies, we showcase their transformative potential. The first delves into the application of AI in interpreting intangible cultural heritage, while the second spotlights the utilization of 3D scanning and reconstruction to preserve tangible cultural treasures. These examples exemplify the power of technology in safeguarding and presenting our cultural legacy to the public.





Petros Siegkas

**Lecturer in Mechanical Engineering Design &
Additive Manufacturing
The Cyprus University of Technology
Limassol, Cyprus**

Dr. Siegkas is a lecturer in Mechanical Engineering Design and Additive Manufacturing, leading the MEDAM lab at Cyprus University of Technology. With expertise in engineering design tools, 3D printing, material behaviour and impact performance, he collaborates on multidisciplinary projects spanning biomechanics, aerospace, machine learning and cultural heritage. Holding a DPhil from the University of Oxford, he has postdoctoral experience at Imperial College London and the University of Oxford's Impact Laboratory.

The future of manufacturing applied on our past

3D printing technology has become more accessible and versatile. The 3D printing process can generate accurate physical replicas or restored objects, offering tangible engagement and accessibility to a wider audience. The synergy of digitisation (3D scanning or CT scan data) and 3D printing fosters a deeper connection to cultural heritage, revolutionizing its conservation, appreciation and use. This tangible connection to our past fosters unparalleled educational and experiential opportunities, allowing people to interact with and appreciate cultural heritage like never before. From educational institutions to museums, the integration of data processing and 3D printing can become an indispensable tool in unlocking the secrets and preserving the beauty of our shared human history.





Ljubo Lah

**Associate Professor
Faculty of Architecture
The University of Ljubljana
Ljubljana, Slovenia**

Associate professor at the Faculty of Architecture of the University of Ljubljana. He is active in the field of renovation, interpretation, research, and popularization of architectural heritage. He advocates for integral forms of heritage protection and the participation of all stakeholders in spatial planning and cultural heritage protection in accordance with international doctrine and recommendations. He published more than sixty professional and scientific texts in the form of research, monographs, and articles.

Romanesque architecture in Burgundy: experiences of research and recording workshops

For sixteen years, the Faculty of Architecture from Ljubljana has been training small groups of its students to prepare a monument assessment. The international institute from Burgundy is focused on researching the Romanesque architectural heritage and cooperates with various faculties around the world. For the documentation of cultural heritage objects, traditional measurement methods are in decline. 3D laser scanning provides accurate, geometrically consistent, and highly detailed data that can be used in recording and documenting cultural heritage monuments.



Fieldwork Training at Friendship Square, Limassol

Located a short walk from the historical centre of Limassol, on either side of a busy main road, stand two modest religious buildings; the Koprulu Haci Ibrahim Aga Mosque and Agios Antonios Orthodox Church. These places of worship, dating from the nineteenth century, served the residents of the poor Cami-Cedid neighbourhood in the western part of the city. These two religious buildings remain one of the most important examples of the coexistence and everyday life that Greek and Turkish Cypriots shared in Limassol and today are the focus of a new municipal endeavour to reinvigorate the neighbourhood and unite the two monuments with a square of friendship and peace.

Koprulu Haci Ibrahim Aga Mosque

Agiou Andreou, Limassol (34.67233, 33.03822)

Tradition says that when Koprulu Haci Ibrahim Aga joined the Ottoman army he vowed to build a mosque on the site where he enlisted if he returned safely. Returning to Limassol in 1826 he fulfilled his promise of building a mosque on the bank of the Garillis Creek.

In 1894 disaster struck when the creek burst its bank, sweeping away two-thirds of the mosque. Although the minaret survived the flood, it was considered unstable and demolished by the British. Plans to rebuild the mosque were made the following year, but work was delayed until 1906 and finally completed in 1913.



Agios Antonios Orthodox Church

Kioprulouzate Street, Limassol (34.6716, 33.0388)

Agios Antonios, or the Church of Saint Anthony the Great, is a Greek Orthodox church built in 1870 on the foundations of an earlier church site. The 1894 floods caused damage to the church which underwent extensive repairs starting in 1896 until its inauguration in 1905. The small church was further expanded to include a third aisle in 1939.

According to locals, every year on the day of the saint's feast 17th of January, the whole of Limassol would gather at the church for a festival in the church grounds, in which both Christians and Muslims from the community participated.

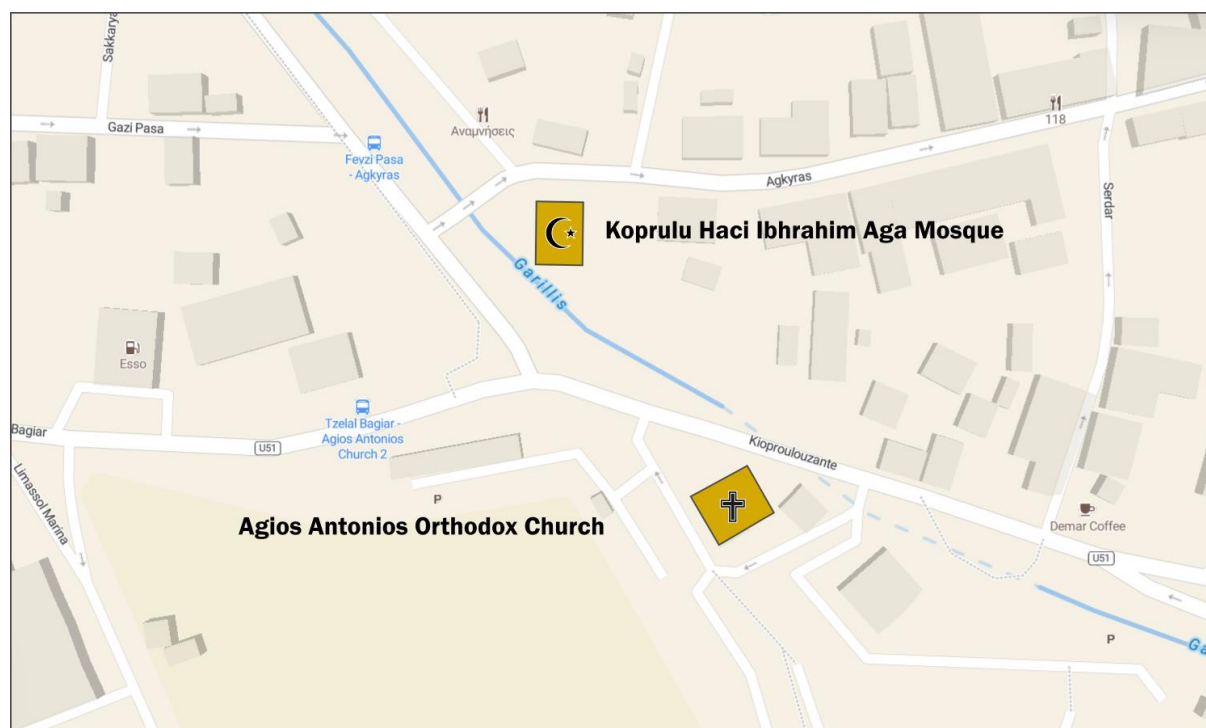


Practicalities

Location

The monuments are within 100m of each other but on either side of the Kioproulozate main road.

By Foot	Pefkos City Hotel is an easy 1.2km walk, about 15 minutes, to Friendship Square
By Car	Parking is available at Agios Antonios (off Kioproulozate), opposite Koprulu Haci Ibrahim Aga mosque (Agiou Andreou), Carob Mill Parking (Agias Theklis) and Limassol Marina Car Park (Limassol Marina Street)
By Bus	The closest bus stop is the Tzeial Bagiar – Agios Antonios Church 2 (Ekklesia Agiou Antoniou) on Limassol Bus routes 30,45, 46, 56 and 64 and Intercity Bus stop (Saint Antonios Church) from Larnica and Paphos



Conditions

Conditions on site are good, however, please be aware of traffic when working near or crossing the busy roads between the two sites. Caution should be taken if surveying is required in the Garillis creek, while it is usually dry there is always a possibility of flash flooding and, even when dry, the banks and creek bed are difficult to traverse and uneven underfoot.

Working both inside and outside the monuments is expected to be warm with mid to high 20°C temperatures expected. Rain is unlikely and updates will be provided during the Summer School to actual conditions nearer the day.

Both monuments are active places of worship and should be respected as such. The church is open to public visitors and work should not hamper visitors to the site. Although the mosque is currently not in regular use, work should cease by 12:15 to allow Dhuhr prayers at 12:32, if worshippers are in attendance.

Extra Curricula Events

Summer School Social Dinner

Tuesday 24 October 2023

The cost of the social dinner is included in the Summer School fees. Please let us know in advance of any dietary restrictions you may have. The dinner will be held at the Pefkos City Hotel from 19:00.

Cultural Excursion Omodos Village

Saturday 28 October 2023 Cost €TBA

Located in the Lemesos (Limassol) district, the pretty wine-producing village of Omodos sits at an altitude of 800 metres on the Troodos mountain range, in the beautiful area of Krassohoria, just 42 km from Limassol. Famous for its wine, *zivania* spirit, handmade narrow-knit lacing and *arkatena* bread, Omodos is one of the most traditional and charming villages on the island.

The village has existed since the Frankish period and is marked as Homodos, and Homoclos on old maps, with its name originating from the Greek word for street - *odos*. Despite its small size, Omodos has many interesting sights. Located within close proximity of one another are the cobbled square, old stone-built houses, local wineries, a medieval wine press and the Monastery of Timios Stavros (Holy Cross), with its old icons and impressive woodcarvings. There is also a museum dedicated to the National Liberation Struggle, a centre for the preservation of narrow-knit lacing, and an Icon Museum.

If you would like to take advantage of this excursion please let us know in advance. Please be aware that the return time to Limassol may vary and cannot be guaranteed if you need to depart for travel later in the day.

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United Nations
Educational, Scientific and
Cultural Organization



UNESCO Chair on
Digital Cultural Heritage at
the Cyprus University of Technology



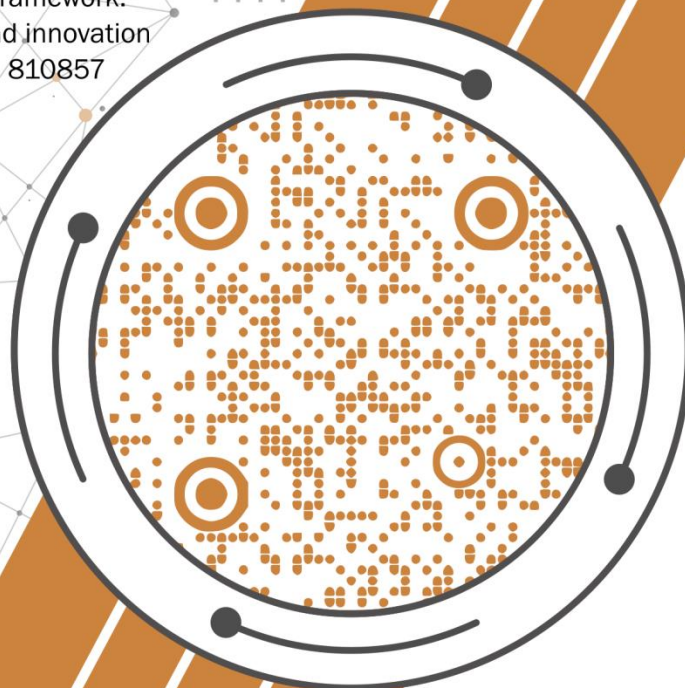
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DEPARTMENT OF ANTIQUITIES

ACKNOWLEDGMENT

This project has received funding from the European Union's H2020 Framework Programme for research and innovation under Grant agreement no. 810857



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