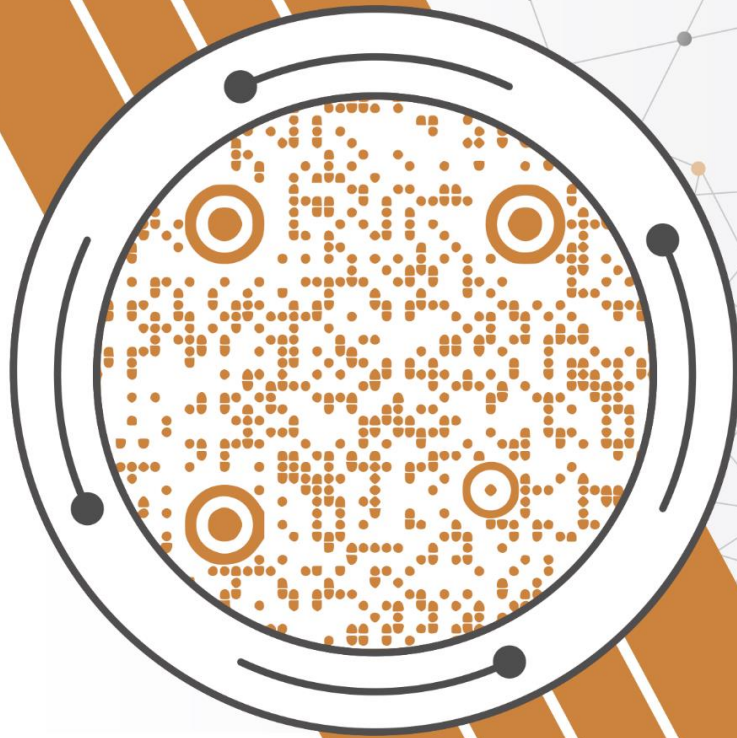


# Summer SCHOOL 2023

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.

## Mnemosyne Summer School 2023 Programme

EET Time	<i>Monday 23 October 2023</i>	
08:00-09:00	<i>Delegate Registration</i>	
<b>Opening Address and Introductions</b>		
09:00-10:30	Dr Kyriakos Efstathiou	Cyprus University of Technology, H2020 ERA Chair MNEMOSYNE
	Dr Panayiotis Zafiris	Rector of Cyprus University of Technology
	Mr Nicos Nicolaides	Mayor of Limassol City Council
	Mr Marios Siammas	Economic Policy & Programme Officer British High Commission
	Mr Harri Mäki-Reinikka	His Excellency the Ambassador of Finland in Cyprus
	Mr Ioannis Papameletiou	His Excellency the Ambassador of Greece in Cyprus
	Mr Philippos Hadjizacharias	Deputy Minister of Research & Innovation of the Republic of Cyprus
	Dr Vasiliki Kassianidou	Deputy Minister of Culture of the Republic of Cyprus
	Mr Nikos Christodoulides	His Excellency the President of the Republic of Cyprus
10:30-11:15	Dr Trilce Navarrete Hernandez	<i>Museums, Documentation, and AI</i>
11:15-11:30	<i>Coffee</i>	
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	Ms Sabine Klaus	<i>3D Terrestrial Laser Scanning</i>
13:45-14:45	<i>Lunch</i>	
14:45-15:30	Dr Kyriacos Themistocleous	<i>Why and How to Digitise Monuments</i>
15:30-16:15	Mr Chrysanthos Pissaridis	<i>Methods for Documenting Architectural Heritage</i>
16:15-17:00	Mr Chrysanthos Pissaridis	<i>Methods for Documenting Architectural Heritage</i>
17:00-17:15	<i>Coffee</i>	
17:15-18:00	Dr Anna Reeve†	<i>Tracing provenance through digitized archives</i>
18:00-18:45	Discussion	
18:45-19:00	<i>Close</i>	

† Online presentation

EET Time	<i>Tuesday 24 October 2023</i>	
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	<i>Coffee</i>	
11:30-12:15	Dr Costas Papadopoulos	<i>Reconstructing the Past in Four Dimensions: From Field and Lab Recording to Research and Interpretation</i>
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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	<i>Lunch</i>	
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 Fafaliost†	<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 Fresat†/Dr Marinou Ioannides	<i>The EU Digital Europe Project Eureka3D: Implementing the Data Cloud on Cultural Heritage</i>
17:00-17:15	<i>Coffee</i>	
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	<i>Close</i>	

† Online presentation

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

EET Time	<i>Thursday 26 October 2023</i>	
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	<i>Coffee</i>	
11:30-12:15	Dr Petros Siegkas	<i>The future of manufacturing applied on our past</i>
12:15-13:00	Ms 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 Ljubo Lah	<i>Romanesque architecture in Burgundy: experiences of research and recording workshops</i>
13:45-14:45	<i>Lunch</i>	
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	<i>Coffee</i>	
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	<i>Close</i>	

† Online presentation

EET Time	<i>Friday 27 October 2023</i>	
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 &amp; Interpretation</i>
11:15-11:30	<i>Coffee</i>	
11:30-12:15	Dr Kenneth Silvert†	<i>The Archaeological Importance of the Swedish Cyprus Expedition in 1927-1931. The Digital Reunification of the Collections of Stockholm &amp; Nicosia: Benefits &amp; Challenges</i>
12:15-13:00	Dr Minna Silvert†	<i>Archaeological Remote Sensing &amp; GIS: Data, Application &amp; Experiences</i>
13:00-14:00	<i>Lunch Break</i>	
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	<i>Coffee</i>	
17:15-18:00	Presentation of Awards	Pefkos City Hotel, Limassol
18:00-18:45	Closing Remarks & Thanks	Pefkos City Hotel, Limassol
18:45	<i>Close</i>	

† Online presentation





## Kyriakos Efstathiou

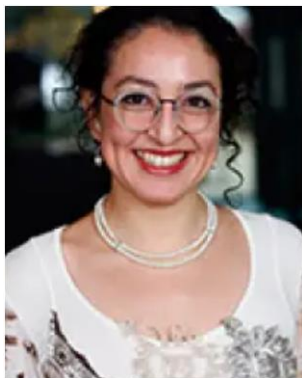
### EU ERA Chair on Digital Cultural Heritage The Cyprus University of Technology Limassol, Cyprus

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 to establish a regional Centre of Excellence for 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 in Rome (2009), where he completed the Architectural Records, Inventories and Information Systems for Conservation Course, an advanced course in architectural conservation sponsored by the Getty Conservation Institute and ICCROM. In 2015, he was elected President of the Cyprus Branch of ICOMOS, a position that he holds until today.

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 and an irreplaceable source of life and inspiration for all humankind that substantiates and certifies our own identities, as it exists in time and space and, subsequently, bears inestimable witness to our past generations, eras as well as civilizations.

Appropriate and scientific recording and documentation of our heritage buildings in all their form and historic periods signifies, first and foremost, a possession of the community, a rich and 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 and future generations. Through fostering and coordinating properly executed heritage recording activities of all buildings of historical and 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 and 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-19<sup>th</sup> 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**

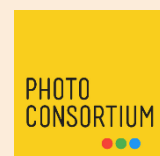
ICT expert, Director of Design at Promoter SRL and vice-president of PHOTOCONSORTIUM association, she has been working on European collaborative projects since the 1990s. Since 2002, she has been Technical Coordinator and Communication Manager of national and European projects in the domains of digital cultural heritage, creativity and co-creation, citizen science, smart cities, digital preservation and e-Infrastructures. She regularly serves as an independent expert and evaluator for the European Commission. She is a founding member of IDEA - International Digital Epigraphy Association, and Enterprise Fellow at Coventry University.

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

The Eureka3D project addresses the growing need of enabling 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 re-use. They need to re-train their personnel to cope with the new digital responsibilities and roles; to review their infrastructure capacity, in particular with regard to the ability to process 3D contents; to generate a novel holistic documentation of the digital objects. The existing services of the Europeana platform is a good starting point to support sharing and re-use, but an integration with more advanced, powerful and safe services is needed to answer to the demand of small institutions. To achieve this goal, the project will engage a variety of CHIs in a piloting action that 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 their related para-/metadata ready to be harvested to Europeana
- perform aggregation of the new contents to the Europeana platform and exemplification of a few cases for use and re-use in unique areas such as Education.

The presentation will illustrate the current achievements of the project and how the delegates can use the Eureka3D 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 Bognesi**

**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



UNIVERSITÀ DEGLI STUDI DI SALERNO  
DIPARTIMENTO DI INFORMATICA



**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.

**TBA**

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 the 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.





**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.



**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.



Bank of Cyprus  
Cultural Foundation



**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.





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***

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## 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.





## 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



**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 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.

***Digital Flow in Archaeology: From Space to The Ground and Museums***

The process of digital flow in archaeology will be presented from prospecting archaeological sites by remote sensing, surveying on the ground, recording, mapping, landscape modelling, excavating, documenting and bringing finds into a museum to be stored and displayed. In addition, protecting, monitoring and reviving ruined sites digitally will be discussed. Examples, experiences and challenges are provided from archaeological projects and sites in the Mediterranean region and the Near East.



**CIPA**  
Heritage  
Documentation

## 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 3042, Cyprus \(34.67233, 33.03822\)](#). Tradition says that when Koprulu Haci Ibrahim Aga joined the Ottoman army he vowed that if he returned safely from his military service, he would build a mosque on the site where he enlisted. When he returned to Limassol in 1826 he fulfilled his promise of building a mosque on the bank of the Garilli creek.

In 1894 disaster struck when the creek burst its bank, sweeping away two-thirds of the mosque in floodwaters. Although the mosque's minaret survived the flood, it was considered unstable and demolished by the British authorities. The following year Koprulu Haci Ibrahim Aga's descendants undertook to rebuild the mosque, but work was not started until 1906 with the completion of the new mosque and minaret being completed in 1913.

### Agios Antonios Orthodox Church (Saint Anthony the Great)

[Kioprolouzate Street, Limassol 3042, Cyprus \(34.6716, 33.0388\)](#). Agios Antonios, or Saint Anthony, 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

Conditions on site are good, however, both the 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.

Both monuments are located close to busy roads and delegates should be aware of traffic when working or moving between the two sites.



## 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.

### 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.