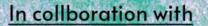


Traditional and digital approaches for landscape, architecture, heritage

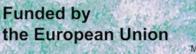
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UNIVERSITÀ DIPARTIMENTO INGEGNERIA CIVILE ARCHITETTURA DI PAVIA







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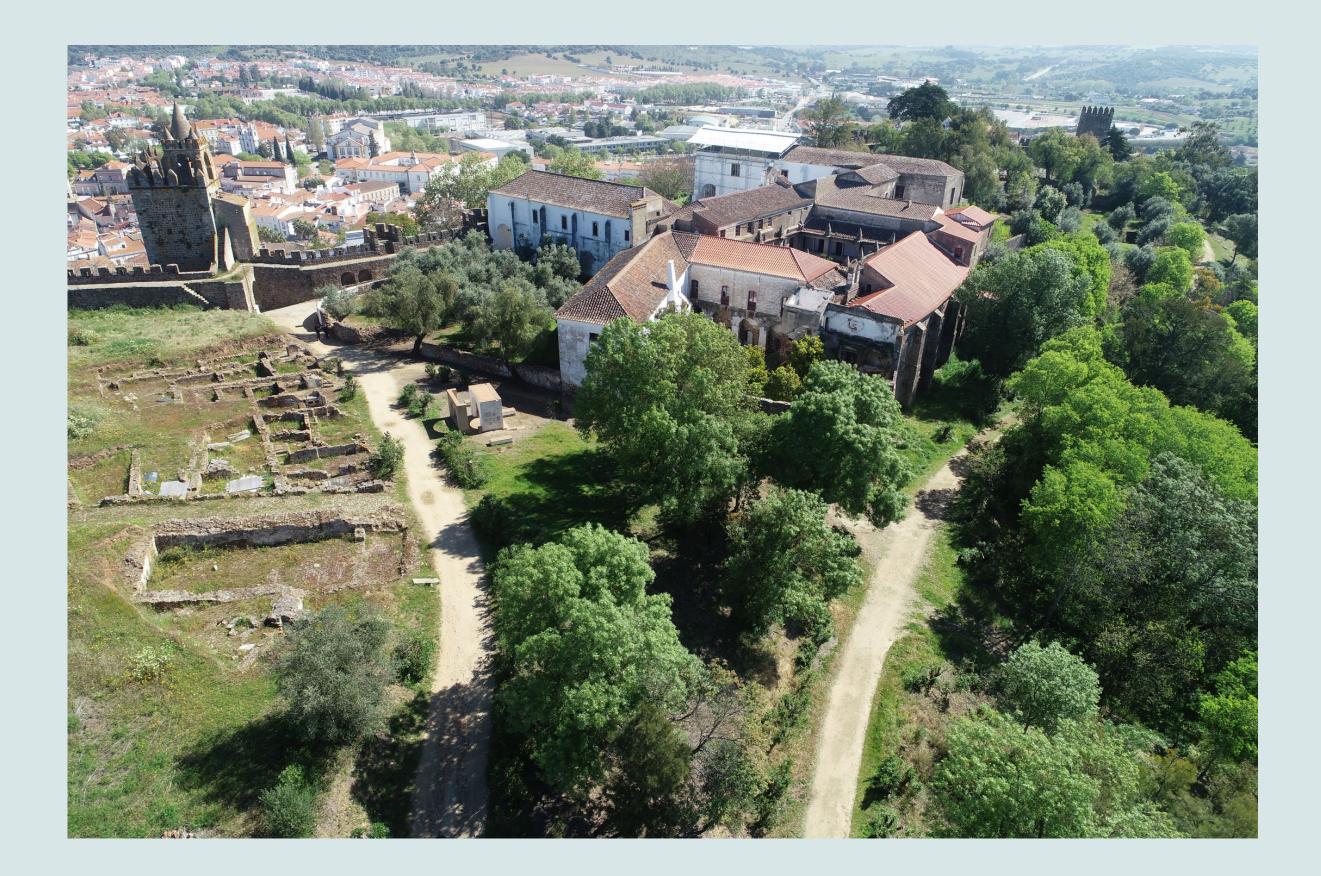


The Blended Intensive Programme Unveiling Medieval Monastic Dynamics (M\_Dyn) aims to develop a didactic approach for the study of religious landscapes, in order to understand their diachronical evolution, since the Middle-Ages, as well as its past and current values.

The course will provide participants with the knowledge and skills needed to understand a historical landscape through theoretical classes and practical activities, joining on-site and off-site methodologies, traditional and digital technologies.

Based on a real case study, lectures and practical activities will focus on the examination of medieval archival documents through historical, cultural and ecological lenses; the acquisition, management and analysis of data from digital survey technologies; the introduction of data in GIS environments. Traditional and digital methodologies will be applied. The last ones include a three-level approach with i) aerial Photogrammetry and Laser Scanning, for a wider portion of the territory; ii) terrestrial Photogrammetry and Laser Scanning, for built structures; iii) georadar surveys for underground hydraulic systems.

The selected case study is the convent of Nossa Senhora da Saudação, located in Montemor-o-Novo, in Alentejo region (south of Portugal).



This area will allow the application of an interdisciplinary approach, joining:

- medieval history and architecture (IEM-NOVA FCSH Portugal);
- landscape and ecology (University of Évora Portugal);
- architectural heritage (Politecnico di Torino);
- engineering and computer science (Università di Pavia Italy);
- archaeology and digital humanities (The Cyprus Institue Cyprus).

Students will be invited to contribute to the development of contents for its interpretation.

### **Recipients**

Bachelor, Master, Postgraduate degrees and PhD students, in the disciplinary areas of of history, history of art, architecture, landscape architecture, archaeology, geography, engineering and cultural heritage, who are interested in obtaining fundamental knowledge and skills in digital survey methodologies applied to landscape scales.

Maximum number of participants: 30

Students attending the B.I.P. will have the unique opportunity to experience an integrated, interdisciplinary, and international formation.

### When

Online distance learning sessions will be held in September 2024:

- 8 hours before the on-site activities, in order to provide an introduction to the topics for the working sessions;
- 40 hours of face-to-face activities are foreseen, in Lisbon and Montemor-o-Novo, from September 16th to 20st, 2024.

### What and Why?

The three main questions of the school and actions are:

Q1. To understand the diachronical evolution of the built structures through the constructive systems, focusing on the first floor. This include: the church, the cloister, the conventual dependencies around it (kitchen, refectory, chapter room, primitive cells) and the enclosure;

Q2. To unveil the network made of the hydraulic system: mostly underground structures of collection

and distribution of water. Moreover, its connection with the hydric component of the landscape will be delved in-depth, focusing on natural springs, as well as the stream at the foot of the hill;

Q3. To analyse the vegetation system within the different enclosures of the convent, until the area of the stream, in order to develop a diachronical analysis.

### How?

For each one of these questions, the following approaches will be carried out:

1. Documental analysis: parchments, historical cartographies, aerial pictures from the mid-20th century, previous historical studies on the same area, previous surveys of the structures (these will be previously translated and provided to the participants);

2. Production of unprecedented documentation through traditional and 3D digital surveys. Q1. terrestrial and aerial laser scanning and photogrammetry will be used together with drawing by hands. Q2. geo-radar and terrestrial photogrammetry. Q3. terrestrial and aerial laser scanning and photogrammetry will be used together with walkover surveys.

3. Integration and interpretation of data. Q1. Develop a stratigraphic analysis of the buildings through the constructive systems. Q2. 2D and 3D reconstruction of water flows. Q3. Map of the vegetation.

All these data can be collected, for each group, within ArcGIS StoryMaps, focusing on the specific topic: built, water and vegetation systems.

## **Date of realization**

2nd, 9th, 16th-20th of September of 2024

# **Schedule**

2nd September 2024 (9.00-13.00 | online) | 4 hours

Traditional Approaches for Landscape, Architecture and Heritage

9th September 2024 (9.00-13.00 | online) | 4 hours

• Digital Approaches for Landscape, Architecture and Heritage

16th-20st September 2024 (on-site | Montemor-o-Novo) | 40 hours

• Masterclasses, data collection, analysis and interpretation

# **International Partners and Teachers**

Instituto de Estudos Medievais, NOVA FCSH (Portugal)

Disciplinary field: Medieval History and Architecture

University of Évora (Portugal)

Disciplinary field: Landscape and Ecology

Politecnico di Torino (Italy)

Disciplinary field: Architectural heritage / preservation and restoration guidelines

# University of Pavia (Italy)

Disciplinary field: Engineering and Computer Science

### The Cyprus Institute (Cyprus)

• Disciplinary field: Archaeology and Digital Humanities

# **Credits**

The program will deliver 3 credits ECTS to recognize participation in the activities.

### Coordination

Rolando Volzone I IEM, NOVA FCSH (Portugal)

# **Organising Committee**

João Luís Fontes I IEM, NOVA FCSH (Portugal) Raffaella De Marco I University of Pavia (Italy) Francesca Picchio I University of Pavia (Italy) Francesco Novelli | Politecnico di Torino (Italy) Nikolas Bakirtzis | The Cyprus Institute (Cyprus) Aurora Carapinha l Universidade de Évora (Portugal)



# 02.09.2024 (Online - Central European Time)

https://videoconf-colibri.zoom.us/j/91868460020pwd=S0WMtpR3HYZW1W11QF5bbB5Nbakpya.1

9h00 - 9h30 Introduction to the course and presentation of the participants Catarina Tente, João Luís Fontes, Rolando Volzone I IEM, NOVA FCSH (Portugal)

9h30 - 10h00 From monasticism to mendicant experiences: forms and landscapes of religious life in medieval Europe João Luís Fontes I IEM, NOVA FCSH (Portugal)

10h00 - 10h30 Sacred Landscape in South of Portugal Aurora Carapinha | CHAIA, UÉvora (Portugal)

10h30 - 11h00 Toward the Reconstruction of Sacred Medieval Spatialities in South of Portugal Rolando Volzone I IEM, NOVA FCSH (Portugal)

11h00 - 11h30 **Multidisciplinary Approaches to the Monastic Landscapes of the Troodos Mountains in Cyprus** Nikolas Bakirtzis | The Cyprus Institute – STARC APACLabs (Cyprus)

11h30 - 12h00

Unveiling spatial perception and interaction on religious buildings through graffiti: Cyprus as a case

study

Mia Trentin | The Cyprus Institute – STARC APACLabs (Cyprus)

12h00 - 12h30

Monastic Hydraulic Systems in the Iberian Peninsula. The Infrastructure of Cistercian Nunneries inside the Inner Court

Ester Penas González I Real Asociación de Hidalgos de España - Archivo Histórico Nacional (Spain)

12h30 - 13h00 **Multiscale digital strategies for documentation of religious Cultural Heritage complexes** Francesca Picchio I University of Pavia, DICAr Department of Civil Engineering and Architecture, DAda-LAB (Italy)

# 09.09.2024 (Online - Central European Time)

https://videoconf-colibri.zoom.us/j/91868460020pwd=S0WMtpR3HYZW1W11QF5bbB5Nbakpya.1

9h00 - 9h10 Introduction to the day of study Rolando Volzone I IEM, NOVA FCSH (Portugal)

9h10 - 9h30 **Documentation of cultural heritage: metric and non-metric data integration** Fulvio Rinaudo I DAD – Politecnico di Torino; President of ICOMOS ISC CIPA-HD (Italy)

9h30 - 9h50 Sustainable preservation experiences of underused religious architectural heritage: the case of Santa Chiara in Turin Francesco Novelli | DAD – Politecnico di Torino (Italy)

9h50 - 10h10 The birth of the humanistic monastic landscape, 15th century Gianmario Guidarelli I University of Padua – DICEA (Italy)

10h10 - 10h30

Spatial Innovation in Monastery Studies: GIS, Spatial Databases, and Interactive Maps Maria Soler, Marc Ferrer I Universitat de Barcelona (Spain)

Masterclasses on digital methodologies applied to natural and cultural heritage

10h30 - 11h20

Strategies of Digital Survey for Architectural Heritage and Landscape: objectives and applied methods

Raffaella de Marco, Silvia La Placa and Francesca Galasso I University of Pavia, DICAr Department of Civil Engineering and Architecture, DAda-LAB (Italy)

11h20 - 12h10

Application of geophysics for the archaeological reconstruction of buried structures Bento Caldeira, Pedro Trapero Fernández and Rui Oliveira I University of Evora (Portugal)

12h10 - 12h50

Developing a semantic framework for management, preservation and conservation of heritage at risk: the case of the UNESCO site of Agios Ioannis Lampadistis Monastery, Cyprus Valentina Vassallo I The Cyprus Institute – STARC APACLabs (Cyprus)

12h50 - 13h00 Final Questions and Planning of the next activities João Luís Fontes (Institute of Medieval Studies – NOVA FCSH, Portugal)

# From monasticism to mendicant experiences: forms and landscapes of religious life in medieval Europe

From an early stage, Christianity integrated the search for solitude and escape from the world as a way of seeking religious perfection, conversion and living the evangelical ideal. From eremitical experiences to the emergence of community forms, structured by their own normative texts, monasticism became an increasingly present form of religious life in a world that was increasingly changing, both in the East and in the West. It was associated with the first community experiences lived by clerics dedicated to pastoral work, which would gain new impetus at the beginning of the second millennium, along with new movements of religious renewal. From the 13th century onwards, the mendicants opened up a new space of synthesis, open to the world and geared towards meeting the challenges of the flourishing urban world. Alongside them, other forms of less organised religious life were multiplied, both in remote areas and within towns and cities: from voluntary seclusion to small communities that followed a poor and austere lifestyle. Monasteries, convents, hermitages, cells or inmates' houses, small beateries or places of poor life: they all reveal their own logics of implantation but also their own understanding of the spaces in which they are rooted and that, often, transformed. This is the itinerary we will propose, starting with some concrete examples, as a gateway to a complex but certainly fascinating universe.

### Biography

Assistant Professor in Medieval History at the Faculty of Social Sciences and Humanities of the New University of Lisbon, where he made his PhD with a dissertation entitled "From "Poor Life" to the Religious Congregation of Serra de Ossa. Genesis and institutionalisation of an eremitic experience (1366-1510)". Researcher and Deputy-Director of the Institute for Medieval Studies of the same Faculty, and also a member of the Centre for Religious History Studies of the Catholic University of Portugal. He's also deputy-director of the IEM's ejournal Medievalista.

Between 2013 and 2019, he was a post-doctoral fellow by the Foundation for Science and Technology, with the project "The desert in the city: women's religious experiences in Portugal in the late Middle Ages (1350-1525)". His current research interests are Eremitism, Lay Spirituality, Hagiographic Literature, Courtly and Noble Culture and Piety, Social Elites, Geography and Heritage of Religious Institutions, Rituals and Liturgical Worship, History of Spirituality, History of Women.

More information in https://www.cienciavitae.pt/portal/9D1F-EF62-93F2.



# Aurora Carapinha (CHAIA – University of Évora, Portugal)

# Sacred Landscape in South of Portugal

The lecture delves into the intricate relationship between monastic heritage and the sacred landscape of the Alentejo region in southern Portugal. The landscape here is a dynamic entity, composed of terrain, vegetation, and water, embodying vital energy and the cosmos as understood in the Aristotelian sense. It is not merely a backdrop for human activity but a binding agent between the physical space (topus) and the sense of place (locus). We begin by exploring the ethereal components of the landscape as defined by Nuno Mendonça and the poetics of Gaston Bachelard, examining how these elements create spaces for prayer, meditation, and withdrawal from profane time. This section highlights how certain physical attributes of the landscape foster spiritual experiences and contribute to the emergence of a sacred landscape. The talk then shifts focus to the influence of religious orders in shaping the landscape empathetically

### **Biography**

Aurora Carapinha is a Landscape Architect, and has Professor at the University of Évora, Coordinator of the PhD programme "Landscape Architecture", visitor Professor and lecturer in several MSc degrees and PhD programmes in Portugal and Brazil until mid-2024.

Due to the her extensive background in the teaching area, she has been the Principal Investigator of the Portuguese team of the project Launching Innovation-Based Landscape Architecture Training Framework in Europe (InnoLAND). She is, currently, Vice President of the Research Centre for Art History and Artistic Research (CHAIA).



Aurora Carapinha is an acknowledged expert in the field of cultural landscape, investigating its aesthetic, ecological and cultural components and values, particularly in the Alentejo region (Southern Portugal). Within this research line she authored several books, book chapters and original articles in national and international journals and she supervised numerous MSc students and PhD thesis on this topic. She published several articles in international journals, and participated in numerous national and international conferences. She has been also the previous director of the Directorate of the Regional Culture of Alentejo.

# Rolando Volzone (Institute of Medieval Studies – NOVA FCSH, Portugal)

# Toward the Reconstruction of Sacred Medieval Spatialities in South of Portugal

In this lecture, we will delve into the sacred landscapes of southern Portugal, focusing on how religious communities appropriated and managed their surroundings. Centuries of spatial transformation have rendered material evidence scarce, making it challenging to understand the original structure of these landscapes. However, by strategically examining historical documents, we can uncover their historical and ecological significance. We will begin with an overview of the interaction between religious communities and the existing landscape, discussing how they transformed or adapted to their surroundings to create unique spiritual environments. The history of this landscape construction will be explored by analyzing historical documents to gather relevant data. Moreover, on-site surveys with traditional and digital technologies, have been carried out. Through detailed analysis and interpretation of this material data, we aim to delineate the structure of these landscape humanization and construction, providing deeper insights into how religious communities shaped and were shaped by their natural surroundings.

### Biography

Rolando Volzone is an architect, working on building rehabilitation, integrated researcher at Institute of Medieval Studies (NOVA-FCSH) and assistant researcher at DINÂMIA'CET-Iscte, focusing on religious heritage in Southern Europe, through interdisciplinary studies, by combining Medieval, Modern and Contemporary History, Landscape Architecture, Architecture, Computer Sciences and Public Policies.



Since 2022, he has been Assistant Professor and lecturer at Master degrees and PhD programs in Portugal and Italy. He is the coordination of the international conferences "Architectures of the Soul", since 2017. In 2020 he joined the national project "CONVEMOS" and the European project "F-ATLAS", led by the Università degli Studi di Firenze. Currently he is principal investigator of the project transHERITAGE. He is member of ICOMOS Portugal and integrated into two International Scientific Committees, PRERICO and CIPA Heritage Documentation, as well as member of the Scientific Board of the network Future for Religious Heritage (FRH). More recently, he Actions ("MARGISTAR" joined two COST and "Underground4Value").

He authored several publications, edited two international books, and he has been reviewer of indexed scientific articles. Moreover, he attended numerous national and international conferences.

# Multidisciplinary Approaches to the Monastic Landscapes of the Troodos Mountains in Cyprus

Responding to the theme of the BIP program, this presentation will provide a comparative view to another monastic landscape, namely a look at selected examples of Byzantine and Medieval monasteries on Mount Troodos in the island of Cyprus. This will also offer the opportunity to briefly present aspects of the interdisciplinary science and technology methodologies applied by the Cyprus Institute and its Andreas Pittas Art Characterization Laboratories (APAC Labs). Probably the most important body of material we have been studying is a group of ten medieval churches inscribed in UNESCO's list of World Heritage. Known as the "Painted Churches of the Troodos Region", they feature amazing murals effectively offering an overview of Byzantine and post-Byzantine painting in Cyprus, roughly from the 11th through the beginnings of the 16th century. Most of them originally served as the katholika of rural monasteries with their frescoes being highlighted as outstanding examples of the artistic exchanges between East and West - directly mirroring the position and role of Cyprus as a hub of cultural and socioeconomic interconnections in the Medieval and Crusader Mediterranean. Spread around the Troodos, the study of these churches carries significance for the history of Cyprus beyond their art historical value, as they constitute the earliest surviving structures of the mountainous region. What the description included in UNESCO's listing also highlights, is that all ten churches are 'living monuments' - since they continue to be used as places of cult and pilgrimage.

### **Biography**

Nikolas Bakirtzis is Associate Professor at The Cyprus Institute in Nicosia.

His research and publications focus on byzantine monasticism, medieval cities and fortifications, and, the island landscapes of the Byzantine, Medieval and Early Modern Mediterranean. More recently his work explores issues of heritage and cultural identity in historic cities.

As the Director of the Andreas Pittas Art Characterization Labs at the Cyprus Institute, he is also leading research on the history, the materiality and the provenance of medieval and early modern works of art enhanced through advanced digital and analytical methods. His awards and fellowships include among others support from the European Commission, the Cyprus Research and Innovation Foundation, the Princeton Seeger Center for Hellenic Studies, the A.G. Leventis Foundation, the Getty Research Institute in Los Angeles and the Center for Advanced Studies "Migration and Mobility in Late Antiquity and the Early Middle Ages" at the University of Tübingen.



Mia Trentin (The Cyprus Institute – STARC APACLabs, Cyprus)

# Unveiling spatial perception and interaction on religious buildings through graffiti: Cyprus as a case study

In recent decades, the study of historic graffiti has become more prevalent across Europe and beyond. This demonstrates that this phenomenon was as widespread in the past as it is in our cities today, giving insight into the perspectives of common people and offering a unique bottom-up approach to traditional views on historic urban and built environments. The signs and marks scratched and traced on walls represent an underexplored visual archive, recording people's interactions with sacred spaces and shedding light on everyday life and practices not documented by other sources. The religious heritage of Cyprus will serve as a case study to illustrate how to approach the graffiti heritage and optimize their potential as a graphic source, revealing stories and practices from the past.

### **Biography**

Mia Gaia Trentin is an archaeologist and historian working in digital humanities.

She is a fellow of the Society of Antiquaries of London (FSA). She has an interdisciplinary curriculum, including Archaeology (BA), Cultural Heritage Studies (MA), and Social History (PhD), with a thesis on Medieval Graffiti along the northern Italian pilgrimage routes. She investigates Medieval and Early Modern written culture in all its aspects, from traditional historical study and source editing to epigraphy. Her expertise is in informal written communication—graffiti—with a particular focus on written and visual expression to recover past people's practices, attitudes, and approaches to their surrounding natural and anthropic space.



She led the GRAFMEDIA (GRAFfiti Mediterranean DIALogue 2020-2021), and DIGIGRAF (DIGIzing GRAFfiti, 2022-2023) projects to study the visual communication across the Eastern Mediterranean while defining a dedicated methodology for the study of historic graffiti. She is also engaged in EU project consortia, aiming to promote Cypriot graffiti within the academic community, education, and valorisation through community involvement and citizen science.

# Ester Penas González (Real Asociación de Hidalgos de España - Archivo Histórico Nacional, Spain)

# Monastic Hydraulic Systems in the Iberian Peninsula. The Infrastructure of Cistercian Nunneries inside the Inner Court

The use of water imprinted materiality on the cloister building that was reflected in many structures, sometimes unnoticed, but vital for the habitability of the monastery and the proper daily functioning of the activities that took place in it. In this conference, the hydraulic system of the Cistercian nunneries will be analyzed in its context, taking into account the parts that make it up, the rooms it supplied, and the visible hydraulic structures. Each monastery had to have drinking water and non-drinking water, which reached the cloister building in two separate circuits: the internal and external hydraulic system. Each house, within a pattern established on a common need, always sought unique solutions based on its topography, natural resources and architectural history. All of this had its role in the monastery and was integrated into a general dynamic within the building. Examples of Castilian female monasteries will be presented, comparing them with the surrounding male ones, since there were particularities in both branches of the Order conditioned by the community's gender, which were deeply reflected in the architecture.

### **Biography**

Ester Penas González has a degree in Archeology (2016), a Master in Medieval Studies (2017) at the Complutense University of Madrid, and a PhD in Archeology at the Autónoma University of Madrid (2023).



She has been a collaboration scholarship in the Department of Archeology of the UCM, an FPU professor at the Department of Prehistory and Archeology of the UAM, a predoctoral researcher at the Juanelo Turriano Foundation and a postdoctoral researcher at the Museum of History of Madrid. She has received the Extraordinary Degree Award (UCM) and a 3rd National End of Degree Award (Ministry of Universities).

She has a research contract at the National Historical Archive through the Royal Association of Hidalgos of Spain. She is a member of the MUNARQAS Project and the Archaeonat Research Group of the UAM. Her lines of research are the History and Archeology of female Cistercian monasticism in Castile and medieval and modern hydraulics.

# Francesca Picchio (University of Pavia, DICAr Department of Civil Engineering and Architecture, DAda-LAB, Italy)

# Multi-scale digital strategies for documentation of religious Cultural Heritage complexes

Each analysis system for documenting the monument is developed according to integrated survey strategies, considering a multi-scale approach, even more important in the case of religious cultural heritage complexes. These strategies allow for detailed examination of morphological aspects, constructive elements, and decorative details, providing multiple levels of in-depth analysis of the digitized asset, from the general scale to sculptural specifics. The ability to analyze, control, and manage data produced by these activities advances within digital documentation processes of the architectural systems of the Charterhouses. The experimentation on the Chartreuse of Pavia aimed to establish geometric and spatial knowledge of the complex, organized within an updatable digital database. This database serves as a knowledge base, providing necessary data for investigations and processing, including potential restoration work. Conducted by the DAda LAB of the University of Pavia, the documentation project seeks to deepen the analysis of the complex from the architectural scale down to the detailed stone sculptural apparatuses. The goal is to create an up-to-date, implementable database that can provide useful information for a comprehensive understanding of the typological and formal characteristics of Carthusian architecture, serving as parameters for comparative research.

### Biography

Associate Professor in the academic discipline of Representation of Architecture at the Department of Civil Engineering and Architecture of the University of Pavia.

She got her Ph.D. in Architecture, and since 2023 she has been the scientific responsible for research projects promoted by the DAda Lab of the University of Pavia. She has participated in national and international research projects, including two European projects, coordinating documentation activities in the historical centre of Samara (Russia), in Central America (Panama), and in Middle East territories (Iran, Israel, Palestine).

She is involved in architectural and urban documentation projects aimed at enhancing architectural and landscape heritage by developing virtual fruition and digital database management systems.



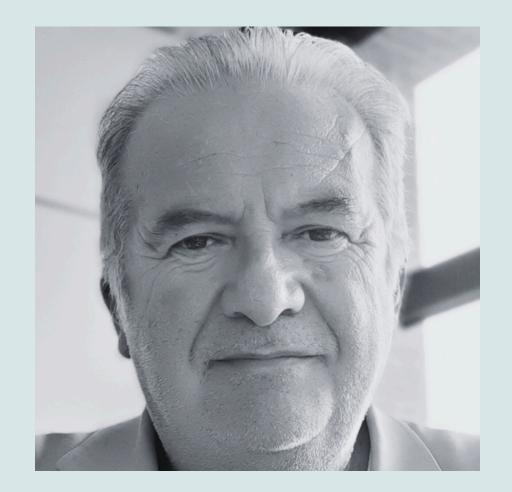
# Fulvio Rinaudo (DAD – Politecnico di Torino, Italy; President of ICOMOS ISC CIPA-HD)

# Documentation of cultural heritage: metric and non-metric data integration

The thorough documentation of Cultural Heritage provides the essential foundation for informed decision-making in the realm of conservation, restoration, valorisation, management, and understanding of cultural assets. In our contemporary digital age, we have the remarkable opportunity to access an array of data in digital format, stemming from various disciplines such as physical property measurements, personal observations, historical archives, and documents of diverse nature including written texts, photographs, videos, and interviews. Demonstrably, accurate georeferencing of this wealth of information enables a more profound interpretation and establishes connections among seemingly disparate pieces of data, thus facilitating a comprehensive understanding of historical and structural phenomena related to the examined asset. The prevalent digitization of textual documents further enables the seamless integration of data derived from the study of historical archives into the pool of valuable information essential for offering complete documentation of a cultural asset. It is important to note that this seamless integration is attainable when standard quality certification activities are embraced, accompanied by the conversion of data into formats harmonious with sharing platforms such as databases.

### **Biography**

Dr. Fulvio Rinaudo is a Full Professor in Geomatics at Politecnico



di Torino, Department of Architecture & Design.

From 2021 to 2024, he served as Vice-Rector for Teaching and Scientific Activities at Turin Tashkent Polytechnic University in Uzbekistan. He is a member of the Academic Board of the Ph.D. School "Architectural and Landscape Heritage" at Politecnico di Torino and coordinated the National Scientific Committees of ICOMOS Italia (2020-2022). Dr. Rinaudo also held the position of General Secretary of the ICOMOS Italia Committee (2020-2022) and ICOMOS ISC CIPA-HD (2020-2023). Currently, he co-chairs the ISPRS WGII/6 "Cultural Heritage Data Acquisition and Processing" (2023-2026) and will preside over ICOMOS ISC CIPA-HD (2024-2027).

He coordinated the ERASMUS+ project "Environmental Risk Assessment and Mitigation on Cultural Heritage Assets in Central Asia (ERAMCA)" from 2020 to 2024. With over 320 scientific publications (SCOPUS h-index of 19), his research includes innovative solutions in photogrammetry, laser scanning, GIS for cultural heritage, and AI applications in cultural heritage documentation. His work also covers HBIM, multi-spectral and geophysical analysis, and video photogrammetry for historical architecture, significantly contributing to Digital Humanities and Urban History. Francesco Novelli (DAD – Politecnico di Torino, Italy)

# Sustainable preservation experiences of underused religious architectural heritage: the case of Santa Chiara in Turin

The contribution presented introduces the complex topic of the search for new functions for abandoned or under-used religious architectural heritage. Through teaching experiences and actual case studies, state of the art in Italy is outlined: the activities and initiatives promoted by the CEI and the Italian Dioceses, often with the contribution of banking foundations and local authorities, constitute a wide range of case studies, highlighting the richness and complexity of the topic, very topical today. The restoration of the former convent complex of Santa Chiara in Turin (Italy) represents a case study of good practices on which to develop the themes presented and start a debate in the international context.

### **Biography**

Francesco Novelli, architect, Ph.D., a specialist in History, Analysis, and Evaluation of Architectural and Environmental Heritage, architect, is an Associate Professor in Architectural Restoration at the DAD Department of Architecture and Design of the Polytechnic of Turin (Italy), where he teaches as a professor in theoretical courses and design workshops in Architecture degree courses.

He carries out research and is the author of monographs and scientific essays on the restoration of architectural heritage, the protection and conservation of religious and fortified architectural heritage, and the reuse and enhancement project in complex restoration interventions.



He has designed and directed numerous restoration interventions.

# Gianmario Guidarelli (University of Padua – DICEA, Italy)

# The birth of the humanistic monastic landscape, 15th century

The lecture aims to investigate a moment in the history of monastic architecture in which a "microlandscape", limited to the cloister walls, is added (in some cases replaced) by the adoption of a form of aestheticized territory, external to the monastery, which is inspired by a humanistic concept of landscape. The field of study is in particular the new concept of monastic landscape developed in the Benedictine Congregation of Santa Giustina (later Cassinese) in the second half of the 15th century, starting from the adoption (made mandatory by the General Chapters) of the monastic cell in the reconstruction of monasteries. The cell becomes the privileged place of individual prayer and meditation; consequently the architecture of the monastery will be reorganized based on this double principle: multiplication of individual prayer spaces and orientation of the main architectural axes with respect to the elements of the landscape.

### Biography

Gianmario Guidarelli is Assistant Professor (with tenure track) in Architectural History at the University of Padua (Department of Civil, Environmental and Architectural Engineering).

He took his undergraduate degree in architecture in Università luav di Venezia and he obtained a PhD in Architectural History (School for Advanced Studies Venice – Ca' Foscari&IUAV) in 2006. He has done research and taught at the Duke University (Department of Art and Art History, 2005, 2010), the Università luav di Venezia (2008-2009, 2013-2015), the University of Verona (2017-2020), the Venice International University (2020) and the Facoltà Teologica del Triveneto (2017-today). He is the director of the project "Chiese di prospettive Venezia, ricerca" di nuove (www.chiesedivenezia.eu), and co-director of the projects "Armonie composte. Ciclo di seminari sul paesaggio monastico" (with Elena Svalduz; www.armoniecomposte.org) and "Medieval city. City of the friars" (with Silvia Beltramo; www.friarscity.eu). He is P.I of the project PRIN 2022 "CoenoBI(u)M. Art and architecture of the Cassinese Benedictine Congregation (XV-XVIII centuries): digital and spatial analysis strategies through BIM models." (2023-2025). He has published the books "Una giogia ligata in piombo". La fabbrica della Scuola Grande di San Rocco 1517-1560 (Helvetia, Venice 2003) and "I patriarchi di Venezia e l'architettura. La cattedrale di San Pietro di Castello nel Rinascimento" (IUAV-II Poligrafo, Padova 2015).



He's the joint author (with Marsel Grosso) of "Tintoretto and Architecture" (Marsilio, Venice 2019). His other publications include height edited volumes and numerous articles on the urban and architectural history of Venice and religious Italian architecture in the in the Renaissance, on monastic architecture and landscape.

# Maria Soler Sala (Universitat de Barcelona) and Marc Ferrer (MAHPA, Universitat de Barcelona, Spain)

Spatial Innovation in Monastery Studies: GIS, Spatial Databases, and Interactive Maps

The use of digital technologies for the study and dissemination of cultural heritage is a valuable resource, and projects such as Claustra F-Atlas or Freilas have demonstrated the potential of these technologies for the study of monasteries and their heritage. Historical research remains the main objective, but the use of three digital tools, such as Spatial Databases, Geographic Information Systems (GIS) and Web Mapping, offers new possibilities in our research. Spatial databases provide a structured means of organising information and facilitate data entry by multiple users. Geographic Information Systems (GIS) allow thematic mapping and the testing of research hypotheses, using methods such as Site Catchment Analysis to analyse the natural resources of the surrounding area and communication with other sites, or Viewshed Analysis to study the visual strategy of monasteries as symbols of power. The use of interactive web maps is a key component in the dissemination of research results, facilitating the accessibility to a wide audience. Consequently, the integration of these tools establishes an effective model for interdisciplinary research and cultural dissemination within the digital humanities.

### Biography | Maria Soler

Maria Soler is Associate Professor in Medieval History and Archaeology at the University of Barcelona, and specialises in the study of medieval monastic landscapes. She is the PI of a EU-funded project (F-Atlas: Franciscan Landscapes 2020-2023, JPI Cultural Heritage), one national research project (Freilas 2023-2027) and two regional projects (Castells, monestirs I palaus 2018-2021 and Prioresses, senyors i prínceps 2022-2025), in which she has led large interdisciplinary research teams working in the field of Digital Humanities. She is also director of the archaeological excavations taking place at the site of the former nunnery of Santa Maria d'Alguaire, a site with enormous potential to challenge our current understanding of the role of women within the military order of Saint John and more generally about female monasticism and the political-spiritual agency of medieval women. She is a pioneer in the application of digital mapping methodologies, spatial analysis and GIS to the study of spiritual landscapes, to which she has contributed through the publication of numerous articles in high-impact journals and in book chapters for prestigious publishers. She has supervised 4 doctoral dissertations, all of them dealing with the territorialisation of the monastic phenomenon and the use of geospatial analysis tools.



### **Biography | Marc Ferrer**

Marc Ferrer holds a Ph.D. in Medieval History from the University of Barcelona (2019), where his thesis focused on the application of spatial analysis methods and GIS in the study of the early Middle Ages. He has participated as a researcher and team member in numerous national and European research projects, with a focus on historical and cultural heritage research. His research career has focused on the study of medieval territory and landscape, as well as digital humanities. His professional experience includes functions as a computer technician and secondary school teacher, as well as research technician and associate professor at the University of Barcelona since 2021.



# Raffaella de Marco, Silvia La Placa and Francesca Galasso (University of Pavia, DICAr Department of Civil Engineering and Architecture, DAda-LAB, Italy)

# Strategies of Digital Survey for Architectural Heritage and Landscape: objectives and applied methods

The action of documenting the landscape takes into consideration objectives of locating and mapping different scales of artefacts. The anthropic and natural system of the landscape stands as a particular morphological apparatus, furthermore it characterises itself as a collector of elements and micro-systems derived from an architectural action. From this co-presence and integration of elements and systems, comes the exigence to plan documentation strategies that can collect data at the double scale and enhance the properties of relationship, connection, topography and genius loci coexisting between Architectural Heritage and the more proper Landscape. The lecture presents case studies developed in national and international contexts, where the digital survey action is applied to complex systems of architectures and landscape for a combined valorisation. Architectural heritage typologies, such as villas, vernacular elements and water-hydraulic systems, are analysed in close relation to the landscape context that hosts them, and that helps to define morphologies and routes at the centre of narrative, valorisation and mapping objectives. Diversified digital survey tools and methodologies (3D photogrammetry from drones, 360° cameras and mobile LiDAR applications) are presented in the perspective of optimising data acquisition processes and analyses. The aim of the lecture is to transmit knowledge and goals useful for planning landscape documentation actions, taking into account the different instrumental and strategic implications and the achievable outputs.

### Biography | Raffaella De Marco

Raffaella De Marco is a Ph.D., Engineer and Architect, MSCA Research Fellow at DICAr Department of Civil Engineering and Architecture of University of Pavia (Italy), collaborating at DAda-LAB. Young member of Europa Nostra Network and ESACH Member.

Her research deals with the development of databases and reality-based models on Cultural and Endangered Heritage for conservation, valorisation and management protocols, following international policy requirements. Collaborating in international research missions on UNESCO sites for rangebased and photogrammetric documentation at architectural and urban scale. Her research activities focus on the definition of 3D digital databases, structural and urban models and the elaboration of Informative Management systems. Early-Stage Researcher in the EU project Horizon2020 Marie Skłodowska-Curie Actions (MSCA) Research and Innovation Staff Exchange (RISE) H2020-MSCA-RISE-2018, "PROMETHEUS".

Since 2022, she is Marie Skłodowska-Curie Action Fellow and Principal Investigator in the project "MOEBHIOS – Multiattribute values' OntologiEs to improve Built Heritage InformatiOn assessment in cluStered territories", for the development of an advanced digital mapping protocol for the architectural, archaeological, social and economic parameterisation and valorisation of cultural clusters.



### **Biography | Francesca Galasso**

Francesca Galasso is PhD in Design, Modelling and Simulation in Engineering and Research Fellow at the Department of Civil Engineering, University of Pavia on modelling procedures for the creation of virtual environments functional to the valorisation of historical architectural heritage.

Since 2014 she has been participating in national and international research projects for architectural documentation with digital representation systems, using digital technologies for structuring databases and 3D models suitable for augmented fruition scenarios.

Since 2016 she has been actively collaborating within the DAda LAB research laboratory and has been involved in experimental research projects on three-dimensional geometric modelling systems for extensive documentation from the architectural scale to the urban sphere. In particular, she is involved in the development of compatibility protocols and implementation of digital models in immersive and augmented virtual scenarios for information and dissemination purposes.

### Biography | Silvia La Placa

Silvia La Placa is PhD in Design, Modeling and Simulation in Engineering and research fellow at DICAr, Department of Civil Engineering and Architecture, University of Pavia on the topic "Development of Historical Heritage Databases and Models".

She has carried out research activities in the field of





documentation of the architectural landscape heritage, dealing with the census of architectural and territorial contexts and the processing of digital databases. Since April 2019, she has been collaborating with the DAda-LAB, Drawing and Architecture DocumentAction, didactic experimental research laboratory of the DICAr of the University of Pavia, actively participating in national and international scientific research projects.

As a young researcher at the University of Pavia she is involved in European Projects on the development of strategies for the documentation, digitisation and valorisation of Cultural Heritage, dealing in particular with the production of documentary corpuses and digital archives and the study of management systems at the architectural and landscape scale. Bento Caldeira (Institute of Earth Sciences, Center for Sci-Tech Research in EArth sysTem and Energy, Physics Department & Earth and Remote Sensing Laboratory, University of Evora, Portugal), Pedro Trapero Fernández (Área de Historia Antigua, Departamento de Historia, Geografía y Filosofía, Universidad de Cádiz, Spain) and Rui Oliveira (Institute of Earth Sciences, Center for Sci-Tech Research in EArth sysTem and Energy, Physics Department & Earth and Remote Sensing Laboratory, University of Evora, **Portugal**)

# Application of geophysics for the archaeological reconstruction of buried structures

Applied geophysics plays an important role in the study of an archaeological site due to its non-invasive and non-destructive nature. The application of methods such as ground-penetrating radar (GPR) allows the study of surface content to detect structures such as walls and sidewalks. If applied over a large area, it allows the mapping of structures, which can play a fundamental role in the delimitation and protection of the archaeological site. It can also be applied to the study of heritage to identify structural pathologies, such as fractures. The magnetic method can also be used, which allows the detection of wall-type structures, objects with baked clay (bricks), places of combustion (fires and ovens) and metallic objects. The combination of geophysical and geospatial methods allows obtaining 3D content, from the surface to the detection limit of the methods used. This talk aims to introduce geophysical methods applied in Archaeology and demonstrate some case studies.

### **Biography | Bento Caldeira**

Bento Caldeira, with a degree and PhD in Physics, is a professor in the Department of Physics at the University of Évora and a researcher at the Institute of Earth Sciences.

His scientific work focuses on seismology and internal geophysics, including areas such as seismic source analysis and rupture process modeling, seismicity and seismotectonics, lithospheric structure and seismic tomography, and the inversion and modeling of seismic and geodetic data (InSAR and GPS). He also specializes in seismic instrumentation and the development of seismic networks. Additionally, his research extends to applied geophysics, particularly in the exploration of natural resources and archaeological remains.

Over the past decade, he has participated in or led more than 25 national and international research projects. He also mentors undergraduate, master's, and doctoral students within his fields of expertise.



### **Biography | Pedro Trapero Fernández**

Pedro Trapero Fernández is a Margarita Salas postdoctoral researcher at the University of Cádiz.

He specializes in the study of the past, particularly ancient times and archaeology, applying technologies such as Geographic Information Systems, remote sensing, and applied geophysics. He is a member of the Heritage Geodetection Unit at the University of Cádiz and a collaborator at the Earth Sciences Institute, Earth Remote Sensing Laboratory – EaRSLab.

His research focuses on the study of ancient and contemporary spaces, both in Spain and Portugal, providing case studies on the Roman rural environment, methods for understanding spatial relationships through GIS, as well as agricultural and livestock production.



### Biography | Rui Oliveira

Doctor Rui Oliveira has a degree and master's degree in Geological Engineering from the University of Aveiro, having specialized in the field of Geological Resources.

In 2020 he completed his PhD in Earth and Space Sciences from the University of Évora, with a specialization in Geophysics applied to Archaeology.

He is member of the Earth Remote Sensing Laboratory -



EaRSLab, and the director of the Portuguese Association of Meteorology and Geophysics, and an integrated member of the Institute of Earth Sciences – Polo de Évora, where he has developed research and participated in several projects in the areas of Geophysics applied to Archeology and Geology, Seismology and Remote Sensing. Valentina Vassallo (The Cyprus Institute – STARC APACLabs, Cyprus)

Developing a semantic framework for management, preservation and conservation of heritage at risk: the case of the UNESCO site of Agios Ioannis Lampadistis Monastery,

Cyprus

The conservation and preservation of Cultural Heritage is at the heart of the European discussion. Recently, the debate has largely focused on heritage at risks, due to both anthropogenic and natural causes. Looting and illicit trafficking of cultural goods, the effects of climate change and natural events are some of the hazards affecting the integrity of our cultural heritage and need to be addressed with effective multidisciplinary solutions. All Cultural Heritage assets, whether under legal protection or not, are subject to such hazards and dynamics. The analysis of the state of the art in this field has revealed a gap in risk mapping and monitoring of cultural heritage with a holistic approach and a common, structured semantic framework. For this reason, within the interdisciplinary research activities of the Andreas Pittas Art Characterization Laboratories (APAC Labs) of the Cyprus Institute on the UNESCO World Heritage Medieval Churches of the Troodos Region (Cyprus), a standardised framework consisting of semantic tools such as metadata, ontologies and vocabularies - has been developed and applied to the site of the Agios Ioannis Lampadistis Monastery for data management, conservation and risk prevention of the monastic structure and its landscape. Such a solution, combined with other digital tools such as Heritage Building Information Modelling (HBIM), forms the basis for the development of data management and risk analysis systems in Cultural Heritage. The presentation will show

the development of this semantic framework and its combination with other digital tools applied to the Monastery of Agios Ioannis Lampadistis and its effectiveness in the management, preservation, conservation and valorization of the monastic landscape.

### Biography

Valentina Vassallo is a post-doctoral researcher at the Cyprus Institute (Cyprus).

She holds a dual Ph.D. in Science and Technology in Cultural Heritage at the Cyprus Institute (Cyprus) and in Classical Archaeology and Ancient History at Lund University (Sweden), focusing her research on the development of 3D approaches, based on geometric, analytical and semantic aspects, for the study and interpretation of archaeological assets.

Her research interests focus on the development of solutions for multidisciplinary data integration and the definition of a knowledge communication framework for data management and communication processes of 3D digital Cultural Heritage assets through new ways of reasoning with information technology, metadata and ontologies. In this context, Valentina's research currently focuses on the development and application of knowledge and semantic frameworks for heritage at risk, providing digital and multidisciplinary solutions.





# 15.09.2024 (Park Station of the Castle of Montemor-o-Novo – Portuguese Time)

# 16h30 - 18h00 Discovering Montemor-o-Novo: Selfie spot itinerary and guided tour in Montemor-o-Novo with the support of the municipality Carlos Carpetudo I Municipality of Montemor-o-Novo



# Meeting Point ► Park Station of the Castle of Montemor-o-Novo ▼38.64348257707463, -8.216433847666268

# **Practical info**

Arrival at Montemor-o-Novo on 15th of September with one of the following buses with the company **Rede Expressos.** 

Tickets available at: https://rede-expressos.pt/pt/horarios-bilhetes

Lisbon (Sete Rios: 38.7417158871595, -9.157101439555191) - Montemor-o-Novo | 8.00, 8.30, 10.30, 11.45, 14.00, 14.30, 15.00, 17.30, 18.30, 19.00, 20.00, 20.30, 22.30 Lisbon (Oriente: 38.768404819419345, -9.099945313664229) - Montemor-o-Novo | 15.00-16.05

# 16.09.2024 (Convento de Nossa Senhora da Saudação – Portuguese Time)

### ▼38.64256673019672, -8.215112272773213

8h30 Pick-up from the Hotel Rural da Ameira to the convent

9h00 - 10h00 The importance of historical records for the understanding of medieval monastic communities

Maria Filomena Andrade I U. Aberta; UCP – CEHR; IEM – NOVA FCSH (Portugal)

10h00 - 11h00 From the poor life to a Dominican community: back to the origins of the convent of Nossa Senhora da Saudação João Luís Fontes | IEM, NOVA FCSH (Portugal)

11h00 - 12h30 Visit to the convent of Nossa Senhora da Saudação Manuela Pereira, Gonçalo Lopes | Municipality of Montemor-o-Novo (Portugal)

12h30 - 13h15 Introduction to the work and division into groups (building, vegetation, water)

13h15 - 15h00 Lunch at the restaurant O Montado (offered by the organisation)

15h00 - 18h00 Group work (data collection)

18h00 Pick-up from the convent to the Hotel Rural da Ameira

20h30 - 21h30

Complimentary Supper (Soup, Bread and Dessert) for the guests of the Hotel Rural da Ameira

Only by appointment, until 19.00

# 17.09.2024 (Convento de Nossa Senhora da Saudação – Portuguese Time)

## ▼38.64256673019672, -8.215112272773213

8h30 Pick-up from the Hotel Rural da Ameira to the convent

09h00 - 13h15 Group work (data collection)

13h15 - 15h00 Lunch at the restaurant O Montado (offered by the organisation)

15h00 - 18h00 Group work (data collection and post-production)

18h00 Pick-up from the convent to the Hotel Rural da Ameira

20h30 - 21h30

Complimentary Supper (Soup, Bread and Dessert) for the guests of the Hotel Rural da Ameira

Only by appointment, until 19h00

# 18.09.2024 (Auditório da União de Freguesias de Nossa Senhora da Vila, Bispo e Silveiras – Portuguese Time)

▼38.643982063757704, -8.213133289982217

8h30 Pick-up from the Hotel Rural da Ameira to the auditorium

09h00 - 13h15 Group work (data analysis and interpretation)

13h15 - 15h00

Lunch at the restaurant O Montado (offered by the organisation)

15h00 - 18h00 Group work (data analysis and interpretation)

18h00 - 19h30

Guided tour to Telheiro da Encosta do Castelo (including Centro de Investigação cerâmica e Laboratório de Terra) and to the former convent of São Francisco, currently Oficina dos Conventos 19h30 - 20h30

Aperitif together in the convent (offered by the organisation)

20h30

Pick-up from Oficina dos Conventos to the Hotel Rural da Ameira (to be confirmed)

20h30 - 21h30

Complimentary Supper (Soup, Bread and Dessert) for the guests of the Hotel Rural da Ameira

Only by appointment, until 19h00

# 19.09.2024 (Auditório da União de Freguesias de Nossa Senhora da Vila, Bispo e Silveiras – Portuguese Time)

▼38.643982063757704, -8.213133289982217

8h30 Pick-up from the Hotel Rural da Ameira to the auditorium

**09h00 - 13h15** 

Group work (data analysis and interpretation)

13h15 - 15h00



Lunch at the restaurant O Montado (offered by the organisation)

15h00 - 18h00 Group work (towards the presentation)

18h00 Pick-up from the convent to the Hotel Rural da Ameira

20h30 - 21h30

Complimentary Supper (Soup, Bread and Dessert) for the guests of the Hotel Rural da Ameira

Only by appointment, until 19.00.

# 20.09.2024 (Auditório da União de Freguesias de Nossa Senhora da Vila, Bispo e Silveiras – Portuguese Time)

▼38.643982063757704, -8.213133289982217

9h30

Pick-up from the Hotel Rural da Ameira to the auditorium

10h30 - 12h30

Final presentations (30 minutes per group + 10 minutes of comments from the Professors)

12h30 - 13h15

Cerimony of distribution of the certificates to teachers and participants

13h15 - 15h00

Final Lunch at the restaurant O Montado (offered by the organisation)

**Practical info** 

Arrival at Lisbon on 20th of September with one of the following buses with the company Rede Expressos.

Tickets available at: https://rede-expressos.pt/pt/horarios-bilhetes

Montemor-o-Novo – Lisbon (Sete Rios: 38.768404819419345, -9.099945313664229) | 14.30, 15.30, 16.30, 18.00, 19.45, 20.00



1. Bus station 2. Oficinas do Convento 3. Convento de Nossa Senhora da Saudação 4. Restaurant "O Montado" 5. Hotel da Ameira

### Where to stay

 Hotel Rural da Ameira (https://hoteldaameira.pt/) - <u>reservas@hoteldaameira.pt, (+351) 266</u> 898 240

-Triple Room (North View) - 102 €; -Couple/Double Room - 74 €; -Single Rom - 42€

The prices shown are per night, including taxes and VAT

Includes:

- Complimentary Supper (Soup, Bread and Dessert) - from 8.30pm to 9.30pm (by appointment until 7pm)

- Breakfast (Free Buffet) - from 8.00 am to 10.00 am

PS. In this case, the municipality will offer a service of transportation at the beginning and at the end of the day, to and from the hotel to the venues of the activities

- São João de Deus (<u>https://www.grupocomercialsjdeus.pt/</u>) 266893104, 967 225 763
- Pensão Ferreira (j<u>oaquimestroia@portugalmail.pt</u>) 266892043
- Hotel Montemor | Monte Alentejano (<u>montealentejano@mail.telepac.pt</u>) 266899630
- Casa Semedo I 6 pax
- Monte do Cota | 8 pax
- Monte de St<sup>°</sup> Margarida | 10 pax

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