



NATIONAL TECHNICAL  
UNIVERSITY OF ATHENS

5th International Conference on  
**Transdisciplinary Multispectral  
Modelling and Cooperation  
for the Preservation of Cultural Heritage**  
Cultural heritage at the forefront of transformation

14-16 December 2026, Eugenides Foundation, Athens, Greece

Καινοτόμος, Διεπιστημονική, Ψηφιακή  
Διατήρηση της Πολιτιστικής Κληρονομιάς

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Το Εύλογον

«Model Interdisciplinary Development and Transfer of Know-how and Cooperation in the Restoration of Emblematic Monuments and Highlighting of Values of Christianity in Dialogue with Society»

The Evlogon, emblematic action, Project n. 5225310, funded by the National Program of Development through the General Secretariat for Research and Innovation, Ministry of Development



National Technical  
University of Athens



Οργανισμός  
Λαοκρατίας  
Κρήτης (ΟΛΑΚ)



Πανεπιστήμιο  
Ιωαννίνων



ΠΑΝΕΠΙΣΤΗΜΙΟ  
ΠΕΛΟΠΟΝΝΗΣΟΥ



TEE  
Technical Chamber  
of Greece



## Preliminary Program

### GENERAL PROGRAM

DAY 1 - 14.12.2026

| Auditorium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Hall 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <p><b>08:30-09:00 Registrations</b></p> <p><b>09:00-10:30 Opening Session</b></p> <p><i>10:30-10:45 Coffee Break</i></p> <p><b>10:45-12:30 Panel discussion 1:</b> Innovative Transdisciplinary Development and Transfer of Know-How and Multilateral Cooperation Addressing World Challenges for the Rehabilitation of Emblematic Monuments</p> <p><b>12:30-14:15 Panel discussion 2:</b> Religious monuments and the Christian values in dialogue with the Society</p> <p><i>14:15-14:45 Lunch Break</i></p> <p><b>14:45-16:15 Panel discussion 3:</b> Science Communication</p> <p><b>16:15-17:45 Panel discussion 4:</b> Novel Educational approach for the Sustainable Preservation and Revealing of Cultural Heritage</p> <p><b>17:45-19:15 Panel discussion 5:</b> Historical and Archaeological Documentation Endorsing the Values of Monuments' Rehabilitation with Respect</p> <p><b>19:15-20:45 Panel discussion 6:</b> Archaeometry and Archaeogene Testimony of Monument History</p> | <p><b>10:45-12:30 Session 1:</b> Dialogue and Mutual Understanding for Peace: Heritage in Conflict - The Case of Religious Monuments and Society</p> <p><b>12:30-14:00 Session 2:</b> Emblematic Works as Source of Innovation: The Evlogon Model, Standardization of Diagnostic Studies and Quality Control of Works</p> <p><i>14:00-14:30 Lunch Break</i></p> <p><b>14:30-16:15 Session 3:</b> History and Archaeology: Modern Reconstruction Technologies for Landscapes, Sites, and Narratives</p> <p><b>16:15-17:45 Session 4:</b> Archaeometry and Archaeogenetics: High-Tech Heritage Investigation Revealing Materials and Techniques</p> <p><b>18:00-19:15 Session 5:</b> Education for Public Engagement Social Awareness and Science Communication by Bridging Heritage Stakeholders, the Arts, Science, and Industry Under the Belt and Road Initiative for Multimodal Cultural Heritage Preservation</p> |



## Preliminary Program

### GENERAL PROGRAM

DAY 2 - 15.12.2026

| Auditorium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Hall 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
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| <p><b>09:00-10:30 Panel discussion 7:</b> Digital Heritage in AI Era: a Holistic Approach</p> <p><i>10:30-10:45 Coffee Break</i></p> <p><b>10:45-12:15 Panel discussion 8:</b> Driving the Digital Transition in Cultural Heritage: The Role of Competence Centers in Advancing European Strategies</p> <p><b>12:15-13:45 Panel discussion 9:</b> Preserving compatibility, the materiality and integrity of structures and architectural authenticity</p> <p><i>13:45-14:30 Lunch Break</i></p> <p><b>14:30-16:00 Panel discussion 10:</b> Historic cities and centers: New Reuse and preservation strategies applying Circular Economy</p> <p><b>16:00-17:30 Panel discussion 11:</b> Culture - Based Climate Action (4COP FOR Conference of Parties of UN action)</p> <p><b>17:30-19:00 Panel discussion 12:</b> The New European Bauhaus creative and interdisciplinary initiative addressing materials and energy challenges</p> <p><b>19:00-20:30 Panel discussion 13:</b> Green and blue deal for Tourism through the sustainable revival Cultural Heritage and Environmental Assets</p> | <p><b>09:00-10:40 Session 6:</b> Memory Twin II: Semantic Platforms, Community Memory and Adaptive Reuse</p> <p><i>10:40-10:55 Coffee Break</i></p> <p><b>10:55-12:25 Session 7:</b> The Role of Generative AI in Cultural Heritage Documentation, Restoration and Augmented Reality</p> <p><b>12:25-14:55 Session 8:</b> The Green and Blue Deal for Cultural and Environmental Tourism Towards Sustainable Local Development and Energy Transition</p> <p><i>14:55-15:30 Lunch Break</i></p> <p><b>15:30-17:15 Session 9:</b> Preserving Compatibility, the Materiality and Integrity of Structures and Architectural Authenticity</p> <p><b>17:15-19:00 Session 10:</b> Historic Cities and Centers: New Reuse and Preservation Strategies Through Circular Economy and Social Cohesion</p> |



## Preliminary Program

### GENERAL PROGRAM

DAY 3 - 16.12.2026

| Auditorium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Hall 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <p><b>09:00-10:30 Panel discussion 14:</b> Resilience to Climate Change, Natural Hazards and Pandemic Risks - Biosafety</p> <p><i>10:30-10:45 Coffee Break</i></p> <p><b>10:45-12:15 Panel discussion 15:</b> Earthquake protection and structural rehabilitation</p> <p><b>12:15-13:45 Panel discussion 16:</b> Advanced Non Destructive and Structural Techniques for Diagnosis, Redesign, Health Monitoring and Quality Assessment of Materials and Preservation Interventions</p> <p><i>13:45-14:30 Lunch Break</i></p> <p><b>14:30-16:00 Panel discussion 17:</b> From Digital Twin to Memory Twin: A New Horizon for Cultural Heritage</p> <p><b>16:00-17:30 Panel discussion 18:</b> Sustainable Preservation of Maritime Cultural Heritage</p> <p><i>17:30-17:45 Coffee Break</i></p> <p><b>17:45-19:15 Panel discussion 19:</b> Bridging Heritage Stakeholders, Art, Science, Industry and Society</p> <p><b>19:20 Closure</b></p> | <p><i>09:45-10:00 Coffee Break</i></p> <p><b>10:00-12:30 Session 11:</b> Non-Destructive and Structural Techniques for Diagnosis, Redesign and Health Monitoring in the New Digital Era</p> <p><b>12:30-14:00 Session 12:</b> Reinventing Resilience: Natural Hazards, Earthquake and Structural Rehabilitation</p> <p><i>14:00-14:30 Lunch Break</i></p> <p><b>14:30-16:00 Session 12 (continued):</b> Reinventing Resilience: Natural Hazards, Earthquake and Structural Rehabilitation</p> <p><b>16:00-18:40 Session 13:</b> Memory Twin I: From 3D, HBIM and GIS Documentation to a Holistic Digital Framework</p> <p><b>18:40-19:20 Session 14:</b> Maritime Heritage Preservation</p> |

**PROGRAM PART A****14.12.26 | 10:45-12:30 Auditorium****Panel discussion 1: Innovative Transdisciplinary Development and Transfer of Know-How and Multilateral Cooperation Addressing World Challenges for the Rehabilitation of Emblematic Monuments***Moderator, Rapporteur and panellists to be announced***14.12.26 | 12:30-14:15 Auditorium****Panel discussion 2: Religious monuments and the Christian values in dialogue with the Society***Moderator, Rapporteur and panellists to be announced***14.12.26 | 14:45-16:15 Auditorium****Panel discussion 3: Science Communication***Moderator, Rapporteur and panellists to be announced***14.12.26 | 16:15-17:45 Auditorium****Panel discussion 4: Novel Educational approach for the Sustainable Preservation and Revealing of Cultural Heritage***Moderator, Rapporteur and panellists to be announced***14.12.26 | 17:45-19:15 Auditorium****Panel discussion 5: Historical and Archaeological Documentation Endorsing the Values of Monuments' Rehabilitation with Respect***Moderator, Rapporteur and panellists to be announced***14.12.26 | 19:15-20:45 Auditorium****Panel discussion 6: Archaeometry and Archaeogene Testimony of Monument History***Honorary Session in memoriam Nikos Zacharias**Moderator, Rapporteur and panellists to be announced***15.12.26 | 09:00-10:30 Auditorium****Panel discussion 7: Digital Heritage in AI Era: a Holistic Approach***Moderator, Rapporteur and panellists to be announced***15.12.26 | 10:45-12:15 Auditorium****Panel discussion 8: Driving the Digital Transition in Cultural Heritage: The Role of Competence Centers in Advancing European Strategies***Moderator, Rapporteur and panellists to be announced***15.12.26 | 12:15-13:45 Auditorium****Panel discussion 9: Preserving compatibility, the materiality and integrity of structures and architectural authenticity***Moderator, Rapporteur and panellists to be announced***15.12.26 | 14:30-16:00 Auditorium****Panel discussion 10: Historic cities and centers: New Reuse and preservation strategies applying Circular Economy***Moderator, Rapporteur and panellists to be announced*

**15.12.26 | 16:00-17:30 Auditorium**

**Panel discussion 11: Culture - Based Climate Action (4COP FOR Conference of Parties of UN action)**

*Moderator, Rapporteur and panellists to be announced*

**15.12.26 | 17:30-19:00 Auditorium**

**Panel discussion 12: The New European Bauhaus creative and interdisciplinary initiative addressing materials and energy challenges**

*Moderator, Rapporteur and panellists to be announced*

**15.12.26 | 19:00-20:30 Auditorium**

**Panel discussion 13: Green and blue deal for Tourism through the sustainable revival Cultural Heritage and Environmental Assets**

*Moderator, Rapporteur and panellists to be announced*

**16.12.26 | 09:00-10:30 Auditorium**

**Panel discussion 14: Resilience to Climate Change, Natural Hazards and Pandemic Risks – Biosafety**

*Project TRIQUETRA, EU HE research and innovation programme under GA No. 101094818: Toolbox for assessing and mitigating climate change risks and natural hazards threatening Cultural Heritage.*

*Moderator, Rapporteur and panellists to be announced*

**16.12.26 | 10:45-12:15 Auditorium**

**Panel discussion 15: Earthquake protection and structural rehabilitation**

*Moderator, Rapporteur and panellists to be announced*

**16.12.26 | 12:15-13:45 Auditorium**

**Panel discussion 16: Advanced Non Destructive and Structural Techniques for Diagnosis, Redesign, Health Monitoring and Quality Assessment of Materials and Preservation Interventions**

*Moderator, Rapporteur and panellists to be announced*

**16.12.26 | 14:30-16:00 Auditorium**

**Panel discussion 17: From Digital Twin to Memory Twin: A New Horizon for Cultural Heritage**

*Moderator, Rapporteur and panellists to be announced*

**16.12.26 | 16:00-17:30 Auditorium**

**Panel discussion 18: Sustainable Preservation of Maritime Cultural Heritage**

*Moderator, Rapporteur and panellists to be announced*

**16.12.26 | 17:45-19:15 Auditorium**

**Panel discussion 19: Bridging Heritage Stakeholders, Art, Science, Industry and Society**

*Moderator, Rapporteur and panellists to be announced*

## PROGRAM PART B

14.12.26 | 10:45-12:30 Hall 1

## Session 1: Dialogue and Mutual Understanding for Peace: Heritage in Conflict - The Case of Religious Monuments and Society

| Id  | Title                                                                                                                                                                             | Authors                                                                                                                       |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 2   | The Sensory Audience of the Liturgy                                                                                                                                               | Zoe Tsiami<br><i>Orthodox Academy of Crete</i>                                                                                |
| 68  | Cultural Values and Practices of Religious Heritage: Results of a Quantitative Survey on Three Iconic Religious Monuments                                                         | Hara Stratoudaki, Nikolaos Souliotis, Nikos Klironomos<br><i>EKKE</i>                                                         |
| 115 | Destruction, Memory, and Resistance: Documenting Palestinian Cultural Heritage Loss in Gaza                                                                                       | Rula Shahwan<br><i>Arab american University of Palestine</i>                                                                  |
| 120 | The Roles of the Bayt Mal Al-Quds Al-Sharif Agency in Supporting the Resilience of Jerusalemites and Enhancing the Civilizational Identity of the City:                           | Ibrahim Ramadan<br><i>AlQuds Open University</i>                                                                              |
| 134 | The Sacred Orthodox Temple as a Living Community: The Pastoral Role in the Sustainable Preservation of Religious Cultural Heritage                                                | Christoforos Chronis<br><i>National and Kapodistrian University of Athens</i>                                                 |
| 174 | Society and Religious Monuments: Perceptions of Responsibility and Identity Frames in the Protection of Cultural Heritage                                                         | Vasiliki Georgiadou, Nikolaos Klironomos, Konstantinos Papagiannopoulos<br><i>National Center for Social Research (EKKE)</i>  |
| 180 | War-Affected Cultural Heritage in Tigray: Transdisciplinary Documentation, Community Resilience, and Multispectral Approaches for Sustainable Heritage Management in Kolla Temben | Abreha Kiros<br><i>Aksum University</i>                                                                                       |
| 185 | Digitizing Ukrainian Mosaic Bus Stops of Poltava Region: 3D Documentation and Open-Access Preservation in Wartime                                                                 | Anna Sinelnik<br><i>Independent Researcher, Project Lead, Specialist in Photogrammetry and Cultural Heritage Digitization</i> |
| 305 | When the past is captured and preserved forever through digitization: Digitization of cultural heritage of Famagusta province                                                     | Anastasia Fotiou<br><i>Cyprus University of Technology</i>                                                                    |
| 337 | THE HOLY TOMB OF CHRIST - vol. 1 of post-doctoral thesis on an international academic inter- and transdisciplinary approach                                                       | Gabriela Mihlig<br><i>Vienna Archdiocese</i>                                                                                  |

## Session 2: Emblematic Works as Source of Innovation: The Evlogon Model, Standardization of Diagnostic Studies and Quality Control of Works

| Id  | Title                                                                                                                                                                             | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 65  | Transdisciplinary Physicochemical Investigation and Conservation of the Rigas Charta of the Onassis Library: From Multispectral Documentation to a Sustainable Treatment Approach | Penelope Banou <sup>1</sup> , Euthimia Kiskira <sup>1</sup> , Agathi Athoula Kaminari <sup>1</sup> , Georgios Tsairis <sup>1</sup> , Vassiliki Gerontopoulou <sup>2</sup> , Athina Georgia Alexopoulou <sup>1</sup><br><i><sup>1</sup> University of West Attica</i><br><i><sup>2</sup> Onassis Library</i>                                                                                                                                                                                                                                                                                                                                            |
| 160 | The Repository of Evlogon: Content Structuring and Formatting to Enable and Facilitate Learning                                                                                   | Konstantinos Athanasakos <sup>1</sup> , Nikolaos Moropoulos <sup>2</sup> , Anastasios Doulamis <sup>3</sup> , Antonia Moropoulou <sup>4</sup><br><i><sup>1</sup> Agile Vendors</i><br><i><sup>2</sup> 4Causes</i><br><i><sup>3</sup> National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering</i><br><i><sup>4</sup> National Technical University of Athens, School of Chemical Engineering,</i>                                                                                                                                                                                                            |
| 163 | The Evlogon Information Platform: The case study of the rehabilitation of the Varnakova Monastery                                                                                 | Antonia Moropoulou <sup>1</sup> , Charalampos Mouzakis <sup>2</sup> , Nikolaos Moropoulos <sup>2</sup> , Maria Apostolopoulou <sup>2</sup> , Ekaterini Delegou <sup>2</sup> , Kyriakos Lampropoulos <sup>1</sup> , Stergios Roumeliotis <sup>2</sup><br><i><sup>1</sup> National Technical University of Athens, School of Chemical Engineering</i><br><i><sup>2</sup> National Technical University of Athens</i>                                                                                                                                                                                                                                     |
| 164 | The Evlogon Information Platform: The case study of the rehabilitation of the Holy Aedicule of the Holy Sepulchre                                                                 | Antonia Moropoulou <sup>1</sup> , Andreas Georgopoulos <sup>2</sup> , Charalampos Mouzakis <sup>3</sup> , Nikolaos Moropoulos <sup>3</sup> , Maria Apostolopoulou <sup>3</sup> , Ekaterini Delegou <sup>3</sup> , Kyriakos Lampropoulos <sup>1</sup> , Emmanouil Alexakis <sup>3</sup> , Elisavet Tsilimantou <sup>3</sup> , Stergios Roumeliotis <sup>3</sup><br><i><sup>1</sup> National Technical University of Athens, School of Chemical Engineering</i><br><i><sup>2</sup> National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering</i><br><i><sup>3</sup> National Technical University of Athens</i> |
| 165 | The Evlogon information platform: The case study of the Greek contribution in the protection of Hagia Sophia                                                                      | Antonia Moropoulou, Eleni Aggelakopoulou, Ekaterini Delegou, Maria Apostolopoulou, Kyriakos Lampropoulos<br><i>National Technical University of Athens School of Chemical Engineering</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Session 2: Emblematic Works as Source of Innovation: The Evlogon Model, Standardization of Diagnostic Studies and Quality Control of Works

| Id  | Title                                                                                                                                                           | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| 166 | Standardization and Specifications of the Methodology of Diagnostic Studies for the Protection of Monuments and Preservation of the Values                      | <p>Antonia Moropoulou<sup>1</sup>, Amalia Androulidaki<sup>2</sup>, Konstantina Siountri<sup>2</sup>, Andreas Georgopoulos<sup>3</sup>, Elisavet Tsilimantou<sup>4</sup>, Konstantinos Apostolopoulos<sup>4</sup>, Kyriakos Lampropoulos<sup>1</sup>, Ekaterini Delegou<sup>4</sup>, Eleni Aggelakopoulou<sup>4</sup>, Maria Apostolopoulou<sup>4</sup>, Pagona-Noni Maravelaki<sup>5</sup>, Stergios Roumeliotis<sup>4</sup>, Charalampos Mouzakis<sup>4</sup>, Lucia Karapita<sup>4</sup>, Theodoros Panou<sup>6</sup></p> <p><sup>1</sup> National Technical University of Athens, School of Chemical Engineering</p> <p><sup>2</sup> Ministry of Culture</p> <p><sup>3</sup> National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering</p> <p><sup>4</sup> National Technical University of Athens</p> <p><sup>5</sup> Technical University of Crete</p> <p><sup>6</sup> ELOT</p> |
| 167 | Standardization and Specifications for the Quality Control of Works for the Protection of Cultural Heritage Assets                                              | <p>Antonia Moropoulou<sup>1</sup>, Eleni Aggelakopoulou<sup>2</sup>, Ekaterini Delegou<sup>2</sup>, Kyriakos Lampropoulos<sup>1</sup>, Maria Apostolopoulou<sup>2</sup>, Theodoros Panou<sup>3</sup></p> <p><sup>1</sup> National Technical University of Athens, School of Chemical Engineering</p> <p><sup>2</sup> National Technical University of Athens</p> <p><sup>3</sup> ELOT</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 176 | Interdisciplinary diagnostic study of the Museum of the Greek-Orthodox Patriarchate of Alexandria, Egypt: Architectural, geometric and materials documentation. | <p>Ekaterini Delegou<sup>1</sup>, Stergios Roumeliotis<sup>1</sup>, Anastasia Vythoulka<sup>2</sup>, Maria Apostolopoulou<sup>1</sup>, Charalampos Mouzakis<sup>1</sup>, Andreas Georgopoulos<sup>3</sup>, Antonia Moropoulou<sup>4</sup></p> <p><sup>1</sup> National Technical University of Athens</p> <p><sup>2</sup> School of Architecture, National Technical University of Athens, (NTUA)</p> <p><sup>3</sup> National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering</p> <p><sup>4</sup> National Technical University of Athens, School of Chemical Engineering</p>                                                                                                                                                                                                                                                                                                       |

14.12.26 | 14:30-16:15 Hall 1

## Session 3: History and Archaeology: Modern Reconstruction Technologies for Landscapes, Sites, and Narratives

| Id | Title                                                                                                                                                      | Authors                                                                                                                                                                   |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15 | Integrated GIS and Interdisciplinary Framework for the Spatial Reconstruction and Sustainable Management of the Ancient Municipality of Kymissala (Rhodes) | <p>Zoi Stamati<sup>1</sup>, Andreas Georgopoulos<sup>2</sup></p> <p><sup>1</sup> University of the Aegean</p> <p><sup>2</sup> National Technical University of Athens</p> |

### Session 3: History and Archaeology: Modern Reconstruction Technologies for Landscapes, Sites, and Narratives

| Id  | Title                                                                                                                                                                                                                             | Authors                                                                                                                                                                                                                                                                                                    |
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| 19  | "IASIS for the urban web: urban planning and cultural heritage assets harmonization" to "IASIS for the urban web: urban planning and cultural heritage assets harmonization – The Kahal Kadosh Hadash Yanina Synagogue Case Study | Athina Chroni <sup>1</sup> , Andreas Georgopoulos <sup>2</sup> , Pavlos-Stylianos Megalooikonomou <sup>2</sup><br><i><sup>1</sup> Hellenic Ministry of Education, Religious Affairs and Sports, National Technical University of Athens</i><br><i><sup>2</sup> National Technical University of Athens</i> |
| 23  | Ancient Theatre of Sparti: Archaeological Research, 3D Representation and Cultural Heritage Proposals                                                                                                                             | Lydia Eles Vlachou <sup>1</sup> , Vayia Panagiotidis <sup>2</sup><br><i><sup>1</sup> University of Peloponnese</i><br><i><sup>2</sup> University of the Peloponnese</i>                                                                                                                                    |
| 69  | Water Cisterns and Water Fountains as a Joint Effort for Life in Jerusalem                                                                                                                                                        | Naama Ringel<br><i>Architect</i>                                                                                                                                                                                                                                                                           |
| 73  | The Eurialo Fortress at Syracuse and Paolo Orsi's excavations: restoring meaning to the ruins                                                                                                                                     | Valentina Macca<br><i>University of Catania</i>                                                                                                                                                                                                                                                            |
| 187 | Ancient Theatre of Sparti: Archaeological Research, 3D Reconstruction and Cultural Heritage Proposals                                                                                                                             | Lydia Eles Vlachou<br><i>University of Peloponnese</i>                                                                                                                                                                                                                                                     |
| 188 | Integrated GIS and Interdisciplinary Framework for the Spatial Reconstruction and Sustainable Management of the Ancient Municipality of Kymissala (Rhodes)                                                                        | Zoi Stamati <sup>1</sup> , Andreas Georgopoulos <sup>2</sup><br><i><sup>1</sup> Department of Mediterranean Studies, University of the Aegean</i><br><i><sup>2</sup> National Technical University of Athens</i>                                                                                           |
| 190 | Ancient Elis: A Brief Journey into the Past and a Vision for the Future                                                                                                                                                           | Christos Papageorgiou<br><i>Chemical Engineer, DProf, Europeologist, PhD</i>                                                                                                                                                                                                                               |
| 197 | Integrating GIS and Geoarchaeological Data for the Palaeoenvironmental and Palaeogeographical Reconstruction of the Neolithic Settlement of Dispilio, Kastoria                                                                    | Vasiliki Samara, Aikaterini Theodorakopoulou, Elisavet Tsilimantou<br><i>Hellenic Open University</i>                                                                                                                                                                                                      |
| 335 | Archaeological Sites of Thyamis River in Thesprotia, Geographic Information, Heritage Route and Promotion                                                                                                                         | Aristotelis Kotsias<br><i>Hellenic Open University</i>                                                                                                                                                                                                                                                     |

## Session 4: Archaeometry and Archaeogenetics: High-Tech Heritage Investigation Revealing Materials and Techniques

| Id  | Title                                                                                                                                     | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| 61  | Illuminating heritage through conservation-driven analysis: spectroscopic investigation of a 19th-century post-Byzantine icon             | <p>Martha Athanasiadou<sup>1</sup>, Kostas Hatzigiannakis<sup>2</sup>, Kristalia Melessanaki<sup>2</sup>, Vassilios Panagiotopoulos<sup>3</sup>, Alexandros Petrou<sup>1</sup>, Argyro Tsigkri<sup>1</sup>, Demetrios Anglos<sup>4</sup></p> <p><sup>1</sup> Ephorate of Antiquities of the City of Athens (EACA), Makriyianni 2-4, GR-11742</p> <p><sup>2</sup> Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology-Hellas (FORTH), GR-70013</p> <p><sup>3</sup> Ephorate of Modern Monuments and Technical Works of Attika, Eastern Stereas Elladas and Cyclades GR-10555</p> <p><sup>4</sup> IESL-FORTH and Department of Chemistry, University of Crete, GR-70013</p> |
| 62  | Multimodal analysis of Inks and Polychromy in a 19th-Century Ecclesiastical Music Manuscript Using the TriENA Hybrid Spectroscopic System | <p>Eirini Ampatzoglou<sup>1</sup>, Martha Athanasiadou<sup>1</sup>, Kostas Hatzigiannakis<sup>2</sup>, Vassileios Kitkas<sup>3</sup>, Kristalia Melessanaki<sup>2</sup>, Evangelia Stamouli<sup>1</sup>, Argyro Tsigkri<sup>1</sup>, Demetrios Anglos<sup>4</sup></p> <p><sup>1</sup> Ephorate of Antiquities of the City of Athens (EACA), Makriyianni 2-4, GR-11742</p> <p><sup>2</sup> Institute of Electronic Structure and Laser (IESL), Foundation for Research and Technology-Hellas (FORTH), GR-70013</p> <p><sup>3</sup> IESL-FORTH, and Department of Physics, University of Crete, GR-70013</p> <p><sup>4</sup> IESL-FORTH and Department of Chemistry, University of Crete, GR-70013</p>             |
| 111 | Illuminating the Invisible: A Multispectral Study of the Zerbitsa Evangelistarium (1067)                                                  | <p>Myrto Vlachou<sup>1</sup>, Vagia Panagiotidis<sup>2</sup>, Dimitris Mitsos<sup>2</sup>, Dimitrios Vachaviolos<sup>3</sup></p> <p><sup>1</sup> University of the Peloponnese, Management and New Technologies in Cultural Heritage MSc Program “Mantech”</p> <p><sup>2</sup> University of the Peloponnese, Department of History, Archaeology and Cultural Management, Laboratory of Archaeometry</p> <p><sup>3</sup> University of the Peloponnese, Department of History, Archaeology and Cultural Resources Management</p>                                                                                                                                                                                 |
| 116 | On two Cu-based pigment recipes in Dionysius of Fourni “Hermeneia”                                                                        | <p>Larissa Tivikeli<sup>1</sup>, Eleni Rakanta<sup>1</sup>, Stamatios Boyatzis<sup>2</sup>, Konstantinos G. Beltsios<sup>1</sup>, Georgios P. Mastrotheodoros<sup>2</sup></p> <p><sup>1</sup> School of Chemical Engineering, National Technical University of Athens, Zographou, Greece</p> <p><sup>2</sup> Department of Antiquities &amp; Works of Art Conservation, West Attica University, Egaleo, Greece</p>                                                                                                                                                                                                                                                                                               |
| 124 | Measuring radioactivity in Orchomenos archaeological area of interest                                                                     | <p>Konstantinos Kamoutsis, Stelios Xanthos</p> <p>Department of Industrial Engineering and Management, International Hellenic University</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Session 4: Archaeometry and Archaeogenetics: High-Tech Heritage Investigation Revealing Materials and Techniques

| Id  | Title                                                                                                                                     | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 138 | Applications of Egyptian Blue in Early Roman Judea: Evolution of Color Manipulations                                                      | <p>Abraham Leviant<sup>1</sup>, Naama Lena Sharabi<sup>2</sup>, Roi Porat<sup>2</sup>, Uzi Ad<sup>3</sup>, Peter Gendelman<sup>3</sup>, Silvia Rozenberg<sup>4</sup>, Yotam Asscher<sup>1</sup></p> <p><sup>1</sup> <i>Department of Culture Heritage, School of Archaeology and Maritime Cultures University of Haifa, Israel</i></p> <p><sup>2</sup> <i>Department of Archaeology, The Hebrew University of Jerusalem, Israel</i></p> <p><sup>3</sup> <i>Department of Archaeology Research, Israel Antiquities Authority, Jerusalem, Israel</i></p> <p><sup>4</sup> <i>Israel Museum, Jerusalem, Israel</i></p> |
| 139 | GIS-based spatial analysis of resource exchange networks between metals production sites and ancient urban centres in northeastern Greece | <p>Nerantzis Nerantzis<sup>1</sup>, Vayia V. Panagiotidis<sup>2</sup></p> <p><sup>1</sup> <i>University of the Peloponnese</i></p> <p><sup>2</sup> <i>Laboratory of Archaeometry, University of the Peloponnese</i></p>                                                                                                                                                                                                                                                                                                                                                                                            |
| 146 | Archaeometric investigation of the composite materials of the museum of the Greek-Orthodox Patriarchate of Alexandria, Egypt              | <p>Eleni Zimi</p> <p><i>Laboratory of Archaeometry, University of the Peloponnese, Greece</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

14.12.26 | 18:00-19:15 Hall 1

## Session 5: Education for Public Engagement Social Awareness and Science Communication by Bridging Heritage Stakeholders, the Arts, Science, and Industry Under the Belt and Road Initiative for Multimodal Cultural Heritage Preservation

| Id  | Title                                                                                                                                                             | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 18  | Innovative teaching approaches for the promotion of Tangible and Intangible Cultural Heritage by students in Formal Education using 2D, 3D, Stop Motion animation | <p>Anastasia Labropoulou<sup>1</sup>, Spyridon Siakas<sup>2</sup></p> <p><sup>1</sup> <i>Postdoctoral Researcher UniWA</i></p> <p><sup>2</sup> <i>UniWA</i></p>                                                                                                                                                                                                                                                                                                                                                              |
| 60  | China-Greece Belt and Road Joint Laboratory on Cultural Heritage Conservation Technology                                                                          | <p>Paraskevi Pouli<sup>1</sup>, Kostas Hatzigiannakis<sup>1</sup>, Demetrios Anglos<sup>2</sup>, Costantinos Vasiliadis<sup>3</sup>, Amalia Siatou<sup>4</sup>, Hanwen Liu<sup>5</sup>, Qu Liang<sup>5</sup></p> <p><sup>1</sup> <i>IESL-FORTH</i></p> <p><sup>2</sup> <i>IESL-FORTH and University of Crete, Department of Chemistry</i></p> <p><sup>3</sup> <i>The Acropolis Museum</i></p> <p><sup>4</sup> <i>revive-art.works</i></p> <p><sup>5</sup> <i>Department of Conservation Standards, The Palace Museum</i></p> |
| 114 | A Holistic and Interdisciplinary Approach to Cultural Heritage Education: Designing a Digital Game for Teaching History in Greek Primary School                   | <p>Elpida Gaitani<sup>1</sup>, George Malaperdas<sup>2</sup></p> <p><sup>1</sup> <i>University of Peloponnese, MSc in Cultural Heritage Management and Technologies</i></p> <p><sup>2</sup> <i>Department of Environment, Ionian University</i></p>                                                                                                                                                                                                                                                                          |

## Session 5: Education for Public Engagement Social Awareness and Science Communication by Bridging Heritage Stakeholders, the Arts, Science, and Industry Under the Belt and Road Initiative for Multimodal Cultural Heritage Preservation

| Id  | Title                                                                                                                            | Authors                                                                                                                                                                                  |
|-----|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 183 | Innovative Practices of the Tanyuan Program in Promoting Digital Preservation and Utilization of Cultural Heritage               | Yongqiang Wang, Wei Li, Yaoti Chang<br><i>China Cultural Heritage Information and Consulting Center<br/>(Data Center of the State Administration of Cultural Heritage)</i>               |
| 307 | Virtual restoration as a mean to engage the public. One more experience in Vimercate historic center.                            | Stefano Della Torre <sup>1</sup> , Rossella Moioli <sup>2</sup><br><sup>1</sup> <i>Politecnico di Milano</i><br><sup>2</sup> <i>Politecnico di Milano, Graduate School of Management</i> |
| 322 | Immersive Legends of Lake Pamvotis: Virtual Reality for the Interpretation of Intangible Cultural Heritage                       | Aikaterini Papachristopoulou, Anastasia Varoucha, Vasiliki Stamati, Ioannis Fudos<br><i>University of Ioannina</i>                                                                       |
| 339 | Digital Transformation and Public Participation in the Sustainable Preservation of Cultural Heritage: Perspectives from Pakistan | Hussain Adnan<br><i>Pakistan Academy of Letters, Ministry of National Heritage &amp; Culture</i>                                                                                         |

15.12.26 | 09:00-10:30 Hall 1

## Session 6: Memory Twin II: Semantic Platforms, Community Memory and Adaptive Reuse

| Id  | Title                                                                                                                       | Authors                                                                                                                                                                                                                                                                                                                                                                             |
|-----|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3   | Reactive Heritage Digital Twins                                                                                             | Roberto Di Giulio <sup>1</sup> , Franco Niccolucci <sup>2</sup><br><sup>1</sup> <i>Inception srl</i><br><sup>2</sup> <i>ARIADNE Infrastructure AISBL</i>                                                                                                                                                                                                                            |
| 6   | The Passage of Time – Constructing a Narrative between an Item and the Screen                                               | Inbal Dr. Rivlin, Sorin Dr. Heller, Shunit Marmelstein<br><i>Hecht Museum, University of Haifa</i>                                                                                                                                                                                                                                                                                  |
| 129 | “From Memory to Experience: A Memory Twin Framework for Interpreting the 1947 Akko Prison Break under the British Mandate”  | Shelley-Anne Peleg<br><i>University of Haifa</i>                                                                                                                                                                                                                                                                                                                                    |
| 131 | PhilokaliaPlus: Developing a Memory Twin for Theological Heritage through Artificial Intelligence and Google Cloud Platform | Ioannis Panagiotopoulos<br><i>NKUA</i>                                                                                                                                                                                                                                                                                                                                              |
| 133 | From community narratives and everyday objects to digital heritage: a case study in the Aldeia da Luz, Portugal             | Rafael Ramírez Eudave <sup>1</sup> , Tiago Miguel Ferreira <sup>2</sup> , Giorgia Giardina <sup>1</sup><br><sup>1</sup> <i>Department of Geoscience and Engineering, Delft University of Technology, Stevinweg 1, 2628 CN, Delft, The Netherlands</i><br><sup>2</sup> <i>CERIS, Instituto Superior Técnico, University of Lisbon, Av. Rovisco Pais 1, 1049-001 Lisboa, Portugal</i> |

## Session 6: Memory Twin II: Semantic Platforms, Community Memory and Adaptive Reuse

| Id  | Title                                                                                                                                                                       | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 171 | A Hybrid Memory Twin Platform for the Holy Aedicule: Workflow Orchestration, Spatial Persistence and Semantic Interoperability for Multidisciplinary Heritage Documentation | Emmanouil Alexakis <sup>1</sup> , Dimosthenis Kyriazis <sup>2</sup> , Andreas Georgopoulos <sup>2</sup> , Antonia Moropoulou <sup>3</sup><br><i><sup>1</sup> National Technical University of Athens</i><br><i><sup>2</sup> National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering</i><br><i><sup>3</sup> National Technical University of Athens, School of Chemical Engineering</i>                                              |
| 172 | From Ontological Framework to Operational Semantic-Spatial Memory Twin: Extending Semantic Heritage Integration Workflows for the Holy Aedicule                             | Emmanouil Alexakis <sup>1</sup> , Dimosthenis Kyriazis <sup>2</sup> , Andreas Georgopoulos <sup>3</sup> , Antonia Moropoulou <sup>4</sup><br><i><sup>1</sup> National Technical University of Athens</i><br><i><sup>2</sup> University of Piraeus</i><br><i><sup>3</sup> National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering</i><br><i><sup>4</sup> National Technical University of Athens, School of Chemical Engineering</i> |
| 186 | Memory Twin for Igoumenitsa: coastal heritage change and urban rehabilitation                                                                                               | Christina Gogolou<br><i>University of Ioannina</i>                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 301 | From Local Memory to Digital Cultural Heritage: Documenting and Preserving the History of Chandria Village, Cyprus                                                          | Evanthia Itsa<br><i>Cyprus University of Technology</i>                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 355 | Towards a Digital Twin for Paper Artworks: A Risk Monitoring and Decision-Support Framework for Preventive Conservation                                                     | Stavroula Kissa, Vasiliki Kokla, Georgios Bardis, Dimitrios Makris<br><i>University of West Attica</i>                                                                                                                                                                                                                                                                                                                                                                         |

15.12.26 | 10:45-12:15 Hall 1

## Session 7: The Role of Generative AI in Cultural Heritage Documentation, Restoration and Augmented Reality

| Id | Title                                                                                                                        | Authors                                                                           |
|----|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| 13 | Generative AI and the Authenticity Crisis in Visual and Literary Production: Responsibility, Originality, and Artistic Value | Ioannis Peros, Eugenia Giannini<br><i>National Technical University of Athens</i> |
| 22 | Smart Cultural Heritage: Design and Development of an AI-Powered Mobile Application for Personalized Museum Exploration      | Dimitrios Gousopoulos, George Petrakos<br><i>Panteion University, Greece</i>      |

## Session 7: The Role of Generative AI in Cultural Heritage Documentation, Restoration and Augmented Reality

| Id  | Title                                                                                                                                                              | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 117 | Reshaping Greek Trousseau textiles into wearable heritage through designer-artificial intelligence co-creation                                                     | Maria Zoumaki <sup>1</sup> , Kerasia Chloridou <sup>2</sup> , Venetia Koutsou <sup>2</sup> , Eleftheria Stoikou <sup>2</sup> , Apostolos Korlos <sup>3</sup><br><i><sup>1</sup> International Hellenic University, School of Design, Department of Interior Architecture</i><br><i><sup>2</sup> International Hellenic University, School of Design, Department of Creative Design and Clothing</i><br><i><sup>3</sup> International Hellenic University, School of Engineering, Department of Production Engineering and Management</i> |
| 145 | Will AI and GenAI benefit creativity and culture?                                                                                                                  | Alfredo Ronchi<br><i>Engineering Faculty Politecnico di Milano Milano, Italy</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 182 | Extended Reality Research for Cultural Heritage in Europe: Insights from a Bibliometric Analysis                                                                   | Junwen Lu, Guillermo García-Badell, Joan B. Rodriguez<br><i>Universidad Politécnica de Madrid</i>                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 242 | Beyond the Beach: A 3-Hourly HCI:Beach/Urban Decision-Support Framework with an Inverse Comfort Index (iHCI) for Sheltered Heritage Visitation in Heraklion, Crete | Antonios Parasyris <sup>1</sup> , George Alexandrakis <sup>2</sup> , Vassiliki Metheniti <sup>2</sup> , Georgios V. Kozyrakis <sup>2</sup> , Nikolaos Kampanis <sup>2</sup><br><i><sup>1</sup> IACM FORTH</i><br><i><sup>2</sup> Institute of Applied and Computational Mathematics, Foundation for Research and Technology - Hellas</i>                                                                                                                                                                                                 |
| 300 | The Influence of Training and Agentic Architecture on AI-Assisted Diagnosis of Stone Deterioration Patterns                                                        | José Delgado Rodrigues <sup>1</sup> , Daniele Corradetti <sup>2</sup><br><i><sup>1</sup> Consultant</i><br><i><sup>2</sup> Instituto Superior Técnico, University of Lisbon, Portugal</i>                                                                                                                                                                                                                                                                                                                                                |
| 302 | From Visitor Data to Personas: Towards Personalized Digital Mediation in Archaeological Heritage Sites                                                             | Elissavet Kosta, Markos Konstantakis, Konstantinos Michalakis, George Caridakis<br><i>University of the Aegean</i>                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 350 | After the Witness: AI, Historical Truth and the Transmission of Cultural Memory                                                                                    | Marianna Mavroudi<br><i>Independent Researcher</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

15.12.26 | 12:15-14:45 Hall 1

## Session 8: The Green and Blue Deal for Cultural and Environmental Tourism Towards Sustainable Local Development and Energy Transition

| Id | Title                                                                                                                | Authors                                                                                                                                                                                                                                                              |
|----|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 17 | Rural Heritage as a Driver of Circular Development: Reuse Scenarios from Agricultural Waste in a Sicilian Case Study | Carla Di Giorgio <sup>1</sup> , Stefania De Medici <sup>2</sup><br><i><sup>1</sup> Department of Architecture, University of Naples Federico II, Naples</i><br><i><sup>2</sup> Department of Civil Engineering and Architecture, University of Catania, Siracusa</i> |

## Session 8: The Green and Blue Deal for Cultural and Environmental Tourism Towards Sustainable Local Development and Energy Transition

| Id  | Title                                                                                                                                                   | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20  | Aegean Sea and mainland Greece trade routes in antiquity: people and cultures in motion - Cultural heritage, landscape and urban web crossroads         | Athina Chroni <sup>1</sup> , Vassilia Karathanassi <sup>2</sup><br><sup>1</sup> <i>Hellenic Ministry of Education, Religious Affairs and Sports, National Technical University of Athens</i><br><sup>2</sup> <i>National Technical University of Athens</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 21  | Adaptive Reuse of Cultural Heritage Buildings: Integrating Energy Performance and Bioclimatic Design for Sustainable Transformation-A Literature Review | Lamprini Kitsouli<br><i>Architect, MSc University of Edinburgh, Phd University of Ioannina</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 24  | Renewable Energy transition in Mediterranean Historic Urban Landscapes: a Renovation Action Plan for coastal cities                                     | Francesca Ciampa, Giuseppe Cataldi, Maria Rita Pinto<br><i>Department of Architecture, University of Naples Federico II</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 118 | Managing Waste in the Hospitality Sector: A Sustainability Perspective                                                                                  | Stavroula Athanasakopoulou <sup>1,2</sup> , Theodora V. Nikou <sup>1,2</sup> , Sofia Panousi <sup>2</sup> , George Petrakos <sup>1,2</sup> , George Soklis <sup>1,2</sup> , Iakovos Stoubos <sup>2</sup><br><sup>1</sup> <i>Panteion University, Athens, Greece</i><br><sup>2</sup> <i>Research Institute for Tourism, Athens, Greece</i>                                                                                                                                                                                                                                                                                                                                                                            |
| 127 | The Economic Viability of Digital Marketing in Sustaining Cultural Heritage Sites: A Strategic Framework for Palestinian Landmarks                      | Nisreen Hamdan<br><i>al quds open university</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 142 | The potential of agritourism to support climate resilience in rural Albania                                                                             | Anila Sulaj<br><i>Agriculture University of Tirana</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 159 | Stakeholder Engagement and Participatory Planning in Small Island Contexts: The Case of Kasos under the GRECO Islands Initiative                        | Antonia Moropoulou <sup>1</sup> , Vasileios Vasileiadis <sup>2</sup> , Simos Malamis <sup>1</sup> , Anastasios Doulamis <sup>3</sup> , Emanouil Ellinas <sup>4</sup> , Anastasia Vythoulka <sup>5</sup> , Ioanna Mikrou <sup>1</sup> Stergios Roumeliotis <sup>1</sup><br><sup>1</sup> <i>National Technical University of Athens, School of Chemical Engineering</i><br><sup>2</sup> <i>Naval Engineer, President of Panhellenic Association of Traditional Shipyards, Energy Project</i><br><sup>3</sup> <i>School of Rural, Surveying and Geoinformatics Engineering, NTUA</i><br><sup>4</sup> <i>Energy Project</i><br><sup>5</sup> <i>National Technical University of Athens, School of Architecture, NTUA</i> |
| 169 | Transdisciplinary Energy Transition Planning for Small Island Systems: The Case of Kasos                                                                | Emmanouil Ellinas <sup>1</sup> , Vasilios Vasiliadis <sup>2</sup> , Antonia Moropoulou <sup>3</sup><br><sup>1</sup> <i>National Technical University of Athens</i><br><sup>2</sup> <i>Energy Project</i><br><sup>3</sup> <i>National Technical University of Athens, School of Chemical Engineering</i>                                                                                                                                                                                                                                                                                                                                                                                                              |

## Session 8: The Green and Blue Deal for Cultural and Environmental Tourism Towards Sustainable Local Development and Energy Transition

| Id  | Title                                                                                                                                                  | Authors                                                                                                                                                                                                                                  |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 175 | Strategic Prioritization of Sustainable Resource Management Measures in Decentralized Communities: The Case of Kasos under the GRecoIslands Initiative | Ilias Chatzimpalis, Simos Malamis<br><i>Sanitary Engineering Laboratory, School of Civil Engineering, National Technical University of Athens</i>                                                                                        |
| 241 | Tourism Potential and Conservation Challenges of the St. Petersburg World Heritage Site on the Southern Coast of the Gulf of Finland (Peterhof Road)   | Sergey Gorbatenko<br><i>ICOMOS</i>                                                                                                                                                                                                       |
| 303 | Revealing the Industrial and Pre-Industrial Heritage of the Island of Symi                                                                             | Anastasia Papaioannou<br><i>Architect</i>                                                                                                                                                                                                |
| 318 | Uneven Development in Mountainous Greece: Cultural Heritage in a Place-Based Perspective                                                               | Dimitra Foufri<br><i>Laboratory Teaching Staff (EDIP)</i>                                                                                                                                                                                |
| 352 | Measuring Sustainable Practices and Infrastructures concerning Energy Consumption in the Hotel Industry                                                | Stavroula Athanasakopoulou <sup>12</sup> , George Petrakos <sup>12</sup> and Iakovos Stoubos <sup>2</sup><br><i><sup>1</sup>Panteion University, Athens, Greece</i><br><i><sup>2</sup>Research Institute for Tourism, Athens, Greece</i> |
| 354 | Solar Retrofit for Historic Buildings: A Transdisciplinary Approach to Heritage Compatibility, Energy Performance and Public Acceptance                | Qian Phoebe Xu and Theo Tryfonas<br><i>University of Bristol</i>                                                                                                                                                                         |

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## Session 9: Preserving Compatibility, the Materiality and Integrity of Structures and Architectural Authenticity

| Id  | Title                                                                                                           | Authors                                                                                                                                                                                                          |
|-----|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 112 | Ti – based materials for the protection of built cultural heritage: Theoretical insight into Ti-Ca interaction. | A Papadimitriou, D.A. Exarchos, E Delegou, T.E. Matikas, Ch.E. Lekka<br><i>University of Ioannina</i>                                                                                                            |
| 113 | Assessing Urban Materiality: Using Impact Assessment in Urban Heritage Conservation                             | Adi Sela Wiener <sup>1</sup> , Laura Medeghini <sup>2</sup> , Gabriele Favero <sup>2</sup><br><i><sup>1</sup>Bezalel Academy of Arts and Design, Jerusalem</i><br><i><sup>2</sup>Sapienza University of Rome</i> |
| 121 | Designing a mixed-use dormitory at Tokyo University                                                             | Aikaterini Kyrmizoglou, Venetia Tsakalidou<br><i>Aristotle University of Thessaloniki</i>                                                                                                                        |
| 128 | Quantum Mechanics: Contributions to Innovation, High Technology, and Cultural Heritage                          | Evangelos Gazis <sup>1</sup> , Nick Gazis <sup>2</sup><br><i><sup>1</sup>National Technical University of Athens</i><br><i><sup>2</sup>European Spallation Source ERIC</i>                                       |

## Session 9: Preserving Compatibility, the Materiality and Integrity of Structures and Architectural Authenticity

| Id  | Title                                                                                                          | Authors                                                                                                                                                                                                                                                                  |
|-----|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 132 | The Corner as Urban Palimpsest: Reading a Micro-Heritage Node on Fokionos Negri, Athens                        | Georgina Eleftheraki<br><i>PhD(c) School of Architecture, National Technical University of Athens</i>                                                                                                                                                                    |
| 136 | Rethinking the Preservation of Reinforced Concrete Heritage: The Case of the Patras Port Authority Building    | Apostolos Apostolopoulos, Alkiviadis Apostolopoulos, Prof. Charis Apostolopoulos<br><i>Prothesis Office - Architecture and Civil Engineering firm</i>                                                                                                                    |
| 184 | Two Ottoman konaks in Northern Greece: architectural analysis, construction technology, and heritage viability | Damiani Karageorgiadou <sup>1</sup> , Katerina Ritzouli <sup>2</sup><br><i><sup>1</sup> PhD Candidate, Democritus University of Thrace, Department of Architecture</i><br><i><sup>2</sup> Ast. Profesor, Democritus University of Thrace, Department of Architecture</i> |
| 243 | New Evidence for the Old Monastery of St. John the Baptist at Desfina, Phocis                                  | Marilena Tsakoumaki, Anthoula Tsaroucha<br><i>Ephorate of Antiquities of Phocis</i>                                                                                                                                                                                      |

15.12.26 | 17:15-19:00 Hall 1

## Session 10: Historic Cities and Centers: New Reuse and Preservation Strategies Through Circular Economy and Social Cohesion

| Id  | Title                                                                                                                                                   | Authors                                                                                                                                                                                                                                               |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 67  | Towards a Master Plan for the Restoration and Adaptive Reuse of the Vamvakas Mansion in Kozani, Greece: A Framework for Heritage-Led Urban Regeneration | Sofia Tsanaksidou<br><i>Municipality of Kozani</i>                                                                                                                                                                                                    |
| 74  | The historic houses of the Greek War of Independence as components of cultural heritage preservation and levers for local development.                  | Foteini Mikiki <sup>1</sup> , Marios Theleritis <sup>2</sup><br><i><sup>1</sup> International Hellenic University, Civil Engineering Department</i><br><i><sup>2</sup> International Hellenic University, Business Administration Department</i>      |
| 143 | Historic Urban Landscapes and Geoinformatics Methods and Technologies: A Bibliometric Perspective                                                       | Evangelos Brachos <sup>1</sup> , Dimitris Psychogyios <sup>2</sup> , Nikolaos Patsavos <sup>1</sup><br><i><sup>1</sup> Department of Architecture University of Ioannina</i><br><i><sup>2</sup> Department of Architecture University of Thessaly</i> |
| 173 | The Cisterna delle Vignacce: A Multiscalar Approach to Urban Regeneration and Heritage Conservation via Digital Twin                                    | Veronika Karadzhova<br><i>indipenent researcher</i>                                                                                                                                                                                                   |

## Session 10: Historic Cities and Centers: New Reuse and Preservation Strategies Through Circular Economy and Social Cohesion

| Id  | Title                                                                                                                                                                                                                                    | Authors                                                                                                                                                                                                                                                                |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 181 | Spatial Configuration and Public Space Ambience Qualities: Exploring the Interactions between Urban Morphology, Soundscape, and Social Behavior (a comparative study of place du 1er novembre and place de la liberté in Blida -Algeria) | Amina Radji<br><i>SAAD DAHLEB BLIDA 1</i>                                                                                                                                                                                                                              |
| 196 | revised Fifteen minutes “Architecture” The continuous reuse of Papazogleios Weaving School in Ioannina                                                                                                                                   | Angelos Papageorgiou <sup>1</sup> , Georgios Smyris <sup>1</sup> , Anastasios Mpalaskas <sup>2</sup><br><sup>1</sup> <i>University of Ioannina, Department of Architecture</i><br><sup>2</sup> <i>Democritus University of Thrace, Department of Civil Engineering</i> |
| 239 | A Web-Based Digital Platform as a Transferable Methodology for Integrated Heritage Management of Living Historic Cities                                                                                                                  | Fatmanur Gökşin, Elif Mihcioglu, Işıl Ruhi-Sipahioğlu, Mehmet Burak Akgün, Sabha Okur, Afra Temiz<br><i>TOBB University of Economics and Technology</i>                                                                                                                |
| 306 | Temporary Reuse as Ecological Transition Strategy for the Conservation of Abandoned Built Cultural Heritage                                                                                                                              | Mehrnaz Rajabi <sup>1</sup> , Arian Heidari Afshari <sup>2</sup><br><sup>1</sup> <i>Politecnico di Milano</i><br><sup>2</sup> <i>DASTU, Politecnico di Milano</i>                                                                                                      |
| 321 | From Preservation to Transformation: Mapping the Capacity for Adaptive Reuse and Sustainable Change in the Historic Centre of Rethymno                                                                                                   | Despina Dimelli<br><i>School of Architecture Technical University of Crete</i>                                                                                                                                                                                         |
| 336 | Paname influence le monde: An analysis of Paris's cultural identity through its songs                                                                                                                                                    | Olga-Christina Kymizoglou, Konstantinos Katsapis<br><i>Panteion University of Social and Political Sciences</i>                                                                                                                                                        |

16.12.26 | 10:00-12:30 Hall 1

## Session 11: Non-Destructive and Structural Techniques for Diagnosis, Redesign and Health Monitoring in the New Digital Era

| Id | Title                                                                                                                  | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10 | Cooling-Phase Remote Active Infrared Thermography for Condition Documentation of the Elevated Zaojing at Baoguo Temple | Yinuo Ding <sup>1</sup> , Ahmad Osman <sup>2</sup> , Stefano Sfarra <sup>3</sup> , Hai Zhang <sup>1</sup> , Minghao Zhu <sup>4</sup> , Elena Marini <sup>3</sup><br><sup>1</sup> <i>Centre for Composite Materials and Structures (CCMS), Harbin Institute of Technology, Harbin 150001, China.</i><br><sup>2</sup> <i>Hochschule für Technik und Wirtschaft des Saarlandes - University of Applied Sciences</i><br><sup>3</sup> <i>Department Industrial and Information Engineering and Economics, University of L'Aquila, I-67100 L'Aquila, Italy</i><br><sup>4</sup> <i>National Key Laboratory of Laser Spatial Information, Harbin Institute of Technology, Harbin, 150001, China</i> |
| 12 | Real-Time Digital Mapping and Structural Health Monitoring of the Acropolis Circuit Wall                               | Elena Kapogianni<br><i>National Technical University of Athens</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Session 11: Non-Destructive and Structural Techniques for Diagnosis, Redesign and Health Monitoring in the New Digital Era

| Id  | Title                                                                                                                                   | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| 14  | PCA-Based Local Thermographic Mosaicking for Non-Contact Inspection of a Yuan-Dynasty Stone Stele                                       | <p>Zhiyang Zhang<sup>1</sup>, Hai Zhang<sup>1</sup>, Ahmad Osman<sup>2</sup>, Minghao Zhu<sup>3</sup>, Stefano Sfarra<sup>4</sup>, Elena Marini<sup>4</sup></p> <p><sup>1</sup>Centre for Composite Materials and Structures (CCMS), Harbin Institute of Technology, Harbin 150001, China.</p> <p><sup>2</sup>Hochschule für Technik und Wirtschaft des Saarlandes (htw saar), Saarbrücken, Germany</p> <p><sup>3</sup>National Key Laboratory of Laser Spatial Information, Harbin Institute of Technology, Harbin, 150001, China</p> <p><sup>4</sup>Department of Industrial and Information Engineering and Economics, University of L'Aquila, I-67100 L'Aquila, Italy</p> |
| 16  | Video-Based Sliding Window Operational Modal Analysis for the Dynamic Assessment of Historical Stone Masonry Structures                 | <p>Constantinos Providakis, Maria Stavroulaki, Georgia Providaki</p> <p><i>Technical University of Crete</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 64  | Enabling Machine Learning for Monitoring Laser Cleaning Processes in Heritage Conservation based on Inherent Acoustic Signal Generation | <p>Paraskevi Pouli<sup>1</sup>, Georgios D. Barmparis<sup>1</sup>, George J. Tserevelakis<sup>2</sup></p> <p><sup>1</sup>IESL-FORTH</p> <p><sup>2</sup>IESL-FORTH and University of Crete, Department of Biology</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 70  | Low granulometry lime-based mortars for the conservation of wall painting and plasters                                                  | <p>Dimitrios Chatzigiannis, Maria Eleni Kontaxaki, Agathi Patsioura, Nikolaos-Alexis Stefanis, Styliani Papatzani, Maria Chatzidakis</p> <p><i>University of West Attica - Department of Conservation of Antiquities and Works of Art</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 144 | The role of geotechnical engineering within a holistic evaluation of the interrelation between a monument and its environment           | <p>Konstantinos Vasileiadis<sup>1</sup>, Charalambos Mouzakis<sup>2</sup></p> <p><sup>1</sup>EYLOGON - TEE</p> <p><sup>2</sup>NTUA - EYLOGON - TEE</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 157 | Advanced Infrared Thermography for Structural Diagnostics of Cultural Heritage: Application at the Patriarchate of Alexandria           | <p>Dimitrios Exarchos, Spyridoula Farmaki, Panagiota Aikaterini Dalla, Alexandros Tiktapanidis, Christos Metaxas, Theodore Matikas</p> <p><i>University of Ioannina</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 168 | Challenges and Future Trends for the Design and Assessment of Conservation and Restoration Materials for Cultural Heritage Protection   | <p>Antonia Moropoulou<sup>1</sup>, Maria Apostolopoulou<sup>1</sup>, Ekaterini Delegou<sup>1</sup>, Eleni Aggelakopoulou<sup>1</sup>, Pagona-Noni Maravelaki<sup>2</sup>, Kyriakos Lampropoulos<sup>1</sup></p> <p><sup>1</sup>National Technical University of Athens, School of Chemical Engineering</p> <p><sup>2</sup>Technical University of Crete</p>                                                                                                                                                                                                                                                                                                                   |

## Session 11: Non-Destructive and Structural Techniques for Diagnosis, Redesign and Health Monitoring in the New Digital Era

| Id  | Title                                                                                                                                                             | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 179 | Investigating the combined effect of carbon based nanomaterials and superplasticizer on piezoresistivity properties of cement-based restoration pastes            | <p>Maria-Evangelia Stogia<sup>1</sup>, George Maistros<sup>2</sup>, Zoi S. Metaxa<sup>3</sup>, Stavros Kourkoulis<sup>4</sup>, Nikolaos Alexopoulos<sup>5</sup></p> <p><sup>1</sup> University of the Aegean, School of Engineering, Department of Financial Engineering, Chios</p> <p><sup>2</sup> ADVISE DETA S.A.</p> <p><sup>3</sup> Democritus University, School of Science, Dept of Chemistry, Kavala</p> <p><sup>4</sup> National Technical University of Athens, School of Applied Mathematical and Physical Sciences</p> <p><sup>5</sup> University of the Aegean</p> |
| 319 | Integrating ER-FTIR Spectroscopy and Artificial Intelligence for the Characterization and Conservation of Wall Paintings                                          | <p>Carla Rea<sup>1</sup>, Laura Medeghini<sup>1</sup>, Simone Scardapane<sup>2</sup>, Gabriele Favero<sup>3</sup>, Alessandro Ciccola<sup>3</sup></p> <p><sup>1</sup> Department of Earth Sciences, Sapienza University of Rome</p> <p><sup>2</sup> Department of Information Engineering, Electronics and Telecommunications, Sapienza University of Rome</p> <p><sup>3</sup> Department of Environmental Biology, Sapienza University of Rome</p>                                                                                                                             |
| 338 | Digital Twinning for the Health Monitoring and Life-Extension of a Heritage Structure: Reflecting on the lessons from the Clifton Suspension Bridge, Bristol (UK) | <p>Theo Tryfonas</p> <p>University of Bristol</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

16.12.26 | 12:30-14:00 & 14:30-16:00 Hall 1

## Session 12: Reinventing Resilience: Natural Hazards, Earthquake and Structural Rehabilitation

| Id | Title                                                                                                                            | Authors                                                                                                                                                                                                                                                                                      |
|----|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8  | Greek Cultural Heritage Under Pressure: Navigating Crises and Shaping Resilience                                                 | <p>Theodora Chatzi Rodopoulou</p> <p>Dr. Architect Engineer TUDelft-NTUA</p>                                                                                                                                                                                                                 |
| 11 | The Church of San Pietro Maggiore in Tuscania: transformation of structural Behavior as a result of Conservation Interventions   | <p>Caterina F. Carocci<sup>1</sup>, Luciano Antonino Scuderi<sup>2</sup></p> <p><sup>1</sup> Università di Catania</p> <p><sup>2</sup> Ministero della Cultura</p>                                                                                                                           |
| 63 | Post-earthquake conservation and reconstruction. The case of Villa Sant'Angelo (AQ), 17 years after the 2009 L'Aquila earthquake | <p>Caterina Carocci<sup>1</sup>, Margherita Giuffrè<sup>2</sup></p> <p><sup>1</sup> Dipartimento di Ingegneria Civile e Architettura, Università di Catania</p> <p><sup>2</sup> Istituto di Geologia Ambientale e Geoingegneria – Consiglio Nazionale delle Ricerche, Montelibretti (RM)</p> |

## Session 12: Reinventing Resilience: Natural Hazards, Earthquake and Structural Rehabilitation

| Id  | Title                                                                                                                                       | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 66  | From Mitigation to Transformation: Systemic Resilience and Transdisciplinary Risk Governance in Cultural Heritage Conservation              | <p>Athina Georgia Alexopoulou<sup>1</sup>, Christiana Papapostolou<sup>2</sup>, Agathi Athoula Kaminari<sup>3</sup>, Stamatina Theochari<sup>4</sup>, Aimilia Kondili<sup>2</sup>, Penelope Banou<sup>1</sup>, Euthimia Kiskira<sup>3</sup>, Aggelos Kaldellis<sup>2</sup>, Evangelia Panou<sup>5</sup></p> <p><sup>1</sup> University of West Attica, ARTICON Laboratory, Faculty of Applied Arts and Culture</p> <p><sup>2</sup> University of West Attica, Department of Mechanical Engineers</p> <p><sup>3</sup> University of West Attica, Department of Conservation of Antiquities and Artworks</p> <p><sup>4</sup> University of West Attica, Department of Graphic Design</p> <p><sup>5</sup> University of West Attica, ARTICON Laboratory, Faculty of Applied Arts and Culture, University of West Attica</p> |
| 103 | Morphology-Based Assessment of Energy Performance and Seismic Vulnerability in Historic Urban Heritage: The Case of Xanthi Old Town, Greece | <p>Dimitra Tsirigoti, Stylianos Pardalopoulos</p> <p><i>Democritus University of Thrace</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 122 | New findings and discoveries informing resilience-base conservation. The case of the church of Ayia Marina in Frenaros                      | <p>Nasso Chrysochou<sup>1</sup>, Platonas Stylianou<sup>2</sup></p> <p><sup>1</sup> Frederick Univeristy</p> <p><sup>2</sup> Director of P. Stylianou Civil Engineers</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 141 | From Investigation to Intervention: Strategies for Diffuse Architectural Heritage in Seismic Areas                                          | <p>Antonella Saisi</p> <p><i>Politecnico di Milano</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 161 | Key challenges for structural assessment of Unreinforced Masonry historic structures                                                        | <p>Harris Mouzakis, Lucia Karapitta, Maria Apostolopoulou</p> <p><i>National Technical University of Athens</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 162 | Ground motion selection for structural assessment of Unreinforced Masonry historic structures                                               | <p>Harris Mouzakis, Lucia Karapitta</p> <p><i>National Technical University of Athens</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 178 | Seismic performance assessment and strengthening evaluation for earthquake-damaged masonry churches                                         | <p>Georgios Stavroulakis, Maria Stavroulaki, Barbara Charalambidi, Maria-Styliani Daraki, Nikos Kaminakis</p> <p><i>Technical University of Crete</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 189 | Dynamic behavior of colonnades with dowelled multi-drum columns under varying architrave heights                                            | <p>Olympia Panagouli</p> <p><i>University of Thessaly</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 240 | Architectural and Cultural Heritage in Seismic Areas in Italy: Balancing Safety, Conservation and Uncertainty                               | <p>Marco Corradi<sup>1</sup>, Antonio Borri<sup>2</sup></p> <p><sup>1</sup> Huddersfield University</p> <p><sup>2</sup> Department of Engineering, University of Perugia, Perugia, Italy</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 304 | City Information Modeling in Post Emergency Scenarios: From Post-Disaster Data Acquisition to Decision-Support Information Infrastructures  | <p>Lucia Antognozzi<sup>1</sup>, Antonino Libro<sup>2</sup>, Dario Rizzi<sup>1</sup>, Marcello Balzani<sup>1</sup></p> <p><sup>1</sup> UNIFE</p> <p><sup>2</sup> Regione Emilia Romagna</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Session 12: Reinventing Resilience: Natural Hazards, Earthquake and Structural Rehabilitation

| Id  | Title                                                                                                | Authors                                                      |
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| 334 | Demonstrating solutions to protect and preserve cultural heritage from the impacts of climate change | Vasiliki Charalampopoulou<br><i>GEOSYSTEMS HELLAS SA CEO</i> |

16.12.26 | 16:00-18:40 Hall 1

## Session 13: Memory Twin I: From 3D, HBIM and GIS Documentation to a Holistic Digital Framework

| Id  | Title                                                                                                                             | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | Geomatics Based Documentation of Stone Bridges Using GIS: A Comprehensive Review and a Case Study from Pelion, Greece             | Rania Kokkori, Dimitris Psychogios, Sofia Margoni, Eirini Tsiakou<br><i>Department of Architecture University of Thessaly</i>                                                                                                                                                                                                                                                                                                                        |
| 4   | 3D Documentation of paintings using Integrated Geodetic and Photogrammetric Techniques                                            | Stefania Ioannidou<br><i>School of Rural, Surveying &amp; Geoinformatics Engineering, National Technical University of Athens</i>                                                                                                                                                                                                                                                                                                                    |
| 5   | From 3D Documentation to GIS: An Interactive Information System for Paintings                                                     | Stefania Ioannidou <sup>1</sup> , George Pantazis <sup>1</sup> , Elena Konstantinidou <sup>2</sup> , Asterios Bakolas <sup>3</sup><br><i><sup>1</sup> School of Rural, Surveying &amp; Geoinformatics Engineering, National Technical University of Athens</i><br><i><sup>2</sup> School of Architecture, National Technical University of Athens</i><br><i><sup>3</sup> School of Chemical Engineering, National Technical University of Athens</i> |
| 71  | Documentation and digitization of the Church of Hagioi Asomatoi – Methodology and challenges                                      | Athanasios Iliodromitis <sup>1</sup> , Styliani Papatzani <sup>1</sup> , Konstantinos Dimitroulias <sup>2</sup> , Eleni Spentza <sup>3</sup><br><i><sup>1</sup> University of West Attica</i><br><i><sup>2</sup> Hellenic Ministry of Culture</i><br><i><sup>3</sup> Surveying &amp; Geoinformatics Engineer</i>                                                                                                                                     |
| 72  | Preserving details of the Horologion of Andronikos Kyrrhistos through digitization                                                | Styliani Papatzani <sup>1</sup> , Athanasios Iliodromitis <sup>1</sup> , Konstantinos Dimitroulias <sup>2</sup> , Nikolaos Tsoniotis <sup>3</sup><br><i><sup>1</sup> University of West Attica</i><br><i><sup>2</sup> Hellenic Ministry of Culture</i><br><i><sup>3</sup> Ephorate of the Antiquities of Athens</i>                                                                                                                                  |
| 102 | Integrated HBIM and Interdisciplinary Framework for the Digital Reconstruction of the Byzantine Castle of Moglena (Chrisi Pellas) | Sofia Zarkada <sup>1</sup> , Efrosyni Psourouki <sup>2</sup> , Sevasti Tapeinaki <sup>2</sup> , Andreas Georgopoulos <sup>2</sup><br><i><sup>1</sup> University of the Aegean, Dept. of Mediterranean Studies</i><br><i><sup>2</sup> Laboratory of Photogrammetry, NTUA</i>                                                                                                                                                                          |
| 119 | Deformation of Liquid Fuel Storage Tanks Using Modern Measurement and Imaging Methods                                             | Athanasios Magkaniaris <sup>1</sup> , George Pantazis <sup>1</sup> , Vasilis Zafeiris <sup>1</sup> , Nikolaos Darras <sup>2</sup><br><i><sup>1</sup> National Technical University of Athens</i><br><i><sup>2</sup> ASPROFOS SA</i>                                                                                                                                                                                                                  |

## Session 13: Memory Twin I: From 3D, HBIM and GIS Documentation to a Holistic Digital Framework

| Id  | Title                                                                                                                                                                                                        | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 130 | Digital Representation of Architectural Heritage: Dar Lasram as a Field of Application for Photogrammetry                                                                                                    | <p>Dimitris Psychogyios<sup>1</sup>, Evangelos Brachos<sup>2</sup>, Mohsen Ben Hadj Salem<sup>3</sup>, Anastasia Valsamaki<sup>1</sup>, Christina Tsartsaraki<sup>1</sup>, Sophia Briza<sup>1</sup>, Nikolas Makrygiannis<sup>1</sup>, Ioannis Manis<sup>1</sup></p> <p><sup>1</sup> <i>Department of Architecture University of Thessaly</i><br/> <sup>2</sup> <i>Department of Architecture University of Ioannina</i><br/> <sup>3</sup> <i>Department of Architecture and Urban Design, University of Carthage</i></p>              |
| 140 | 3D Digital Recording as the Basis for the Historical Documentation and Conservation of Seven Historic Bridges along the Pavla River, Albania: Challenges and Results                                         | <p>Markos Nikolaou<sup>1</sup>, Andreas Deligiannis<sup>1</sup>, Athanasios Iliodromitis<sup>1</sup>, Anastasia Katsoulou<sup>1</sup>, Panagoula Kopelou<sup>1</sup>, Georgios Papaioannou<sup>2</sup>, Vassilis Pagounis<sup>1</sup></p> <p><sup>1</sup> <i>Laboratory of Geodesy, Surveying &amp; GNSS, Department of Surveying &amp; Geoinformatics Engineering, University of West Attica</i><br/> <sup>2</sup> <i>Museology Research Laboratory, Department of Archives, Library Science and Museology, Ionian University</i></p> |
| 158 | Innovative technologies for geometric documentation: The transition from 3D digital documentation towards a holistic digital heritage environment                                                            | <p>Andreas Georgopoulos<sup>1</sup>, Elisavet Tsilimantou<sup>2</sup>, Konstantinos Apostolopoulos<sup>3</sup>, Antonia Moropoulou<sup>2</sup></p> <p><sup>1</sup> <i>Lab of Photogrammetry, School of Rural, Surveying and Geoinformatics Engineering, NTUA</i><br/> <sup>2</sup> <i>National Technical University of Athens, School of Chemical Engineering</i><br/> <sup>3</sup> <i>School of Rural, Surveying and Geoinformatics Engineering</i></p>                                                                               |
| 170 | Investigation of Digital Methods for Monument Documentation through 3D, GIS and HBIM technologies. Application to the monuments: Tomb of Atreus, Temple of Epicurean Apollo and Hagia Sophia of Thessaloniki | <p>Kyriaki Lafi, Elisavet Tsilimantou</p> <p><i>School of Applied arts and Sustainable Design, Hellenic Open University, Parodos Aristotelous 18, 26335 Patras, Greece</i></p>                                                                                                                                                                                                                                                                                                                                                         |
| 177 | Combined use of NDT technologies and 3D documentation for the assessment of the preservation state of historical stone bridges                                                                               | <p>Elisavet Tsilimantou<sup>1</sup>, Dimitrios Exarchos<sup>2</sup>, Dimitrios Kirikos<sup>2</sup>, Ekaterini Delegou<sup>2</sup>, Theodore Matikas<sup>2</sup>, Vassilis Pagounis<sup>1</sup></p> <p><sup>1</sup> <i>University of West Attica, Department of Surveying and Geoinformatics Engineering, Athens, Greece</i><br/> <sup>2</sup> <i>University of Ioannina, Department of Materials Science and Engineering</i></p>                                                                                                       |
| 198 | Investigation of Methods for Three–Dimensional Documentation and Modeling of Monuments: Case Study of Alatzá Imaret, Thessaloniki                                                                            | <p>Athanasios Mamoutopoulos, Elisavet Tsilimantou</p> <p><i>SCHOOL OF APPLIED ARTS AND SUSTAINABLE DESIGN</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 244 | Gaussian Splatting in Cultural Heritage Documentation: Risks, Challenges and Implications for the Authenticity of the Past                                                                                   | <p>Anthony Cassar<sup>1</sup>, Marinos Ioannides<sup>2</sup></p> <p><sup>1</sup> <i>Technology and Experience Development Unit, Heritage Malta</i><br/> <sup>2</sup> <i>UNESCO Chair on Digital Cultural Heritage, Digital Heritage Research Lab, Cyprus University of Technology</i></p>                                                                                                                                                                                                                                              |

## Session 13: Memory Twin I: From 3D, HBIM and GIS Documentation to a Holistic Digital Framework

| Id  | Title                                                                                                                | Authors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| 351 | Digital documentation of architectural heritage using HBIM technologies: the Sharabia School portal as a model       | Sabeeh Lafta Farhan and Ali Majeed Khairullah<br><i>Wasit University</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 353 | A novel approach for a 3D Holistic Documentation and Quality Assessment in Cultural Heritage: The HERITALISE Project | Alberto Mendikute <sup>1</sup> , Bidane Asua <sup>1</sup> , Marinos Ioannides <sup>2</sup> , Filiberto Chiabrando <sup>3</sup> , Andrea Lingua <sup>4</sup> , Anthony Cassar <sup>5</sup> and Catherine Anne Cassidy <sup>6</sup><br><i><sup>1</sup>Fundación Tekniker, C/ Iñaki Goenaga 5, 20600 Eibar, Gipuzkoa, Spain</i><br><i><sup>2</sup>Research Centre Mnemosyne, Faculty of Engineering and Technology, Cyprus University of Technology</i><br><i><sup>3</sup>Dipartimento di Architettura e Design, Politecnico di Torino</i><br><i><sup>4</sup>Dipartimento Ingegneria dell'Ambiente del Territorio e delle Infrastrutture, Politecnico di Torino</i><br><i><sup>5</sup>Heritage Malta Digitisation Unit, 35, Heritage Malta Head Office Ex Royal Naval Hospital Dawret Fra Giovanni Bich</i><br><i><sup>6</sup>Open Virtual Worlds, School of Computer Science, St Andrews, Fife</i> |

16.12.26 | 18:30-19:20 Hall 1

## Session 14: Maritime Heritage Preservation

| Id  | Title                                                                                                          | Authors                                                                                                                                                                                                                                                                                                                                                                        |
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| 125 | Preservation of cultural heritage in traditional shipbuilding. Hydrodynamic analysis of a karavoskaro vessel.  | Thomas Mazarakos <sup>1</sup> , Sotiria Dimitrellou <sup>2</sup> , Sarantos Sarantidis <sup>2</sup> , Lambros Alexandris <sup>2</sup><br><i><sup>1</sup>Associate Professor, School of Engineering, Department of Naval Architecture, University of West Attica</i><br><i><sup>2</sup>School of Engineering, Department of Naval Architecture, University of West Attica</i>   |
| 126 | Preservation of cultural heritage in traditional shipbuilding. Additive manufacturing of a trechandiri vessel. | Sotiria Dimitrellou <sup>1</sup> , Thomas Mazarakos <sup>2</sup> , Antonios Zeibekoglou <sup>1</sup> , Sarantos Sarantidis <sup>1</sup><br><i><sup>1</sup>School of Engineering, Department of Naval Architecture, University of West Attica</i><br><i><sup>2</sup>Assistant Professor, School of Engineering, Department of Naval Architecture, University of West Attica</i> |
| 320 | Sustainable preservation of the Greek shipbuilding heritage                                                    | Gregory Grigoropoulos<br><i>National Technical University of Athens NTUA</i>                                                                                                                                                                                                                                                                                                   |
| 323 | Preservation of water-related cultural heritage: The case of the Church of Agios Nikolaos in Alassa            | Georgia Frangoudi <sup>1</sup> , Maria Philokyprou <sup>2</sup><br><i><sup>1</sup>Department of Antiquities</i><br><i><sup>2</sup>University of Cyprus</i>                                                                                                                                                                                                                     |