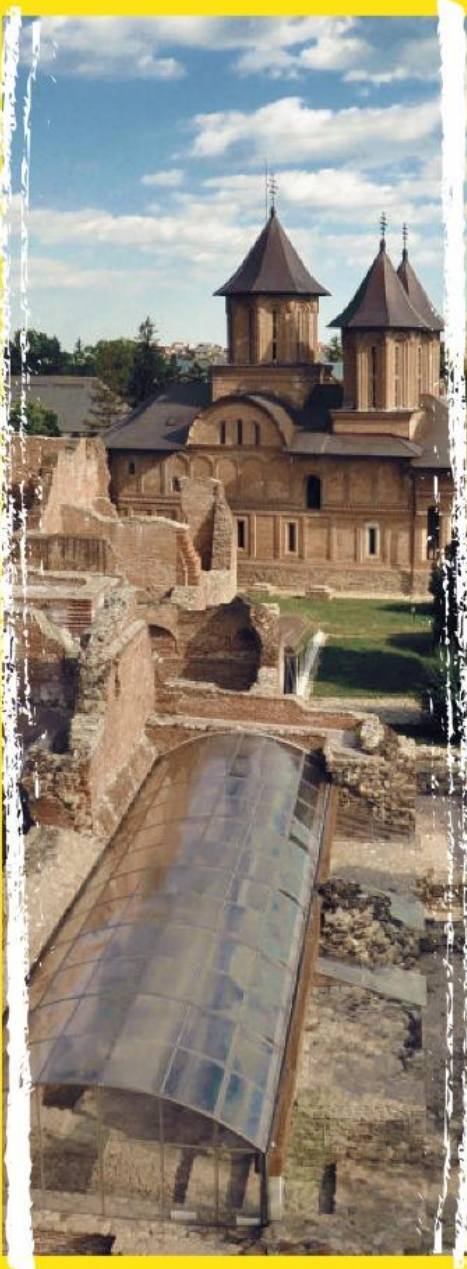




1<sup>st</sup> Annual International  
**KreativEU**  
Conference  
Heritage, Science and Technology  
for a Sustainable Preservation



Valahia  
University  
of Targoviste



Academy  
of Romanian  
Scientists

# Book<sup>of</sup> Abstracts

*Targoviste*

A PLACE EMBRACED BY  
HISTORY AND HERITAGE

**16-17 MAY, 2024**

Event organized under the patronage of



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**75<sup>th</sup>** CIPSH

INTERNATIONAL TECHNICAL GROUP FOR THE STUDY AND CONSERVATION OF HISTORIC MONUMENTS AND SITES  
GRUPUL INTERNAȚIONAL DE LA PĂSTRAREA ȘI ÎNVIETAREA MONUMENTELOR ȘI SITURILOR HISTORICE



**1<sup>st</sup> Annual International  
KreativEU Conference**

**HERITAGE, SCIENCE, AND  
TECHNOLOGIES FOR  
SUSTAINABLE PRESERVATION**

Targoviste  
May 16<sup>th</sup> – 17<sup>th</sup>, 2024

# TOPIC POLICIES

## ***Cultural Heritage: Legal Challenges and Management***

- Exploring the legal framework and regulatory challenges in preserving cultural heritage.
- Strategies and best practices for effective heritage management.

## ***Mapping, Interpretation and Marketization of Historical Sites***

- Novel research approaches for mapping and interpreting historical sites.
- The economic implications of heritage marketization and sustainable tourism.

## ***Natural Hazards and Cultural Heritage***

- Assessing the impact of natural disasters and climate change on cultural heritage.
- Strategies for disaster preparedness and recovery in heritage preservation.

## ***New Trends in Conservation of Cultural Heritage***

- Exploring emerging trends, innovations, and methodologies in cultural heritage conservation.
- Case studies on successful implementation of new conservation techniques.

## ***Technologies and Materials in Cultural Preservation***

- Showcasing the latest technological advancements and materials used in cultural preservation.
- Their applications and benefits in preserving and restoring heritage artifacts.

## ***Invasive and Non-Invasive Techniques Applied on Heritage***

- A deep dive into invasive and non-invasive techniques used for heritage analysis and restoration.
- Ethical considerations and best practices when employing these techniques.

## **SCIENTIFIC COMMITTEE**

Laura-Monica GORGHIU, Valahia University of Targoviste, Romania

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Lígia MATEUS, Polytechnic University of Tomar, Portugal; TECHN&ART - Centre for Technology, Restoration and Art Enhancement, Portugal

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Ioan Alin BUCURICA, Valahia University of Targoviste, Romania

Alexandru POMPILIU, Valahia University of Targoviste, Romania

## SCHEDULE

Wednesday, May 15<sup>th</sup>, 2024

Arrival of participants.

Thursday, May 16<sup>th</sup>, 2024

8 <sup>30</sup> – 9 <sup>30</sup>	<b>Registration</b>
9 <sup>30</sup> – 10 <sup>00</sup>	<b>Amphitheater</b> <b>Opening Ceremony</b> Chairperson: Silviu Miloiu
	<b>Speakers:</b> <i>Madlen Serban</i> Secretary General of the National Commission of Romania for UNESCO
	<i>Hugo Cristóvão</i> Mayor of Tomar
	<i>Célio Marques</i> Pro-President for Internationalization and Pedagogical Innovation of the Polytechnic University of Tomar
10 <sup>00</sup> – 11 <sup>00</sup>	<b>Keynote Speech</b> Chairperson: Sergiu Musteata <i>Augustin Lazar</i> – Royal Dacian Treasures Recycled on the Antiquities Market
11 <sup>00</sup> – 11 <sup>30</sup>	<b>Coffee Break</b>
11 <sup>30</sup> – 13 <sup>30</sup>	<b>Parallel Sessions:</b>
<b>Amphitheater</b> <i>Enhancing Cultural Heritage Through Gamification and Visitor Experiences</i> Chairperson: Andrea Popa	
11 <sup>30</sup> – 12 <sup>00</sup>	<i>Célio Gonçalo Marques, Lígia Mateus, João Tomaz Simões, Inês Serrano, Hélder Pestana</i> – Criteria for Evaluating Gamification Initiatives Applied to Cultural Heritage
12 <sup>00</sup> – 12 <sup>30</sup>	<i>Lyubomira Todorova, Lyubka Mincheva Ilieva</i> – Opportunities to Add Value to the Cultural Tourism Product through Gamification
12 <sup>30</sup> – 13 <sup>00</sup>	<i>Mihai Dragomir</i> – Cultural Heritage is not Set in Stone, It is in the Experience People Share – the Rasnov Fortress Case
13 <sup>00</sup> -13 <sup>30</sup>	<i>Costin-Mihai Dumitru</i> – Peleş Castle - From the Royal Residence to the Communist and Post-communist Museum

**Library**

*Invasive and Non-Invasive Techniques Applied on Heritage*

Chairperson: Marisa P. de Brito

11 <sup>30</sup> – 12 <sup>00</sup>	<i>Simone Campanelli, Renato De Leone, Graziella Roselli</i> - Elemental Analysis by XRF of Color Samples Used by Giorgio de Chirico sampled in the Master's Atelier at the House Museum Located in Piazza di Spagna in Rome
12 <sup>00</sup> – 12 <sup>30</sup>	<i>Sergiu Musteata, Anca Irina Gheboianu, Ioana Daniela Dulama, Ioan-Alin Bucurica, Raluca Maria Stirbescu, Cristiana Radulescu</i> - Sphero-Conical Vessel from Orheiul Vechi, Republic of Moldova. Preliminary Results of Physicochemical Analyses
12 <sup>30</sup> – 13 <sup>00</sup>	<i>Mihai Gligor, Ioana Daniela Dulama, Cristiana Radulescu, Ioan Alin Bucurica, Raluca Maria Stirbescu, Sorina Geanina Stanescu, Calin Suteu</i> - 3D Scanning and Archaeometric Analysis of Transylvanian Plastic Art. Case study: Alba Iulia-Lumea Nouă Neolithic and Eneolithic Artefacts
13 <sup>00</sup> – 13 <sup>30</sup>	<i>James O'Donnell</i> - Raman for Archaeometry

13<sup>30</sup> – 14<sup>30</sup>

**Lunch**

14<sup>30</sup> – 16<sup>00</sup>

**Parallel Sessions:**

**Amphitheater**

*New Trends in Conservation of Cultural Heritage*

Chairperson: Rodica-Mariana Ion

14 <sup>30</sup> – 15 <sup>00</sup>	<i>Andreia Nogueira</i> - Creative Conservation and the Accumulation of the Past: A New Art Conservation Ecology
15 <sup>00</sup> – 15 <sup>30</sup>	<i>Gianina Joldescu-Stan</i> - Immersive Technologies as Cultural Heritage Protection Tools. A Case Study on Romanian Ancient Cultural Heritage
15 <sup>30</sup> – 16 <sup>00</sup>	<i>Nicoleta Insuratelu, Costel Coroban, Ana Maria Gramescu</i> – The Use of Lead in Heritage Buildings

14<sup>30</sup> – 16<sup>00</sup>

**Library**

**WORKSHOP:**

*Sustainable Preservation: Challenges and Opportunities*

Coordinators: Marisa P. de Brito and Hermínia Sol

16<sup>00</sup> – 16<sup>30</sup>

**Coffee Break**

16<sup>30</sup> – 18<sup>30</sup>

**Parallel Sessions:**

**Amphitheater**

*Bridging Culture, Memory and Heritage*

Chairperson: Lucia Nováková

16 <sup>30</sup> – 17 <sup>00</sup>	<i>Costel Coroban, Costin-Valentin Oancea</i> - Museum(s) of a Global Phenomenon. Historical Monuments of the English Language
17 <sup>00</sup> – 17 <sup>30</sup>	<i>Silviu Miloiu</i> - Dracula and Queen Mary Tourism in Bran Museums - Dichotomy or Cultural Confluence?
17 <sup>30</sup> – 18 <sup>00</sup>	<i>Ligia Mateus</i> - The Memory of the Great War in Portugal (1914-2014): A Historiographical Essay

18 <sup>00</sup> – 18 <sup>30</sup>	<i>Florin Gerard Calin, Camelia Calin - The Monuments of Traditional Architecture in the Argeş County - State of Conservation and Prospects for a Better Future</i>
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**Library**

*Technologies and Materials in Cultural Preservation*

Chairperson: Mihai Gligor

16 <sup>30</sup> – 17 <sup>00</sup>	<i>Diana Irinel Baila, Igor Fodchuk, Remigiusz Łabudzki, Myriam Bonilla - Accuracy of Sla and Material Morphology Used in Architecture</i>
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17 <sup>00</sup> – 17 <sup>30</sup>	<i>Rodica-Mariana Ion - Roman Architectural Heritage: Materials and Minimal Interventions for a Sustainable Conservation</i>
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17 <sup>30</sup> – 18 <sup>00</sup>	<i>Laurentiu Dragomir, Marian Dabuleanu, Petronela Fotea, Iulia Anania, Vivian Dragomir, Silviu David - Restoration in War: Restoration of the Funerary Monument of Dimitrie Onciul from the Central Cemetery in Chernivtsi (Ukraine)</i>
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18 <sup>00</sup> – 18 <sup>30</sup>	<i>Adrian Iordache, Ana Ilie, Dragos Viorel Brezoi, Anca Irina Gheboianu, Sofia Slamnoiu-Teodorescu - Archaeometric Analysis of Ceramic Decoration from the Tell Settlement of Hârşova</i>
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19 <sup>00</sup>	<b>Gala Dinner: NOVA Hotel</b>
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Friday, May 17<sup>th</sup>, 2024

8 <sup>30</sup> – 9 <sup>00</sup>	<b>Registration</b>
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9 <sup>00</sup> – 10 <sup>00</sup>	<b>Amphitheater</b> <b>Keynote Speech</b> Chairperson: Mladev Stanev
	<i>Nikolay Ovcharov - The Medieval Svishtov and the Arrival of the Legendary Dracula in 1462</i>

10 <sup>00</sup> – 10 <sup>30</sup>	<b>Coffee Break</b>
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10 <sup>30</sup> – 12 <sup>30</sup>	<b>Parallel Sessions:</b>
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**Amphitheater**

*Challenges, Opportunities and Risks in Cultural Heritage and Tourism*

Chairperson: Herminia Sol

10 <sup>30</sup> – 11 <sup>00</sup>	<i>Rami K. Isaac - Moving from Pilgrimage to Cultural Heritage Tourism in Palestine: Potentials &amp; Limitations</i>
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11 <sup>00</sup> – 11 <sup>30</sup>	<i>Cezar Petre Buiumaci - Stone Crosses – Elements of Urbanity</i>
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11 <sup>30</sup> – 12 <sup>00</sup>	<i>Radu Carp - Destruction of an UNESCO Protected Site: The City of Odesa</i>
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12 <sup>00</sup> – 12 <sup>30</sup>	<i>Cristina Paiusan, Daniel Cosmin Obreja - Recovery of National Heritage through Private Collections. Case Study of a Few Documents from the War of Independence from the Daniel Obreja Collection</i>
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**Library**

*Managing Archaeological Heritage: Perspectives and Challenges*

Chairperson: Ioana Dulama

10 <sup>30</sup> – 11 <sup>00</sup>	<i>Alexandru Popa, Andrea Popa</i> - Archaeological Heritage Management and Valorisation: A Stakeholder Perspective
11 <sup>00</sup> – 11 <sup>30</sup>	<i>Corina Bors</i> - Current Legislative Framework for Development-Led Archaeology in Romania: A SWOT Analysis and Perspectives for The Heritage Code
11 <sup>30</sup> – 12 <sup>00</sup>	<i>Claudiu Purdea</i> - The Archaeological Heritage Between Theft and Recovery. Case Study: Roman Coin Hoards from the Area of the Şureanu Mountains
12 <sup>00</sup> – 12 <sup>30</sup>	<i>Corina Bors, Maria-Magdalena Stefan, Andrei Asandulesei, Mihai Florea, Calin Suteu</i> - Understanding & Documenting the Past in the Framework of Large-Scale Infrastructure Projects. The Upper Topolog River Valley (Romania) – a Useful Case-Study for Archaeological Heritage Management

**Amphitheater**

Speakers: Sergiu Musteata & Andrea Popa

**Book presentation:** *Integrated Management of World Cultural Heritage in Romania. Case Study: The Roman Frontier in Dacia*

12<sup>30</sup> – 12<sup>45</sup>

12<sup>45</sup> – 14<sup>00</sup>

**Lunch**

14<sup>00</sup> – 16<sup>30</sup>

**Parallel Sessions:**

**Amphitheater**

*Preserving the Past: Legal Frameworks and Management Strategies for Cultural Heritage*

Chairperson: Célio Gonçalves Marques

14 <sup>00</sup> – 14 <sup>30</sup>	<i>Sergiu Musteata</i> - The World Heritage Serial Properties: Legal Challenges and Management. The Case of Romania
14 <sup>30</sup> – 15 <sup>00</sup>	<i>Katarzyna Łukaniszyn-Domaszewska, Elżbieta Karaś, Wanda Musialik</i> - Cultural Heritage as a Key Element of Sustainable Development: Implications and Perspectives
15 <sup>00</sup> – 15 <sup>30</sup>	<i>Ânia Chasqueira, Ricardo Triães</i> - The Perception of Intangible Cultural Heritage through Inventory Lists
15 <sup>30</sup> – 16 <sup>00</sup>	<i>Carmen Elena Balteanu</i> - Current National Legislation vs Church Regulations: Two Major Anthropogenic Factors of Degradation of the Intangible National Heritage
16 <sup>00</sup> – 16 <sup>30</sup>	<i>Emanuela Ana-Maria Balan, Alexandra Zbucea</i> - Networking and Collaboration between Heritage Managers and Stakeholders: Essential or Optional for Modern Museums?

**Library**

*Natural Hazards and Cultural Heritage*

Chairperson: *Cristiana Radulescu*

14 <sup>00</sup> – 14 <sup>30</sup>	<i>Lucia Nováková - Ancient City and Catastrophe: Survival Strategies and Recovery</i>
14 <sup>30</sup> – 15 <sup>00</sup>	<i>Jorge Raposo, Eugénio Almeida, João M. Patrício, Rita Anastácio, Luís Reis, Anabela Moreira - Forest Fires and their Impact on Cultural Heritage - An Integrated Approach to Prevention and Preservation</i>
15 <sup>00</sup> – 15 <sup>30</sup>	<i>Daniela Moisa, Iurie Stamati - Rebuilding the Old Way to Live Better in the Future. Intangible Heritage for Sustainable Preservation in Quebec, Canada</i>
15 <sup>30</sup> – 16 <sup>00</sup>	<i>Claudia Stihi, Oana Catalina Bute, Crinela Dumitrescu - Indoor Radon Concentration in Old Heritage Churches – A Case Study</i>
16 <sup>00</sup> – 16 <sup>30</sup>	<i>Maria Alexandra Nacu, Ruxandra Sapoi, Denisa Negreanu, Bogdan Zorila - Protection against Indoor Radon in Case of Building Restoration. The Perspective of an Environmental Monitoring Laboratory</i>
16 <sup>30</sup> – 17 <sup>00</sup>	<b>Closing Ceremony</b>
17 <sup>00</sup> – 19 <sup>00</sup>	<b>Farewell Party at the Princely Court of Targoviste</b>

# KEYNOTE SPEECHES



## ROYAL DACIAN TREASURES RECYCLED ON THE ANTIQUITIES MARKET

*Augustin Lazar*

*“1 Decembrie 1918” University of Alba Iulia, Romania*

**Abstract.** The paper analyzes the judicial case involving unlawful activities of the trafficking networks from 1997 to 2007, financed by players of the illegal antiquities market and carried out in a turbulent internal and external context (the war in former Yugoslavia, the mining raids of 1998-1999, the events of September 11, 2001). Using metal detectors, the poachers stole emblematic treasures from the archaeological site, UNESCO monument, *Sarmizegetusa Regia* - the former capital of the Kingdom of Dacia (1st century BC - 2nd AD) - located in the Șureanu Mountains, Hunedoara County. In order to hide or disguise the criminal origin and to suggest a legal provenance, the network members recycled the product of the theft, on the antiquities market: thousands of ancient coins (Roman denarii, gold stateres Koson, Lysimachos, Asander, Pharnakes II) and 24 spiral bracelets, with a total weight of approximately 115 kg of gold artefacts, worth around 25 million euros.

The study notes that until now, only about 1/4 of the stolen cultural goods have been recovered, others, indicated by the evidence, are being recycled on the Internet. The paper presents the court decisions and the effective legal instruments used by the Romanian judicial authorities to sanction the laundering of the criminal proceeds resulting from the illicit traffic in cultural goods and the recovery of some artefacts, emblematic for the cultural heritage. It reveals the role of international judicial cooperation, through EUROJUST, EUROPOL, INTERPOL, in sanctioning the traffic, in recovering the stolen and recycled emblematic goods, lost from the national cultural heritage: spiral bracelet hoards, gold monetary hoards, shield umbo, etc.

The work also represents a challenge for the young generation of experts, researchers and magistrates to continue the work of recovering lost assets, relying on the perfected jurisprudence and the available legal instruments: the European warrant for obtaining evidence, the freezing order, the European Investigation Order, the 1995 UNIDROIT Convention.

**Keywords:** European Investigation Order, 1995 UNIDROIT Convention, Emblematic goods, Draco dacicus, Dacian wolf, Koson, Lysimachos, Asander, Pharnakes.

## **THE MEDIEVAL SVISHTOV AND THE ARRIVAL OF THE LEGENDARY DRACULA IN 1462**

*Nikolay Ovcharov*

*D. A. Tsenov Academy of Economics, Bulgaria*

**Abstract.** This paper explores the historical significance of the medieval fortress in Svishtov, Bulgaria, shedding light on its origins, development, and strategic importance throughout the centuries. Led by Nikolay Ovcharov, archaeological excavations reveal insights into the fortification's role, particularly during the Ottoman-Turkish conflicts. Of particular interest is the connection between the fortress and the legendary figure Vlad III Tepes, also known as Dracula, who played a pivotal role in the region's history. Dracula's siege of Svishtov in 1462 and subsequent events are analyzed, providing valuable insights into the military tactics and weaponry of the time. The paper concludes with reflections on the enduring legacy of Dracula and plans for the restoration of the fortress, promising to boost tourism in the region.

**Keywords:** Medieval fortress, Svishtov, Dracula, Vlad III Tepes, Ottoman Empire, Siege, Archaeological excavations, Military tactics, Weaponry, Legacy, Tourism.

# **SECTION 1: CULTURAL HERITAGE: LEGAL CHALLENGES AND MANAGEMENT**

**Session 1.1. Preserving the Past: Legal Frameworks and Management  
Strategies for Cultural Heritage**



## **THE WORLD HERITAGE SERIAL PROPERTIES: LEGAL CHALLENGES AND MANAGEMENT. THE CASE OF ROMANIA**

*Sergiu Musteata*

*Valahia University of Targoviste, Romania*

**Abstract.** By adopting the Convention Concerning the Protection of the World Cultural and Natural Heritage (Paris, 1972), UNESCO established an international protection framework for the cultural and natural heritage which has an outstanding universal value. Since then, UNESCO created a comprehensive evaluation, monitoring, and reporting system, enhancing in time the role of Communities regarding WHS conservation and management (Budapest Declaration, 2002). In the last five decades, World Heritage (WH) has become a global issue with a direct impact on international relations, economy, tourism, and management. The World Heritage List (WHL) is constantly growing with annual inscriptions of new sites from around the world, and today contains 1199 properties. A special category of properties from the WHL is represented by the serial properties (national, transboundary), defined by UNESCO as those that will include two or more components while treated as a single nomination and each part should contribute to the Outstanding Universal Value of the property as a whole. The concept of the World Heritage serial nomination or serial property was introduced by Operational Guidelines for the Implementation of the World Heritage Convention in 1980 (Francioni, Lenzerini, 2008, 99-100). During the last four decades, it has been revised and has become more detailed and specific. UNESCO published some recommendation works to help state parties in preparing nominations, including serial properties (Preparing World Heritage Nominations, 2010). However, the issue of the World Heritage serial properties is modestly debated in the scientific literature. Over three decades have passed since Romania signed the World Heritage Convention, and its implementation leaves much to be desired from several perspectives, including scientific research on heritage issues. In Romania, from nine properties, four are national cultural serial properties (churches of Moldavia - 8, villages with fortified churches in Transylvania - 7, Dacian fortresses of the Orăștie Mountains - 6, wooden churches of Maramureș - 8) and one transnational natural serial property (Ancient and Primeval Beech Forests of the Carpathians and Other Regions of Europe). Two new serial properties (one national and another transboundary) are under nomination process: Frontiers of the Roman Empire – Dacia, and Frontiers of the Roman Empire - The Danube Limes. Unfortunately, during the last three decades, the Romanian Government has not created efficient management and monitoring tools for the WHS. This study is actual from several perspectives, especially in the context of developing the Code of Cultural Heritage and the National Strategy on the Protection of Historical Monuments in Romania. The serial property requires a special approach because of their administrative position, and specific management needs. Under these circumstances, the WHSP concept

requires new approaches to management, monitoring, evaluation, and reporting tools. Therefore, within my presentation, I will discuss the experiences of countries that already manage serial properties, compare these with the situation in Romania, and try to find solutions for better management and sustainable preservation of serial sites from our country.

**Keywords:** World heritage serial properties, Heritage preservation, Management, Romania.



**CULTURAL HERITAGE AS A KEY ELEMENT OF SUSTAINABLE DEVELOPMENT: IMPLICATIONS AND PERSPECTIVES**

*Katarzyna Łukaniszyn-Domaszewska, Elżbieta Karaś, Wanda Musialik*

*Opole University of Technology, Poland*

**Abstract.** Cultural heritage plays a vital role in shaping sustainable development strategies worldwide. This paper explores the multifaceted implications and perspectives of cultural heritage as a fundamental element in promoting sustainable development. It elucidates the diverse ways in which cultural heritage contributes to economic, social, and environmental sustainability. Additionally, the paper discusses the challenges and opportunities associated with integrating cultural heritage into sustainable development agendas. By highlighting the significance of cultural heritage in fostering resilience and inclusivity, this study provides valuable insights for policymakers, practitioners, and scholars seeking to advance sustainable development initiatives.

**Keywords:** Cultural heritage, Sustainable development, Integration, Resilience, Inclusivity, Policymaking.

## **THE PERCEPTION OF INTANGIBLE CULTURAL HERITAGE THROUGH INVENTORY LISTS**

*Ânia Chasqueira<sup>1</sup>, Ricardo Triães<sup>2</sup>*

*<sup>1</sup> TECHN&ART - Centre for Technology, Restoration and Art Enhancement, Portugal*

*<sup>2</sup> Polytechnic University of Tomar, Portugal*

**Abstract.** As stated in the 2003 Convention for the Safeguarding of Intangible Cultural Heritage (ICH), it is essential to identify and document ICH, through inventories at both national and international levels, essentially because it requires a safeguarding plan.

Given the importance of ICH inventories as a legal instrument for the protection of this heritage, we believe it is important to understand how communities, local governments and stakeholders, recognise their ICH in the context of these inventories. For this purpose, a survey was carried out among the general population to understand whether the Portuguese community has a different appreciation of ICH and ICH in need of urgent safeguard. As well as the general perception of cultural heritage, i.e. whether they would consider only those manifestations that are inventoried as ICH. One of the open questions also sought to understand what they considered to be ICH in need of protection.

In this sense, the main objective of this reflection is to analyse how the community perceives its ICH considering its inclusion in national and international inventory lists and the perception of the concept of ICH.

**Keywords:** Inventory lists, Intangible cultural heritage, Safeguarding.

**Acknowledgement.** *This work is supported by national funding through the Portuguese National Funding Agency for Science, Research and Technology (FCT) under the PhD research grant with reference UI/BD/151231/2021, and hosted by TECHN&ART - Centre for Technology, Restoration and Art Enhancement, at Polytechnic University of Tomar, in Portugal.*

**CURRENT NATIONAL LEGISLATION VS CHURCH REGULATIONS: TWO MAJOR ANTHROPOGENIC FACTORS OF DEGRADATION OF THE INTANGIBLE NATIONAL HERITAGE**

*Carmen Elena Balteanu*

*Directorate for Culture of Dolj County, Romania*

**Abstract.** This paper unveils one of the key findings stemming from extensive on-site research encompassing over 40 wooden churches. Drawing upon a compelling case study, I will delve into the wooden church located in Pistrîta, Mehedinți county. This church serves as a microcosm reflecting the artistic mastery of the zograph painters Popa Ghițe and his son, Mihăiță, renowned for their work at the onset of the 19th century. Their distinctive holographic and artistic signatures grace not only Pistrîta but also adorn other wooden churches across Mehedinți, including Turtaba, Drăghești, Gornovița, Vidimirești, Prejna, Isverna, Mălărișca, Podeni, and Gornenți. Regrettably, the state of conservation for both the architectural structure and the artistic components within these churches is dire, necessitating urgent conservation-restoration measures. However, despite the permissibility of minor interventions under current national legislation (given the absence of external funding in this instance), internal church regulations pose significant hurdles to executing interventions aimed at halting the degradation, particularly concerning the status of restorers. This presents a formidable challenge in preserving this invaluable heritage.

**Keywords:** Pistrîta, Mehedinți, Popa Ghițe, Mihai Sîn Popa Ghițe, Legislation, Immovable national heritage.

## **NETWORKING AND COLLABORATION BETWEEN HERITAGE MANAGERS AND STAKEHOLDERS: ESSENTIAL OR OPTIONAL FOR MODERN MUSEUMS?**

*Emanuela Ana-Maria Balan, Alexandra Zbucnea*

*National University of Political Studies and Public Administration, Romania*

**Abstract.** In the realm of modern museum management, simply preserving and showcasing collections is no longer sufficient. A museum's success hinges on its ability to adapt to the evolving needs of its visitors and stakeholders. In the case of Romanian museums, stakeholders encompass a diverse array of entities, including visitors, employees, the local community, public administration, educational institutions, volunteers, researchers, non-profit organizations, and businesses. Among these stakeholders, we assert that friends of the museum associations play a pivotal role. Such associations might play a vital role in supporting museum development by providing financial assistance, advocacy, volunteer support, community engagement, networking opportunities, and assisting strategies for long-term sustainability. This paper delves into the collaborative dynamics among Romanian museums, which have led to the formation of such associations. Specifically, through interviews with museum personnel, we seek to uncover the contributions of these associations and the extent of their involvement in museum initiatives, spanning exhibitions, educational activities, and events. Additionally, by engaging in dialogue with association members, we aim to discern their motivations and assess whether they perceive their collaboration with the museum as indicative of the institution's commitment to inclusivity and engagement with the broader public. Through this exploration, we endeavor to shed light on the symbiotic relationship between museums and their affiliated associations, ultimately advocating for a more inclusive and responsive museum landscape in Romania.

**Keywords:** Museum stakeholder management, Participatory museum, Engaged stakeholders, Networking, Friends of the museum.

# **SECTION 1: CULTURAL HERITAGE: LEGAL CHALLENGES AND MANAGEMENT**

**Session 1.2. Challenges, Opportunities and Risks in Cultural Heritage  
and Tourism**



## **MOVING FROM PILGRIMAGE TO CULTURAL HERITAGE TOURISM IN PALESTINE: POTENTIALS & LIMITATIONS**

*Rami K. Isaac*

*Breda University of Applied Sciences, Netherlands*

**Abstract.** Tourism destinations such as Palestine or others reinvent themselves for various reasons ranging from intrinsic characteristics of tourism demand to economic behaviour and attitudes towards environments and local communities. A popular idea among the DMOs, tourism facilities, cultural heritage resources, and local places, particularly in Palestine, is the shift from pilgrimage tourism to cultural heritage tourism. This article uses the case of Palestine to examine the processes and instruments for such a change. The conceptual paper starts by discussing the trends in tourism, determinants of destination success and different trends in promoting rural and cultural heritage destinations instead of mass tourism (pilgrimage). It discusses the main argument that shifting from pilgrimage to rural cultural heritage raises several issues and difficulties. A whole or in part shift from pilgrimage to cultural heritage-based tourism is more than a simple product replacement. It has several consequences. The paper follows by discussing the consequences of 'welcome' and the 'unwelcome' arguments for such change (from a pilgrimage to cultural heritage), the associated constraints and issues, and finally, two possible scenarios for such a change. This paper also explores the answer to the basic question of why there has been a shift from pilgrimage to cultural heritage.

**Keywords:** Palestine, Heritage, Pilgrimage, Narratives, Identity, Heritage markets, Scenarios.

## STONE CROSSES – ELEMENTS OF URBANITY

*Cezar Petre Buiumaci*

*The Museum of Bucharest City, Romania*

**Abstract.** This study serves as a vivid portrayal underscoring the significance of stone crosses situated beyond the confines of cemetery grounds as integral components of urban landscapes, emblematic of a distinct genre of monuments synonymous with the medieval Wallachian city. Initially associated with rural locales as emblematic of peasant culture, these crosses, with their diverse typology, intricate inscriptions, and elaborate ornamentation, are revealed to be products of specialized workshops manned by highly skilled artisans catering to a broad spectrum of clientele. Emerging within a period of profound societal upheaval characterized by the ascendance of a rural bourgeoisie and the consequent urbanization of certain settlements, these stone crosses emerge as public testimonials crafted amidst an iconoclastic zeitgeist, challenging the inclination to immortalize particular historical events. Their significance transcends mere commemoration, serving as conduits of insight into the ethos, architecture, language, religion, and social dynamics of medieval Romanian society. Furthermore, they offer glimpses into the legal, economic, and political frameworks of their time. Yet, these venerable monuments have endured various forms of adversity, ranging from repurposing as construction materials and displacement to conceal property demarcations to the ravages of natural disasters and human intervention, both intentional and unintentional. Many have been relocated in efforts to ensure their preservation. Concurrently, this endeavor seeks to propose strategies for rekindling local community engagement with and appreciation for the role and import of these monuments.

**Keywords:** Wallachia, Stone crosses, Monument, Urbanity.

## **DESTRUCTION OF AN UNESCO PROTECTED SITE: THE CITY OF ODESA**

*Radu Carp*

*University of Bucharest, Romania*

**Abstract.** The ongoing war in Ukraine has inflicted severe damage on its cultural heritage, with countless casualties and destruction of significant archaeological sites and museums. The conflict has ravaged areas of historical importance, including UNESCO-protected sites like Odesa, leaving a trail of devastation. This paper examines the impact of the conflict on Odesa, drawing on firsthand accounts and evidence from local residents. Through a comprehensive analysis of photographs and videos documenting the destruction, it seeks to quantify the extent of the damage and propose concrete solutions for the preservation and restoration of Ukraine's cultural heritage, with a specific focus on Odesa. By highlighting the urgent need for action, this study aims to contribute to efforts aimed at safeguarding the rich cultural legacy of Ukraine in the face of conflict-induced threats.

**Keywords:** Cultural heritage, Damages, Ukraine, UNESCO, War.



**RECOVERY OF NATIONAL HERITAGE THROUGH PRIVATE COLLECTIONS. CASE STUDY OF A FEW DOCUMENTS FROM THE WAR OF INDEPENDENCE FROM THE DANIEL OBREJA COLLECTION**

*Cristina Paiusan<sup>1</sup>, Daniel Cosmin Obreja<sup>2</sup>*

*<sup>1</sup> National History Museum of Romania, Romania*

*<sup>2</sup> Collector, independent researcher, numismatist*

**Abstract.** The establishment of Romania's first museums owes much to the dedication of private collectors who amassed treasures from Moldova and Wallachia during the 19th century. These collectors, whether renowned or merely enthusiasts, safeguarded a significant portion of the nation's immovable heritage, which now resides in museums across Romania. Moreover, their efforts extended beyond preservation; they played a pivotal role in repatriating Romanian heritage from collections worldwide, enriching the national cultural circuit. As we examine the legal complexities surrounding the conservation of Romanian, European, and global heritage, it becomes apparent that private collections are integral to museum activities. Recognizing this symbiotic relationship, the European Union has endeavored to regulate collaboration between public institutions and private collectors, fostering mutual support for heritage preservation. Through a case study focusing on documents recovered and added to the Daniel Obreja Collection from the era of the war of independence, this paper sheds light on the invaluable contributions of private collectors to Romania's cultural legacy. The process of discovery, acquisition, research and placing in the public circuit of some cultural assets related to one of the fundamental historical events of the modern history of Romania - the war of independence, stretched for more than a decade, with rare and valuable heritage assets being discovered. Their presentation and integration into a large-scale international event provides a good picture of the collaboration of museums with collectors, researchers from the public and private environment.

**Keywords:** Heritage, Private collection, Romanian`s War of Independence, Romanian heritage, Documents.

# **SECTION 1: CULTURAL HERITAGE: LEGAL CHALLENGES AND MANAGEMENT**

**Session 1.3. Managing Archaeological Heritage: Perspectives and  
Challenges**



## **ARCHAEOLOGICAL HERITAGE MANAGEMENT AND VALORISATION: A STAKEHOLDER PERSPECTIVE**

*Alexandru Popa<sup>1,2</sup>, Andrea Popa<sup>3</sup>*

*<sup>1</sup> University of Regensburg, Deutschland*

*<sup>2</sup> National Museum of the Eastern Carpathians, Romania*

*<sup>3</sup> Valahia University of Targoviste, Romania*

**Abstract.** The Dacian Limes, a significant cultural and historical treasure, was officially nominated for UNESCO World Heritage status on January 31, 2023. Accompanying this nomination was a comprehensive draft management plan. This plan, crucial for the sustainable conservation and advancement of the Dacian Limes, hinges upon active involvement from all stakeholders, particularly the local communities. Yet, alongside this involvement, effective communication tools are imperative to foster collaboration and engagement among these stakeholders. This presentation aims to underscore the critical role of such tools and motivate experts to integrate them into their future endeavors.

**Keywords:** UNESCO World Heritage, Roman Limes, Roman Dacia, Management plan, Stakeholder engagement, Local communities.

**CURRENT LEGISLATIVE FRAMEWORK FOR DEVELOPMENT-LED  
ARCHAEOLOGY IN ROMANIA: A SWOT ANALYSIS AND PERSPECTIVES  
FOR THE HERITAGE CODE**

*Corina Bors*

*National Museum of Romanian History, Romania*

**Abstract.** The European Convention for the protection of the archaeological heritage was ratified by Romania in 1997 and set the premises for a new national legislation in regard to this issue. After a void of specific legislation which lasted for an entire decade, in 2000 was adopted the new law concerning archaeology and rather soon the “polluters/developers pay” principle was necessary to be implemented since a series of private industrial projects and public motorways projects were initiated. This was a completely new reality for the archaeology and the archaeologists in Romania. It’s very useful that, three decades later to undertake an analysis about how was understood by the different stakeholders the development-led archaeology and how was perceived by the academic environment, the heritage agencies and, last but not least by the institutions involved in this “new kind” of archaeology. An in-depth analysis will be made, considering the experience of the National History Museum of Romania, which has a major expertise as concerns the rescue/preventive/development-led archaeology in Romania during the last 3 decades. The paper will present a series of key issues such as: the importance of these large-scale rescue excavation in providing new understanding and knowledge about the archaeological heritage; how to negotiate and communicate with the stakeholders in the benefit of archaeological heritage; the difficult dialogue between the administrative milieu (the so-called heritage agencies) and the professional environment; the opportunities and constrains for developing a professional carrier in archaeology, yet these are not the only topics to be addressed considering the session's focus. The perspective provided by the paper encompasses certain positive evolutions, but also takes a closer look to the challenges which had to be overcome while undertaking large scale preventive excavation in Romania and recognizing their role in such paradigm shifting. Last but not least, the paper will provide a particular insight about the way in which development-led archaeology was considered in terms of regulations while drafting the Heritage Code, pointing out which are the so much need solutions to the existing (in my opinion) crisis in this very dynamic field of expertise.

**Keywords:** Development-led (rescue/preventive) archaeology, Legislation, Heritage Code.

**THE ARCHAEOLOGICAL HERITAGE BETWEEN THEFT AND RECOVERY.  
CASE STUDY: ROMAN COIN HOARDS FROM THE AREA OF THE ŞUREANU  
MOUNTAINS**

*Claudiu Purdea*

*“1 Decembrie 1918” University of Alba Iulia, Romania*

**Abstract.** The Şureanu Mountains have sadly witnessed a surge in archaeological looting, resulting in irreversible harm to our heritage and the systematic destruction of invaluable archaeological sites. Through my doctoral research, I had the opportunity to delve into this disturbing phenomenon, noting a significant trend: the active involvement of local residents who readily engage in criminal activities, often aiding others in their illicit endeavors. This paper aims to shed light on a collection of Republican and Imperial Roman coins recovered by judicial authorities during investigations related to Dacian gold trafficking. It's noteworthy that a majority of those implicated in these cases were locals who played a role in the illicit operations of archaeological looting. In this presentation, I will provide an overview of the current status of these assets, totaling 2224 coins, none of which are currently classified as part of Romania's national cultural heritage. Central to any strategy for managing cultural heritage is the necessity for a comprehensive policy addressing artifacts obtained through such means. Therefore, I will emphasize the legislative mandates governing this field, which require museum institutions to meticulously inventory and classify these recovered assets.

**Keywords:** Archaeological Poaching, Judicial archaeology, Hoards, Roman coins, Transylvania.

**UNDERSTANDING & DOCUMENTING THE PAST IN THE FRAMEWORK OF  
LARGE-SCALE INFRASTRUCTURE PROJECTS. THE UPPER TOPOLOG  
RIVER VALLEY (ROMANIA) – A USEFUL CASE-STUDY FOR  
ARCHAEOLOGICAL HERITAGE MANAGEMENT**

*Corina Bors<sup>1</sup>, Maria-Magdalena Stefan<sup>1</sup>, Andrei Asandulesei<sup>2</sup>, Mihai  
Florea<sup>1</sup>, Calin Suteu<sup>3</sup>*

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<sup>3</sup> *Gigapixel Art SRL, Romania*

**Abstract.** Large infrastructure projects, while inevitably altering the landscape, also provide an opportunity for comprehensive documentation of the impacted area. In the case of the Topolog River Valley (South Romania), this documentation is particularly valuable due to the region's historical significance and previously very limited desk-based and field assessment. In other words, the construction works of the section 3 of the future motorway Sibiu – Pitești set the framework for complex research about the historical and archaeological potential of this particular micro-zone. The above-mentioned case study focuses on the significance in understanding the past habitation characteristics and cultural development in the area. It is characterized as a geographically well-defined territory with distinct boundaries, making it conducive to integrated social and cultural development. This perception of this valley as a distinct geographical-cultural unit underscores its importance in understanding the broader regional context. The study's temporal focus on the end of the first Iron Age, specifically the Ferigile-Bârsești cultural group, but also for the Middle Age period. Such an approach allows a nuanced comprehension of the dynamics of habitation, settlement patterns, and internal spatial organization during these specific epochs. Methodological aspects are based on a multidisciplinary approach, using preliminary LiDAR data, aerial photographs, and geophysical measurements, especially magnetometer survey. This methodological diversity ensures a comprehensive analysis of the landscape and facilitates the identification of archaeological sites and potential areas of interest. As well, these sets of data can be set in relation with the ones provided by the field investigation – intrusive diagnosis and large-scale rescue/preventive excavations in clearly outlined sites to be impacted by the construction of the motorway. The ongoing research project has generated new data that significantly expands the archaeological map and repertory of the Topolog River Valley. By identifying six new archaeological sites and three areas with archaeological potential, this pluridisciplinary research contributes to a much thorough understanding on how the region was inhabited and organized during the First Iron Age and the Middle Age, but not only. Finally, the data collection from the mentioned area created an opportunity as regards landscape archaeology and archaeological heritage management. This will allow the integration of many archaeological and historical data sets into what has become a GIS

complex database. As a result, further knowledge of the landscape changes occurring over time will update the heritage map in the studied area and will be able to support the beneficiaries or local communities affected by these modifications. On the same time our approach can be seen as a sound basis for developing a work methodology about how must be characterized and investigated a certain geographic area which will be impacted by the construction of a motorway. We will address a series of aspects derived from our investigations (both intrusive and non-intrusive), but also discussing best practice examples in this domain from other European countries.

**Keywords:** Archaeological heritage management, Landscape archaeology, GIS.

# **SECTION 2: MAPPING, INTERPRETATION AND MARKETIZATION OF HISTORICAL SITES**

**Session 2.1. Enhancing Cultural Heritage through Gamification and  
Visitor Experiences**





## CRITERIA FOR EVALUATING GAMIFICATION INITIATIVES APPLIED TO CULTURAL HERITAGE

*Célio Gonçalo Marques, Lígia Mateus, João Tomaz Simões,  
Inês Serrano, Hélder Pestana*

*Polytechnic University of Tomar, Portugal*

**Abstract.** The “HERITAGE GAME - A gamification model for community-based heritage work” project has been created to promote the involvement of local communities in heritage preservation, in low density areas. The project have 4 phases: identification, selection and analysis of best practice examples of community-based gamification strategies for cultural heritage in low density areas, i.e. actions that directly involve the local community; development of a replicable gamification model for contexts similar to those of the best practice examples; development of an accessible gamification tool for community-based heritage work; creation of community coalitions in the seven partner countries for the development of community-based gamification solutions. This research presents the first phase of the project that defined the criteria for evaluating gamification initiatives through the development of a common matrix based on 7 principles, supported by a broad literature review – 1. intrinsic motivation heuristics, 2. extrinsic motivation heuristics, 3. context dependent heuristics, 4. performance, 5. accessibility and inclusion, 6. innovation and creativity, 7. social and cultural impact – and the selection, characterization and assessment of case studies which will be analysed and compared. The project seeks to learn from heritage communities and their citizens, whose voices should be at the centre of knowledge production.

**Keywords:** Cultural heritage, Local community, Gamification, Low-density area.

**Acknowledgement:** *Work under project no. 2023-1-PT01-KA220-HED-000154261 "A gamification model for community-based heritage work", co-funded by the European Union, with the following team: Silviu Miloiu, Sergiu Musteata, Bogdan Salisteanu, Laura Plesea (Valahia University of Târgoviște); Vojtěch Blažek, Petra Karváňková, Jiří Rypl (University of South Bohemia in České Budějovice); Margarita Bogdanova, Marusya Smokova, Evelina Parashkevova, Asen Bozhikov (D. A. Tsenov Academy of Economics); Barbara Re, Renato Leone, Caterina Marchetti, Fabrizio Fornani, Anna Pupilli (University of Camerino); Esen Yıldırım, Fatih Kılıç, Bilge Aksay, Samet Oran, Muhammet Aktaş (Adana Alparslan University of Science and Technology Türkiye); Dana Masaryková, Lucia Nováková, Zuzana Danišková (University of Trnava).*

## **OPPORTUNITIES TO ADD VALUE TO THE CULTURAL TOURISM PRODUCT THROUGH GAMIFICATION**

*Lyubomira Todorova, Lyubka Mincheva Ilieva*

*D. A. Tsenov Academy of Economics, Bulgaria*

**Abstract.** The growing popularity of gamification in digital marketing has not only revolutionized consumer engagement but has also extended its influence into the realm of tourism. As a powerful tool for promoting and safeguarding cultural heritage, the integration of gamification into cultural tourism serves as a compelling means to captivate and motivate tourists. In the ongoing evolution of this approach, there exists a unique opportunity to explore the untapped potential for enhancing the cultural tourism experience through gamification. Through innovative strategies and immersive experiences, we aim to unlock new dimensions of value, enriching the cultural tourism product and fostering deeper connections between travelers and the heritage they encounter.

**Keywords:** Gamification, Cultural heritage, Cultural tourism.

## **CULTURAL HERITAGE IS NOT SET IN STONE, IT IS IN THE EXPERIENCE PEOPLE SHARE – THE RASNOV FORTRESS CASE**

*Mihai Dragomir*

*Forte Cultura Network, Romania*

**Abstract.** In recent decades, the paradigm of cultural management has undergone significant shifts, with a renewed emphasis on intercultural dialogue, the preservation of identities and diversity, and a collective commitment to European values. Within this context, the development of sustainable tourism necessitates a delicate balance between meeting visitor expectations, preserving heritage assets, and enhancing the quality of life for local residents. Rasnov Fortress stands as a pivotal tourist attraction in Romania, drawing over 450,000 visitors annually as of 2019. However, its recent history has been marked by considerable turmoil. Abandoned by its administrator, the Brasov History Museum, in 2000, the Citadel suffered irreparable damage due to unauthorized developments undertaken by a private entity between 2000 and 2006. Following a protracted and arduous process, the fortress was reclaimed by the local community, its historical custodian, culminating in 2010. In February 2020, the fortress embarked on an extensive restoration initiative funded by the European Union. Notable outcomes include the establishment of cultural infrastructure comprising indoor and outdoor exhibition spaces, venues for cultural events, and areas dedicated to commercial and artisanal workshops. However, the Rasnov City Hall's project primarily focuses on infrastructure improvements, lacking a comprehensive strategy for cultural programming post-restoration and a sustainable management plan. Moreover, the economic gains derived from tourism activities at the fortress have predominantly benefited a limited segment of the community, primarily through ticket sales and souvenir shops offering imported goods. Local artisans and producers, though present in the vicinity, have often been marginalized due to insufficient access and skills. This challenge underscores a broader issue of inadequate training among guides and interpreters at cultural sites nationwide, hindering effective visitor engagement and educational experiences. Furthermore, a prevailing detachment from the fortress and local historical heritage among residents underscores the need for comprehensive community engagement initiatives. Over the past 15 years, the Mioritics Association has spearheaded numerous projects aimed at addressing these systemic challenges, including the establishment of the Heritage Information Center, the Film and Histories Festival, educational initiatives such as the Schubz Educational Center, and community-focused platforms like Rasnov Creative. These endeavors seek to foster a deeper sense of local pride and ownership over cultural assets, ensuring their sustained relevance and impact within the community and beyond.

**Keywords:** Rasnov Fortress, Community, Education, Ecotourism, Governance.

## PELEȘ CASTLE - FROM THE ROYAL RESIDENCE TO THE COMMUNIST, AND POST-COMMUNIST MUSEUM

*Costin-Mihai Dumitru*

*Peleş National Museum, Romania*

**Abstract.** Of all the royal palaces and castles, Peleş stands out as the most captivating, being the inaugural royal residence commissioned by Charles I of Romania. This splendid edifice, nestled in the scenic surroundings of Sinaia, owes its entirety to the vision of the first King of Romania and his consort, Queen Elizabeth, who left an indelible mark upon its creation. As the two princely palaces in Bucharest – that on Calea Victoriei and the one in Cotroceni – did not offer particularly comfortable living conditions, the ruler decided to build a residence worthy of his status as a German prince of the House of Hohenzollern. Perched at the base of the Bucegi mountains, alongside the Peleş River, amidst the rugged beauty of the Piatra Arsă massif, Peleş Castle emerged as King Charles I's favored retreat. He meticulously supervised its construction, ensuring its completion in 1914<sup>1</sup>. Immediately after the departure of King Michael I (after the abdication that took place at Elisabeta Palace, Bucharest, December 29<sup>th</sup>, 1947) from Sinaia, on January 5, 1948, the Government issued Decision no. 164, regarding the establishment of an interdepartmental commission for the inventory of royal assets. The President of the Socialist Republic of Romania will allow himself to be convinced by his advisors to pursue a restoration program for the Peleş Castle in order to be able to use the former royal residence as a place of representation for future delegations of officials. Peleş was to enter an extensive restoration process, however, the party leadership decided to end the works only three years (1978) from their beginning<sup>2</sup>, with subsequent stages of restoration to be rescheduled over a longer period, but in 1982, a biological attack of the so-called dry rot, *Serpula lacrymas*<sup>3</sup>, was discovered, which will lead to a new stage of restoration, which will transform the summer residence of Romania's first sovereigns into a huge restoration site. With the fall of the communist regime, Peleş Castle opened its doors to the public, reborn as The Peleş National Museum. Today, it proudly showcases some of Romania's most precious art collections, offering visitors a glimpse into the nation's rich cultural heritage.

**Keywords:** King Charles I<sup>st</sup>, Peleş Castle, Peleş National Museum, Art collections, heritage, Biological attack, Communist museum.

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<sup>1</sup> *Peleş Castle the museum and it's collection*, Sinaia, unknown Publishing house, 2020, p. 8.

<sup>2</sup> Restoration work began in 1975.

<sup>3</sup> Mircea-Alexandru Hortopan, *Castelul Peleş Leagănul Dinastiei Române de la reședință regală la muzeu*, București, Publishing house and print house Oscar Print, 2021, pages 144-165.

# **SECTION 2: MAPPING, INTERPRETATION AND MARKETIZATION OF HISTORICAL SITES**

**Session 2.2. Bridging Culture, Memory and Heritage**



## **MUSEUM(S) OF A GLOBAL PHENOMENON. HISTORICAL MONUMENTS OF THE ENGLISH LANGUAGE**

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**Abstract.** Language plays a pivotal role in shaping cultural identity and preserving cultural heritage. It serves as a vehicle for transmitting traditions, beliefs, values, and knowledge from one generation to the next. This paper aims to map cultural heritage sites of the utmost importance for the English language. English is a global lingua franca, being the preferred language of international business, diplomacy, and science despite falling behind Chinese and Spanish in terms of number of native speakers. As of 2019 enthusiasts such as Nicholas Lodge, Christopher Mulvey and Beryl Pratley were planning to open a Museum of the English Language in Winchester (<http://www.englishproject.org/resources/english-language-museum-winchester>) but the project has stalled. The leaders of the project pointed to a 2009 survey of the world’s language museums carried out by the Norwegian Cultural Centre which highlighted the existence of 45 such cultural establishments in Austria, South Africa, Denmark, Canada, Italy, Australia, Hungary and Brazil to name just a few. In the absence of such an establishment for the English language, its rich cultural heritage is transmitted through monuments such as the reconstituted Globe Theatre in London, William Shakespeare’s birthplace in Stratford-upon-Avon, the Brontë Parsonage Museum in Haworth or Westminster Abbey, where famous writers such as Chaucer, Dickens, Kipling, and Hardy are buried. The scopes of this paper will be, first, to explain how have historical heritage sites associated with the English language evolved over time, and what factors have influenced their preservation or transformation? Second, we aim to discern what strategies can be implemented in the future to ensure the continued preservation and promotion of historical heritage sites related to the English language for future generations, because, ultimately, language serves as a bridge that links the past, present, and future, ensuring the vitality and resilience of cultural heritage for generations to come.

**Keywords:** English, Museum, Heritage site, Stratford-upon-Avon, Monument

## **DRACULA AND QUEEN MARY TOURISM IN BRAN MUSEUMS - DICHOTOMY OR CULTURAL CONFLUENCE?**

*Silviu Miloiu*

*Valahia University of Targoviste, Romania*

**Abstract.** This article delves into the contrasting yet intertwined narratives of Dracula and Queen Mary tourism in the museums of Bran, Romania. It explores the dichotomy between the iconic figure of Dracula, associated with gothic horror and masculinity, and the historical significance of Queen Mary, a symbol of feminine power and elegance. Through an analysis of museum exhibits in Bran Castle and Bran National Museum, curator experiences, and cultural representations, this study investigates whether these tourism phenomena create a clash of narratives or a harmonious cultural confluence. By examining the intersection of folklore, history, and tourism marketing strategies, this research sheds light on the complexities of identity construction and cultural heritage preservation in Bran's museum landscape. This article also explores the repercussions of the Bran National Museum showcasing original exhibits from Bran Castle, juxtaposed with privately owned Bran Castle's inclusion of non-authentic artifacts. It analyzes how this divergence influences the marketization of local heritage, offering insightful perspectives on the intricacies of heritage management and tourism development in the region.

**Keywords:** Dracula, Queen Mary, Tourism, Bran, Romania, Museum heritage.

**THE MEMORY OF THE GREAT WAR IN PORTUGAL (1914-2014): A HISTORIOGRAPHICAL ESSAY**

*Lígia Mateus*

*TECHN&ART - Centre for Technology, Restoration and Art Enhancement, Portugal*

**Abstract.** This paper is about the memory of the First World War and how it was treated in Portugal. The research is based on the study carried out as part of a doctoral project on monuments to the dead of the Great War in Portugal (1914-2014). The current historiography lacks information on how remembrance has been treated since the end of the war, so the aim is to discuss the existing literature according to the gaps identified. This paper presents an essay on three different periods of the study chronology: 1. the period from the beginning of the IWW to the end of the Great War Monuments Commission (1914-1936); 2. the period during the Estado Novo dictatorial regime (1936-1974); 3. the period from the 25 April Revolution to the centenary of the Great War (1974-2014). These memorials have been built and inaugurated all over the country, but it is suggested that there is a discrepancy between visibility in public space and invisibility in the collective consciousness. The research contributes to the literature by adopting a long-term approach that allows us to identify and reflect about the tensions between the "absences" and "presences" in the collective memory.

**Keywords:** Collective memory, War memorial, Great War, Sites of memory, Public space, Historical sites.

**Acknowledgement:** *Work funded by national funds through the Portuguese National Funding Agency for Science, Research and Technology (FCT) under the project UID/05488/2020 - TECHN&ART.*



## **THE MONUMENTS OF TRADITIONAL ARCHITECTURE IN THE ARGEŞ COUNTY - STATE OF CONSERVATION AND PROSPECTS FOR A BETTER FUTURE**

*Florin Gerard Calin, Camelia Calin*

*Museum of Pomology and Viticulture in Goleşti, Romania*

**Abstract.** In 2019 and 2020, the Goleşti Museum, in collaboration with partners INOE 2000, CEPROCIM, and ICECHIM, spearheaded the project "Innovative Methods and Techniques for Assessing Conservation-Restoration Interventions and Monitoring the Conservation of Traditional Buildings in Romania." This ambitious endeavor encompassed a comprehensive range of multidisciplinary activities aimed at evaluating the conservation status of rural monuments and providing a practical guide for conservation and restoration interventions. Key initiatives within this expansive research endeavor included:

- Scrutinizing legislative frameworks pertaining to monument protection.
- Developing two operational protocols for systematically documenting heritage buildings.
- Establishing a pioneering pilot network at the Goleşti Museum to conduct non-invasive or minimally invasive assessments and tests on selected monuments. This initiative traced the evolution of construction techniques, spanning from the ancient "bordei" (earth shelter) to structures with wattle and daub walls, oak beam constructions, fortified houses, and opulent nobleman's mansions built of brick.
- Formulating intervention guidelines tailored to each type of heritage building.
- Conducting applied research in Argeş County to pinpoint monuments in need, assess their conservation status, and explore strategies to enhance their cultural significance.

The study underscored significant challenges faced by traditional houses designated as historical monuments, including funding shortages for repairs or restoration, apathy or disinterest from owners, human-induced damage, and environmental factors precipitating substantial deterioration (such as vandalism, use of incompatible materials, moisture, biological decay, pollution, etc.). In contrast, historical churches generally receive better care and attention from local communities. Despite the project's completion several years ago, its findings and recommendations remain highly pertinent today. The ongoing relevance underscores the enduring significance of addressing the preservation and safeguarding of rural monuments, an issue that continues to demand innovative and sustainable solutions.

**Keywords:** Monuments, Rural areas, Conservation, Restoration, Legislation, Challenges.

## **SECTION 3: NATURAL HAZARDS AND CULTURAL HERITAGE**



## **ANCIENT CITY AND CATASTROPHE: SURVIVAL STRATEGIES AND RECOVERY**

*Lucia Nováková*

*Trnava University in Trnava, Slovakia*

**Abstract.** This paper examines how ancient cities in the Mediterranean responded to natural disasters and how they recovered from them. It utilizes archaeological evidence and literary sources to analyze not only the destruction caused but also the subsequent strategies for recovery and prevention. The focus is on practical measures such as evacuation and preparations for future threats, as well as the broader impacts of these events on urban environments, economies, and social structures. It uses historical and archaeological data to describe the relationships between ancient societies and their environments, emphasizing their adaptive responses to the cycles of disaster and recovery from the Bronze Age through Late Antiquity.

**Keywords:** Antiquity, Archaeology, Prevention, Resilience, Society.

## **FOREST FIRES AND THEIR IMPACT ON CULTURAL HERITAGE - AN INTEGRATED APPROACH TO PREVENTION AND PRESERVATION**

*Jorge Raposo, Eugénio Almeida, João M. Patrício, Rita Anastácio, Luís Reis, Anabela Moreira*

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**Abstract.** Climate change is increasingly impacting our society and its cultural heritage through alterations in temperature, precipitation, atmospheric humidity, and wind intensity. These changes contribute to the heightened occurrence of extreme phenomena like forest fires. In this paper, we propose a methodology for monitoring the effects of climate change, specifically focusing on the probability of forest fire occurrence. Our approach centers on measuring the moisture content of fine fuels (FFMC), including pine trees, eucalyptus leaves, and shrubs. By gathering moisture content data through laboratory analysis of forest fuel samples or in situ sensors, we enhance the accuracy of predicting local Fire Weather Index (FWI) conditions. These findings, depicted through graphical representations correlating FFMC and FWI with fire frequency and burnt area, serve to heighten public awareness regarding forest fire risk reduction. Moreover, this information enables civil protection resources to intervene more efficiently, a crucial aspect in preparing and securing both the territory and its cultural heritage. To demonstrate the effectiveness of our methodology, we present the results derived from analyzing and overlaying geographic information using a Geographical Information System (GIS) in the central Portuguese cities of Tomar and Coimbra. These areas boast extensive forest coverage and significant cultural heritage sites scattered throughout their territories.

**Keywords:** Climate change, Forest fires, Moisture content, Médio Tejo region, Coimbra region, Cultural heritage, Geographic Information Systems.

**REBUILDING THE OLD WAY TO LIVE BETTER IN THE FUTURE.  
INTANGIBLE HERITAGE FOR SUSTAINABLE PRESERVATION IN QUEBEC,  
CANADA**

*Daniela Moisa, Iurie Stamati*

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**Abstract.** Built and monumental heritage has been the subject of inventories and studies, in North America and Europe. The intangible heritage made up of traditional techniques, trades and savoir-faire linked to the (re) and (auto) vernacular construction is poorly documented protected and highlighted. In addition to the physical form and fabric of buildings, structures and spaces, the vernacular also embraces “the ways in which they are used and understood, and the traditions and the intangible associations which attach to them” (Charter of the Built Vernacular Heritage, ICOMOS 1999). Due to the climate crisis, the traditional house perception and use are changing: its safeguarding and valorization are no longer based on aesthetic or national identity, but on its potential to meet new housing needs which are defined by the circular economy: reduce, reuse, recycle. Initially considered a marginal phenomenon, mainly driven by environmental activists, the interest for the intangible heritage linked to the vernacular construction domain now affects residents of ancestral houses, heritage institutions, construction industries as well as decision-makers and institutional policies. Based on an ongoing research project which focuses on the phenomenon of appropriation of traditional construction techniques, trades and know-how from an environmental perspective, in Quebec, this presentation proposes to initiate an epistemological reflection on the necessary recalibration of our approach to the research, conservation and promotion of cultural heritage, particularly intangible heritage. This presentation also aims to break the traditional contours of the disciplines and sectors involved in the study of built heritage to understand this object in transformation, the vernacular house. The purpose is to support the design and implementation of methods and tools, documentation, safeguarding and valorization practices of intangible heritage to pave the way towards public policies to anticipate climate change.

**Keywords:** Intangible cultural heritage, Vernacular heritage, Circular economy, Quebec (Canada)

## **INDOOR RADON CONCENTRATION IN OLD HERITAGE CHURCHES – A CASE STUDY**

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**Abstract.** Cultural heritage stands as a poignant emblem of national identity and a vital asset for social and economic progress, yet it remains vulnerable to a plethora of threats including natural disasters, climate change, air pollution, and human activities. Indoor air quality plays a pivotal role not only in safeguarding artifacts but also in ensuring the health and safety of heritage personnel and visitors. Historical edifices, museums, and heritage sites, including caves, often harbor heightened concentrations of Radon gas indoors. This gas, originating from natural radioactivity in the ground, building materials, stone or glass artifacts, and geological collections, poses significant health risks. Despite the critical importance of monitoring Radon levels, a thorough examination of literature indicates a deficiency in Radon monitoring initiatives and strategies in Romania, particularly concerning the protection of heritage staff and visitors. This study aimed to address this gap by conducting Radon concentration monitoring within old churches, renowned as both religious sanctuaries and tourist attractions, integral to Romania's cultural heritage. The primary objective was to evaluate the effective dose resulting from indoor Radon exposure, thereby enhancing the understanding and management of health risks associated with heritage sites.

**Keywords:** Radon, indoor, old churches, health safety.

**PROTECTION AGAINST INDOOR RADON IN CASE OF BUILDING RESTAURATION. THE PERSPECTIVE OF AN ENVIRONMENTAL MONITORING LABORATORY**

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**Abstract.** Radon (Rn-222) is a naturally occurring colorless, odorless, radioactive gas, a decay product of uranium, an element present in all types of rocks and soils. Radon gas infiltrates inside the buildings through foundation cracks due to the difference between the soil gas pressure and the indoor air pressure. Radon progeny are retained in the lungs and irradiate cells in the respiratory tract. Chronic exposure to high levels of radon increases the risk of developing lung cancer for building occupants. Since radon can build up to a high level inside a building, its concentration values must be monitored. In case of concentration above the national reference level, taking action is mandatory according to the legislation in force. This paper presents the results obtained in the process of soil gas radon concentration measurements as part of a refurbishment project. It also reveals an environmental monitoring laboratory perspective in the framework of the Ministry of Regional Development and Public Administration new guidelines, with a focus on practice matters for complying with legislation and recommendations regarding the protection against indoor radon for new and existing buildings.

**Keywords:** Radon, Radiation, Protection, Environmental radioactivity, Indoor air quality.

# **SECTION 4: NEW TRENDS IN CONSERVATION OF CULTURAL HERITAGE**





## **CREATIVE CONSERVATION AND THE ACCUMULATION OF THE PAST: A NEW ART CONSERVATION ECOLOGY**

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**Abstract.** Museums often accumulate a significant number of boxes full of fragments, many of them severely damaged and not suitable for display purposes. There is a need in reflecting on what to do with these fragments, which are concealed from the public eye, but nevertheless are continuously requiring for maintenance and care, which involves the upkeep of dedicated human and financial resources. In recent discussions it has been argued if these fragments could be used to generate new things, especially if artists, for instance, should be permitted to create new art from these fragments. This would allow the management of fragility, decay and loss to be viewed in a new and positive way. Departing from this, two questions are of the utmost importance for the conservation community at large: What about conservators and heritage related professionals? Why should not they be allowed to utilize their artistic creativity for this purpose? One possible answer to these questions may be provided through the establishment of a new conservation ecology should it be drawn on the newly proposed creative conservation approach, as aimed with this paper. Creative conservation means that artistic creativity is intentionally applied to aid the sustainable preservation of severely damaged or decayed objects. In this sense, remnants and fragments of lost artworks, for instance, in spite of not being allowed to be displayed as representing the artworks themselves, can be creatively reworked to be displayed as conservation by-products, that entail new meanings and values worthy of preservation. This means that by applying creative conservation conservators and heritage related professionals challenge long-accepted traditional conservation tendencies or habits, fostering a new conservation ecology. In reaching this conclusion a methodological approach was developed, one that is based on a reflection about the creative conservation approach. The theoretical reflection envisioned for this paper also grapples with whether and how this new conservation ecology can be a worthwhile addition to the art conservation community at large and even beyond. The potential challenges it may foreground with regard to current chains of power within the museum environment are also debated, while addressing the (in)visible nature of the conservation work.

**Keywords:** Creative conservation, Accumulation, Chains of power.

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## **IMMERSIVE TECHNOLOGIES AS CULTURAL HERITAGE PROTECTION TOOLS. A CASE STUDY ON ROMANIAN ANCIENT CULTURAL HERITAGE**

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**Abstract.** The utilization of Virtual and Augmented Reality within the realm of cultural heritage serves dual purposes: the promotion and sustainable utilization of heritage, as well as its conservation, restoration, and protection. Virtual heritage seamlessly integrates reality-based interactive technologies into an intangible realm, offering visual and sometimes tactile representations of monuments, artifacts, buildings, and other cultural relics. These digital recreations serve as educational tools, enriching the analysis of historical events, while also presenting economic opportunities. A primary concern regarding tangible cultural heritage revolves around its promotion within the framework of sustainable development. Heritage sites are delicate, and improper or excessive use can lead to detrimental effects. Hence, innovative technologies like virtual reality and augmented reality hold promise in providing a unique cultural experience of visiting a site, while simultaneously preserving its integrity and mitigating the impacts of tourism. The arguments in favor of employing VR and AR technologies span across three key categories: time, space, and sustainability. This article delves into how immersive technologies such as Artificial Reality and Augmented Reality have the potential to bolster the preservation of cultural heritage for future generations without compromising its present promotion and utilization. Through a detailed case study, this article will underscore how immersive technologies contribute to enhancing the allure and safeguarding the preservation of cultural heritage under the stewardship of both public and private institutions in Romania.

**Keywords:** Virtual reality, Augmented reality, Cultural heritage protection, EU, Creative Europe.

## THE USE OF LEAD IN HERITAGE BUILDINGS

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**Abstract.** The issue of the present paper concerns how lead, this heavy metal which can be easily bent, has been used in the field of construction throughout history, both because of its workability and because of its durability. Sheets of lead used to be mounted as the last layer on roofs, domes and minarets. This kind of sheets lead had the usual role of providing protection against the action of wind, rain, snow, Sun, but also had the role of lightning rod. The practice of using lead sheets on the roof of buildings dates back to the time of glorious Roman antiquity, such lead sheets can be observed on the dome of the Pantheon in Rome. This practice continued for many centuries. The domes and roofs of important cathedrals, mosques or palaces in Constantinople, Rome, Venice and many other places have such lead sheets. The importance of the use of lead sheets intended for coverings also emerges from the fact that, both in Wallachia and in the Ottoman Empire, the word for lead, in Romanian "plumb" and in Turkish "kurşunlu = with lead" became a proper name: "Plumbuita" in Romanian and "Kurşunlu " in turkish language. The name "Kurşunlu" was given not only to Christian churches, to mosques or to castles, but also to cities and even to a waterfall, as well as to the entire natural park created around it.

**Keywords:** Lead, Kurşunlu, Workability, Sheets, Lightning rod, Plates.

# **SECTION 5: TECHNOLOGIES AND MATERIALS IN CULTURAL PRESERVATION**



## ACCURACY OF SLA AND MATERIAL MORPHOLOGY USED IN ARCHITECTURE

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**Abstract.** Over the past decade, Stereolithography (SLA), Digital Light Processing (DLP), and Fused Deposition Modeling (FDM) technologies have undergone significant advancements, resulting in 3D printers that are increasingly precise, faster, and more affordable. These advancements have led to a level of precision in printed parts that now reaches the scale of microns, while also expanding the range of materials available for use, from traditional PLA and ABS plastics to metal- and wood-reinforced plastics, as well as various types of photopolymerizable resins. The software utilized in conjunction with SLA, DLP, and FDM technologies has also seen notable enhancements, enabling the creation of highly accurate 3D prototypes that closely mirror the original design. The resulting prototypes boast impressive quality and mechanical strength, suitable for a wide array of applications including gears, flanges, bearings, casings, mechanisms, figurines, and architectural models, among others. The primary objective of this research endeavor is to design and 3D print functional prototypes within the architecture and design fields. By doing so, the aim is to evaluate processing precision and compare optimal processing methods based on factors such as part type, material selection, desired precision levels, and associated costs. This investigation seeks to ascertain the most effective processing variant for different scenarios, considering the nuanced requirements of each prototype. Through rigorous testing and analysis, the study aims to provide valuable insights into the capabilities and limitations of 3D printing technologies in architecture and design applications, ultimately contributing to the ongoing advancement of additive manufacturing techniques in these fields.

**Keywords:** 3D printer, Stereolithography SLA, Part design, Structure morphology, Architectural design.

## ROMAN ARCHITECTURAL HERITAGE: MATERIALS AND MINIMAL INTERVENTIONS FOR A SUSTAINABLE CONSERVATION

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**Abstract.** The Roman Empire stands as a monumental testament to human ingenuity, leaving an indelible mark on art, culture, and engineering. Their architectural achievements, crafted with sustainable design principles and enduring materials, have shaped cities and civilizations for centuries. Today, historic buildings constitute approximately 30% of Europe's architectural landscape, each bearing unique aesthetic and historical significance. Despite their resilience, these structures have undergone modifications and restorations over time, leaving some aspects of their construction shrouded in uncertainty. As such, monitoring their conservation status, assessing performance levels, evaluating vulnerability, and gauging redevelopment potential remain imperative tasks. An integral facet of Roman progress was a commitment to resource efficiency, minimizing carbon footprints, and reducing waste in construction endeavors. This presentation introduces pioneering investigations into materials and construction techniques employed during the Roman era, focusing on some Roman monuments/archaeological sites such as Sacidava, Tomis, Tropaeum Traiani, Adamclisi, Roman Mosaic (Constanta), Micia and Rapoltu (Hunedoara). Highlighted are sustainable materials like recycled steel, asbestos, bricks, and innovative concrete formulations, which facilitated the creation of energy-efficient and eco-friendly edifices. Employing an array of microscopic techniques including optical microscopy (OM), scanning electron microscopy (SEM), energy-dispersive X-ray spectroscopy (EDS), Fourier transform infrared spectroscopy (FTIR), Raman spectroscopy, X-ray fluorescence (XRF) spectroscopy, X-ray diffraction (XRD), and neutron activation analysis (NAA), the study deals with the morphological characterization of various architectural Roman pieces and their degradation processes. By leveraging these advanced analytical tools, the research aims to unveil the unique architectural and construction details of Roman-era structures. These techniques not only facilitate comprehensive structural inspections, identifying cracks, irregularities, and aging patterns, but also aid in material and element identification, construction technique analysis, and understanding element connections. Ultimately, findings from this study seek to strike a delicate balance between preserving the intrinsic cultural value of heritage sites and ensuring their long-term durability and sustainability. This interdisciplinary approach underscores the intersection of conservation, art, education, and science, for our shared cultural heritage.

**Keywords:** Roman architectural heritage, Materials, Conservation, Diagnosis.

**RESTORATION IN WAR: RESTORATION OF THE FUNERARY MONUMENT  
OF DIMITRIE ONCIUL FROM THE CENTRAL CEMETERY IN CHERNIVTSI  
(UKRAINE)**

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**Abstract.** In the midst of ongoing conflict in Ukraine, a project aimed at the preliminary research and restoration of significant funerary monuments in the Cernăuți Cemetery, Bucovina Land, achieved its initial success in 2022 with the restoration of the monument dedicated to Dimitrie Onciul. Situated within the Central Cemetery in Chernivtsi, this undertaking exemplifies the resilience and commitment to cultural heritage preservation amidst challenging circumstances. This paper elucidates the methodologies, challenges, and outcomes of this restoration endeavor, shedding light on the importance of safeguarding historical landmarks during times of adversity. Through meticulous research and hands-on restoration efforts, the project not only revitalized the physical structure of Onciul's monument but also symbolized hope and resilience in the face of conflict. This case study underscores the vital role of restoration initiatives in preserving cultural heritage and fostering unity and resilience within communities affected by conflict.

**Keywords:** Research, Restoration, Cernăuți, Funeral monuments.

## **ARCHAEOLOGICAL ANALYSIS OF CERAMIC DECORATION FROM THE TELL SETTLEMENT OF HÂRȘOVA**

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**Abstract.** Systematic archaeological research was carried out at the tell settlement of Hârșova (Constanța county) by an interdisciplinary Romanian-French team during 2016-2017. Several unburned dwellings (no. 111, 112, 113, 114) and an exterior area were excavated. The entire stratigraphic sequence is contemporary with the Boian culture (Vidra phase) based on relative chronology but also on radiometric data. In these archaeological contexts, the coexistence of Hamangia and Boian ceramic was highlighted, the latter being more numerous. The archaeometric analysis carried out on ceramic fragments revealed important information. According to XRD analyses, the quartz and calcite from the white paste of the Boian ceramic inlays, observable under a microscope in the form of crystals, have important percentages, followed by ilmenite, nickel titanate, amesite, rossianthonite. Also the ceramic slip on the Hamangia pottery contains quartz and sodalite. XRF analysis indicated high concentrations of quartz, calcium oxide, aluminum oxide, the highest percentage of quartz being in the slip of Hamangia pottery.

**Keywords:** Chalcolithic, archaeometry, pigment, XRD and XRF analysis.



## **SECTION 6: INVASIVE AND NON- INVASIVE TECHNIQUES APPLIED ON HERITAGE**



**ELEMENTAL ANALYSIS BY XRF OF COLOR SAMPLES USED BY GIORGIO DE CHIRICO SAMPLED IN THE MASTER'S ATELIER AT THE HOUSE MUSEUM LOCATED IN PIAZZA DI SPAGNA IN ROME**

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**Abstract.** Numerous materials utilized by the esteemed artist Giorgio de Chirico underwent analysis. These materials are housed in the House Museum of Piazza di Spagna in Rome, where the painter spent the last thirty years of his life, thanks to the resources provided by the Giorgio and Isa de Chirico Foundation. Besides samples of resins and oils, including both pure and mixed varieties, approximately one hundred samples of tube colors were extracted from various boxes used by de Chirico, which are displayed in the Maestro's Atelier. Concurrently, ten paintings, with nearly 250 analysis points (one for every five years spanning from the 1930s to the 1970s), located within the House Museum, underwent analysis as well. The objective of the study is to establish a correlation between the tube colors utilized by the Master and the colors present in his paintings, aiming to identify significant markers that could serve as references for questions regarding the authenticity of his works. Additionally, the study seeks to conduct an in-depth investigation into the artistic technique of the great master, who was known for his penchant for experimenting with personal formulations in utmost secrecy. Furthermore, this study aims to contribute to the analysis of color degradation on canvas exposed to specific environmental conditions, in contrast to the original color preserved within the tube. The intriguing findings that have emerged are poised to be further enriched in the future through additional comparative analyses on a broader range of paintings and extended to contemporary painters. This endeavor aims to establish a technical-scientific database of reference for scholars of 20th-century painting.

**Keywords:** XRF analysis, Colors characterization, Paintings, de Chirico.

**SPHERO-CONICAL VESSEL FROM ORHEIUL VECHI, REPUBLIC OF MOLDOVA. PRELIMINARY RESULTS OF PHYSICOCHEMICAL ANALYSES**

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**Abstract.** Sphero-conical vessels have been a subject of research for more than two centuries. The discovery of an impressive number of such vessels in various archaeological sites in Asia and Europe has caused wide debate about their functionality. Considering their specific shape, thick walls, and very small space intended for storing some liquids, several opinions have been launched regarding their usefulness, such as for storing mercury, perfumes, and cosmetics, or using them as grenades, lamps, etc. From the medieval site of Orheiul Vechi, Republic of Moldova, come dozens of fragments and a few whole sphere-conical vessels, which fit perfectly into the typology of this vessel characteristic of the Middle Ages. During the domination of the Golden Horde, the city of Yanghi-Şehr (New City in Turanic) or Şehr al-Cedid (New City in Arabic) was founded at Old Orhei, which stands out as an urban center of Islamic tradition during 14th c. Evidence of the high level of urban development is the ruins of several oriental buildings researched by archaeologists since 1947 – citadel, mosque, caravanserai, public baths, mausoleums, etc. During 1362–1364, the Abd-Allah Inn was in Orheiul Vechi, which, in the context of conflicts within the Golden Horde, became the empire's capital for a few years. After 1368, the Tatars lost their power and control over the territories east of the Carpathians and left Orheiul Vechi. The attestation of several Islamic products, including an impressive number of coins, demonstrates the diversity and the level of economic development of this urban center. Among these vestiges are the sphere-conical vessels. However, a qualitative analysis of them is missing until now. In this respect, several types of vessels were investigated, in terms of raw material origin, from which these dishes were produced, and their utility. Phase and mineral composition, and internal structural organization of several vessel fragments have been studied by micro-invasive techniques such as Wavelength Dispersion X-Ray Fluorescence (WDXRF). The proportions of these elements, together with the aggregates of clays, quartz, Ca-carbonates, and sulfates were present in the studied fragments. The samples mainly consist of silicates with a dominant amount of  $\text{Al}_2\text{O}_3$  (i.e., kaolin,  $\text{Al}_2\text{Si}_2\text{O}_5(\text{OH})_4$ ) with variable amounts of iron, magnesium, alkali metals (i.e., sodium, potassium, rubidium), alkaline earth (i.e., magnesium, calcium, strontium), and other cations (i.e., chloride, sulfate). The minor compounds revealed  $\text{MnO}$ ,  $\text{ZnO}$ ,  $\text{SrO}$ , and  $\text{P}_2\text{O}_5$ ; it can be suggested that besides the oxides of Si, Al, Ca, K, Fe, Ti, and Na, minor elements were added as a coloration matter or as a flux of admixed material. Making an abstraction from the content of minor elements, it can be assumed that for the sample preparation, one widely distributed common recipe from major oxides produced a

basis before minor oxides were added. In two samples a small amount of arsenic (As) was detected. This element (detected by WDXRF as  $As_2O_3$ ) is a consequence of contamination of clay, known that arsenic mobilization from mineral clay is due to the natural organic matter (i.e., fulvic and humic acids). The lack of traces of mercury on the fragments of the studied vessels shows that they had another use. Therefore, they were containers for storing and transporting liquids other than mercury. These are just some preliminary results of wider research that is in the process of being carried out and which will conclude with an extensive study regarding the particularities of sphere-conical vessels.

**Keywords:** Sphero-conical vessel, Orheiul Vechi, Middle Age, physicochemical analyses.

**3D SCANNING AND ARCHAEOLOGICAL ANALYSIS OF TRANSYLVANIAN PLASTIC ART. CASE STUDY: ALBA IULIA-LUMEA NOUĂ NEOLITHIC AND ENEOLITHIC ARTEFACTS**

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**Abstract.** The current research presents the results of an interdisciplinary study for which was used 3D scans and archaeometric methods applied to a batch of artifacts from the plastic category originating from the recent preventive excavations carried out in the Alba Iulia-Lumea Nouă site (Alba County). The artifacts are inventoried in the archaeological collection of the "1 Decembrie 1918" University Alba Iulia. The analyzed lot is composed of 15 pieces of burnt clay, belonging to the Middle Neolithic (Vinča culture) and the Early Eneolithic (Foeni cultural group) and dates between 5000-4500 BC. In a first stage, the 3D scanning of the artifacts was carried out by means of the Artec SpaceSpider metrological scanner, with an accuracy of up to 0.05 mm. Through it, detailed and precise information was collected regarding the geometry, volume, color and texture of the surfaces of the artifacts, the result being a graphic, digital rendering of the three-dimensional physical structure, a virtual "surrogate". Artifacts were analyzed afterward by non-invasive or minimally-invasive techniques such as optical microscopy (OM), scanning electron microscopy coupled with energy-dispersive spectrometry (SEM-EDS), and Fourier transform infrared spectroscopy coupled with attenuated total reflectance (ATR-FTIR). The study included also six clay samples - of which four (C3-C6) were taken from the archaeological site and two from areas close to it (C1, C2) - benefited from the same types of archaeometric analyses. The comparative study of the elemental composition of anthropomorphic statuettes and clays has as its main purpose to identify the potential sources of clay through statistical correlations.

**Keywords:** statuettes, clay, sources of clay, elemental content, statistical correlations.

## **RAMAN FOR ARCHAEOOMETRY**

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**Abstract.** Researchers in archaeology, cultural art history and conservation have paid ever increasing attention to the use of this non-invasive vibrational spectroscopy in their fields since the first London RAA conference (Raman Spectroscopy in Art and Archeology) in 2001. Since 2005, regular conventions every other year on the matter (Ghent, Paris, Modena, Bilbao, Parma, Ljubljana, Wroclaw, Évora, Potsdam, and after the coronavirus, most recently Athens in 2023) have re-enforced the willingness of experts to exchange and expand on the application possibilities of this still-relatively ‘confidential’ technique. The increasing power of instrumentation based on Raman have indeed widened the ‘fields of use’ both in the lab and on-site. The topic of this presentation will look notably with this technique on movable and unmovable cultural objects, the use of dyes and pigments on wall paintings and potteries, metallic relics, the effect of degradation and corrosion over time on bronze and iron objects, and the use of precious/semi-precious mineral gems and glass in ancient jewelry.

**Keywords:** Raman spectroscopy, Archaeometric analysis, Dyes and pigments.

## **WORLD CAFÉ WORKSHOP**

### **SUSTAINABLE PRESERVATION: CHALLENGES AND OPPORTUNITIES**

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**Abstract.** This workshop is designed to delve into the core themes of the conference, fostering collaborative exploration and problem-solving on the following key areas: Identifying and tackling the pressing challenges facing cultural heritage in the 21st century; Bridging the gap between theoretical frameworks and practical implementation, while fostering meaningful connections and collaborations; Examining the role of events, leisure activities, and tourism in the preservation and celebration of heritage. In terms of methodology, we propose adopting a world-café style, a participatory qualitative approach<sup>1</sup>, wherein participants gather in small groups around tables. We envision setting up 3 to 6 working tables, accommodating a maximum of 18 to 30 participants. The primary objective of the workshop is to facilitate knowledge sharing and stimulate collective creativity in generating innovative ideas related to the conference topics. This collaborative effort aims to contribute to the development of a research agenda and identify actionable points for further exploration. Furthermore, the workshop fosters deeper connections among participants in an inclusive and relaxed environment, nurturing meaningful relationships beyond the event itself.

**Keywords:** Sustainability, Leisure, Place, Events, Heritage.

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<sup>1</sup> Löhr, K., Weinhardt, M., & Sieber, S. (2020). The “World Café” as a Participatory Method for Collecting Qualitative Data. *International Journal of Qualitative Methods*, 19. <https://doi.org/10.1177/1609406920916976>.

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