

escola das artes

EPoCH 2026

Emerging Perspectives
on Conservation and Heritage



Heritage Future(S)/Future Heritage(S):
On the Threshold of Change

Keynote speakers:

Cornelius Holtorf (School of Cultural Sciences, Uppsala University)

Paulo Lourenço (Department of Civil Engineering, University of Minho)

18–20 March 2026



artes.ucp.pt

BOOK OF ABSTRACTS

UNIVERSIDADE CATÓLICA PORTUGUESA
SCHOOL OF ARTS, PORTO, PORTUGAL
18-20 MARCH 2026

TITLE

EPoCH 2026 Emerging Perspectives on Conservation and Heritage. Heritage Future(S) / Future Heritage(S). On the Threshold of Change – Book of Abstracts

EDITED BY

Laura Castro, Maria Aguiar, Maria João Revez, Patrícia Moreira

RESEARCH CENTRE FOR SCIENCE AND TECHNOLOGY OF THE ARTS – CITAR

Focus Area: Heritage, Conservation and Restoration

2026

CONTENTS

COMMITTEES	5
CONFERENCE OPENING STATEMENT	6
CONFERENCE PROGRAMME	8
KEYNOTE SPEAKERS.....	11
CLOSING EVENT.....	14
PAPER PRESENTATIONS I.....	17
RECOVER-Heritage: from preparedness to recovery	17
Communicating Heritage Future(s) at a Threshold of Time: The Friuli Earthquake, Circular Narratives, and the Transferability of a Post-Disaster Model	19
PAPER PRESENTATIONS II.....	21
Breaking Through Oblivion. How to Preserve the Hardly Told Narratives of the Jewish Ghetto in Sosnowiec-Środula	21
Voice and Heritage? Crossed perspectives as preliminary research	22
Ephemeral Signs: Land Art and Flows of Cultural Memory on the Threshold of Heritage Future(S).....	23
Cultural Heritage and the Patrimonialisation of Black Territories	24
APAGADAS: Bio-mapping women@cartoteca ‘geoartística’ e ‘chronoreferenciada’	26
PAPER PRESENTATIONS III.....	29
Artificial Intelligence and Preventive Conservation: practical notes on automation, predictive analysis and strategic decision-making.....	29
The Critical/Ethical Artificial Intelligence turn on urban arts heritage: sociological reflections and A.I. art on urban cultural heritage destruction via the war on Ukraine	31
The controversial revival of a colonialist monument in an Oporto’s historic square	32
PAPER PRESENTATIONS IV.....	34
PAW (Plasma-Activated Water): the “new solvent” of the future?	34
Cellulose-modified poultices to address salt weathering problems in cultural heritage	36
PAPER PRESENTATIONS V.....	39
Between Two Temporalities: The Medieval Painting of Saint John the Evangelist and the Ethical Challenge of Removing the Baroque Repainting	39
From Fragment to Space: Digital Reconstruction and Possible Futures for the Mural Heritage of the Café Rialto (Porto)	40
PAPER PRESENTATIONS VI.....	43
Heritage management strategies for future communities	43
New challenges for the conservation of the Côa Valley Open-air Rock Art: the development and implementation of a conservation plan.....	44
From extractive practices to regenerative futures: reframing PoTaRCH heritage in Europe’s sustainable transition.....	46

Mapping the Aesthetic Imaginaries through the Atmosphere of Extractive Zones in Lausitz of Germany	48
PAPER PRESENTATIONS VII.....	50
Artificial Intelligence Applied to Safeguarding Historic Tiles: The AI4Az Project and TileWatch platform	50
Digital Invisibility: Can Digitisation Include “Unauthorised” Voices? Expanding the Conservator-Restorer’s Role	52
POSTER SESSION I.....	54
Biofilms colonising outdoor stone monuments and climate change: learning outcomes from a year of the Assistens Kirkegård project	54
The use of new technologies for protection of the cultural heritage held in museums	54
Monitoring Climate Vulnerability of Cultural Heritage: Case Studies from Brazil and Spain	55
POSTER SESSION II.....	58
Tile Watch Digital Collaborative Platform: Engaging Diverse Stakeholders in Safeguarding Tile Heritage	58
“How can I protect my region’s heritage?”: Education for the conservation and its challenges in Alto Douro and Côa Valley Schools	60
Performative Silence as Cultural Practice: Reflections from the Luso-Japanese Encounter (16th century).....	61

COMMITTEES

ORGANISING COMMITTEE

Laura Castro
Maria Aguiar
Maria João Revez
Patrícia Moreira

PhD Students:

Cíntia Freitas
Mariana Durana
Marta Borges
Marta Gueidão

SCIENTIFIC COMMITTEE

Alessandro Carrieri (Università degli Studi di Trieste – Dipartimento di Studi Umanistici)
Ana Margarida Abrantes (Universidade Católica Portuguesa – Faculty of Human Sciences)
André Baltazar (Universidade Católica Portuguesa – School of Arts/CITAR)
Begoña Farre Torras (Universidade Nova de Lisboa, NOVA FCSH - School of Social Sciences and Humanities)
Gonçalo de Vasconcelos e Sousa (Universidade Católica Portuguesa – School of Arts /CITAR)
Isabel Tissot (Universidade Nova de Lisboa – NOVA School of Science & Technology)
Joana Teixeira (Universidade Católica Portuguesa – School of Arts /CITAR)
José Guilherme Abreu (Universidade Católica Portuguesa – CITAR)
Laura Castro (Universidade Católica Portuguesa – School of Arts /CITAR)
Luís Teixeira (Universidade Católica Portuguesa – School of Arts /CITAR)
Luísa Santos (Universidade Católica Portuguesa – Faculty of Human Sciences)
Maria Aguiar (Universidade Católica Portuguesa – School of Arts /CITAR)
Maria João Revez (Universidade Católica Portuguesa – School of Arts /CITAR)
Mário Pastor (Universidade Católica Portuguesa – CITAR)
Marluci Menezes (Laboratório Nacional de Engenharia Civil - LNEC)
Mercedes Sánchez Pons (Universitat Politècnica de València – Dept. of Conservation and Restoration of Cultural Heritage)
Nuno Camarneiro (Universidade Católica Portuguesa – School of Arts /CITAR)
Patrícia Moreira (Universidade Católica Portuguesa – School of Arts /CITAR)
Pedro Andrade (Universidade Católica Portuguesa – CITAR)
Rita Macedo (Universidade Nova de Lisboa – NOVA School of Science & Technology)
Roberta Altin (Università degli Studi di Trieste – Dipartimento di Studi Umanistici)
Rui Bordalo (Universidade Católica Portuguesa – CITAR)
Sara Magno (Universidade Católica Portuguesa – Faculty of Human Sciences)

CONFERENCE OPENING STATEMENT

EPoCH Emerging Perspectives on Conservation and Heritage

EPoCH is an annual scientific conference organised by the Heritage & Conservation-Restoration Focus Area of the Centre for Science and Technology of the Arts (CITAR) of Universidade Católica Portuguesa, intended as an international forum for discussions on future directions in heritage and conservation-restoration research, embracing collaborative conversations driven by emerging perspectives and the exploration of a diverse array of practices, theories, and approaches.

EPoCH 2026

Heritage Future(S) Future Heritage(S). On the Threshold of Change

In 2026, EPoCH is organised in connection with the Transform4Europe (T4EU) alliance and is part of the broader framework of the T4EU Sustainable Heritage Conference and T4EU Common European Heritage Week. This connection reinforces the conference's commitment to fostering dialogue across European universities and disciplines, aligning heritage research and conservation-restoration practices with the alliance's shared mission of sustainability, innovation, and societal engagement.

The central theme of the 2026 edition of EPoCH is *Heritage Future(s) / Future Heritage(s): on the Threshold of Change*. Starting from the intertwined and open-ended concepts of heritage future(s) and future heritage(s), the conference challenges us to critically reflect on the evolving landscapes of conservation-restoration and heritage studies, and to imagine new configurations of practice, ethics, and responsibility – on the threshold of change.

The formulation *heritage future(s)* suggests a forward-looking perspective: how do current heritage practices shape, or constrain, possible futures? This invites reflection on the values, ethical frameworks, and operative concepts that underpin conservation-restoration today. What are we preserving – and for whom? To what extent does our desire to safeguard the past risk inscribing a singular vision of the future, excluding other temporalities, epistemologies, or communities? As the climate crisis, digital technologies, and shifting sociopolitical landscapes accelerate change, how might conservation practices adapt without becoming complicit in the very dynamics of erasure they aim at resisting?

Conversely, *future heritage(s)* challenges us to imagine what will come to be seen as worthy of preservation. Which materials, memories, and media will future generations inherit – and how will they reinterpret or repurpose them? This opens a crucial space to problematise the canon of heritage itself, questioning the implicit hierarchies and silences that have historically defined what is deemed “preservable.” And how can conservation-restoration evolve to accommodate heritages that are still in formation, fluid, or at risk of being overlooked? Future heritages may rely on heightened immaterial, ephemeral, communal, or even virtual dimensions – demanding modes of conservation that exceed traditional frameworks of material care.

The subtitle – *on the threshold of change* – underscores the sense of urgency, liminality, and possibility that defines this historical moment. It prompts us to consider conservation-restoration not as a reactive or merely preservative act, but as a generative practice deeply entangled with cultural, political, ecological and technological transformation. Standing on this threshold, practitioners and scholars alike are called to reimagine their roles: not only as stewards of the past, but as co-authors of evolving narratives of heritage, attuned to plural temporalities and emerging forms of life. In doing so, it encourages a collective reckoning with change, not merely as disruption, but as a condition of possibility.

CONFERENCE PROGRAMME

Wednesday | March 18th

9:00 Welcome and registration of participants

9:30 CONFERENCE OPENING

10:00 KEYNOTE

Paulo Lourenço

University of Minho, Portugal

Heritage at Risk, Heritage in Transition: ICOMOS, Structural Safety, and Climate Adaptation

11:00 POSTER SESSION |

Coffee Break

Michela Gambino - *Biofilms colonising outdoor stone monuments and climate change: learning outcomes from a year of the Assistens Kirkegård project.*

Olivia Rybak-Karkosz - *The use of new technologies for protection of the cultural heritage held in museums*

Ernestina Engel, Lisiane Ilha Librelotto, Laia Haurie, Aleix Alva - *Monitoring Climate Vulnerability of Cultural Heritage: Case Studies from Brazil and Spain*

11:30 PAPER PRESENTATIONS I

Catarina Cortes Pereira, Eduarda Vieira, Karen Barbosa, Maria Aguiar, Martha Tavares - *RECOVER-Heritage: from preparedness to recovery*

Elisabetta Pozzetto - *Communicating Heritage Future(s) at a Threshold of Time: The Friuli Earthquake, Circular Narratives, and the Transferability of a Post-Disaster Model*

12:30 Lunch Break

14:00 PAPER PRESENTATIONS II

Tomasz Grząślewicz - *Breaking Through Oblivion. How to Preserve the Hardly Told Narratives of the Jewish Ghetto in Sosnowiec-Środula*

Laetitia Kozlova - *Voice and Heritage? Crossed perspectives as preliminary research*

Veronika Zvirble, Jaroslav Daveiko - *Ephemeral signs: land and art flows of cultural memory on the threshold of heritage future(s)*

Alyne Fernanda Reis, Henrique Antunes Cunha Junior - *Cultural Heritage and the Patrimonialisation of Black Territories*

Fátima Lambert - *APAGADAS: Bio-mapping women@cartoteca 'geoartística' e 'chronoreferenciada'*

15:40 Coffee break & Exhibition
Opening: Garden of the (In)Visibles T4EU

16:10 PAPER PRESENTATIONS III

Nuno Moreira - *Artificial Intelligence and Preventive Conservation: practical notes on automation, predictive analysis and strategic decision-making*

Pedro de Andrade - *The Critical/Ethical Artificial Intelligence turn on urban arts heritage: sociological reflections and A.I. art on urban cultural heritage destruction via the war on Ukraine*

José Guilherme Abreu - *The controversial revival of a colonialist monument in an Oporto's historic square*

CONFERENCE PROGRAMME

Thursday | March 19th

9:00 Registration of participants

9:30 KEYNOTE

Cornelius Holtorf

Linnaeus University, Sweden

UNESCO Chair on Heritage Futures

Heritage Futures: From Conservation to Change

10:30 PAPER PRESENTATIONS IV

Cláudio Monteiro, Alexandra Figueiredo - *PAW (Plasma-Activated Water): the “new solvent” of the future?*

Ana Quílez-Molina, Suset Barroso Solares, Óscar Fadón-Loro, Jorge Torre, Carlos Sanz-Velasco, Violeta Hurtado-García, Javier Pinto - *Cellulose-modified poultices to address salt weathering problems in cultural heritage*

11:10 POSTER SESSION | Coffee Break

Marluci Menezes, Matilde Cabrita, Mariana Santos, Sara Pires, Dora Roque, Sílvia Pereira - *Tile Watch Digital Collaborative Platform: Engaging Diverse Stakeholders in Safeguarding Tile Heritage*

Mariana Pinto, Thierry Aubry, Eduarda Vieira - *“How can I protect my region’s heritage?”: Education for the conservation and its challenges in Alto Douro and Côa Valley schools*

Filipa Iglésias - *Performative Silence as Cultural Practice: Reflections from the Luso-Japanese Encounter (16th century)*

11:40 PAPER PRESENTATIONS V

Gabriel Vasconcelos, Maria Aguiar - *Between Two Temporalities: The Medieval Painting of Saint John the Evangelist and the Ethical Challenge of Removing the Baroque Repainting*

Leticia Crespillo, Patrícia Tonel Monteiro - *From Fragment to Space: Digital Reconstruction and Possible Futures for the Mural Heritage of the Café Rialto (Porto)*

12:30 Lunch Break

14:00 PAPER PRESENTATIONS VI

Kadri Kallast - *Heritage management strategies for future communities*

Mariana Pinto, Fernando Carrera-Ramírez, Thierry Aubry, Eduarda Vieira - *New challenges for the conservation of the Côa Valley Open-air Rock Art: the development and implementation of a conservation plan*

Dunja Demirović Bajrami - *From extractive practices to regenerative futures: reframing PoTaRCH heritage in Europe’s sustainable transition*

Hok Nang Tam - *Mapping the Aesthetic Imaginaries through the Atmosphere of Extractive Zones in Lausitz of Germany*

15:40 Coffee break

16:10 PAPER PRESENTATIONS VII

Sílvia Pereira, Hugo Benavente, Mariana Santos, Liane Lin, Sara Pires, Marluci Menezes, Gonçalo Jesus, António Antunes, Dora Roque, Lurdes Esteves, Jose Saporiti Machado, Anabela Oliveira - *Artificial Intelligence Applied to Safeguarding Historic Tiles: The AI4Az Project and TileWatch platform*

Catarina Cortes Pereira - *Digital Invisibility: Can Digitisation Include “Unauthorised” Voices? Expanding the Conservator-Restorer’s Role*

CONFERENCE PROGRAMME

Friday | March 20th

CLOSING EVENT

11:30 – 13:00

Conversation with

Rui Oliveira Lopes (Director of Museu das Convergências)

Roberta Altin (Professor at Università degli Studi di Trieste – Dipartimento di Studi Umanistici)

Chair: Laura Castro

Exhibition Visit

Flux Objects, People and Places

by **Rui Oliveira Lopes** (Director of Museu das Convergências)

KEYNOTE SPEAKERS

Wednesday | March 18th, 10:00



PAULO LOURENÇO
University of Minho

Heritage at Risk, Heritage in Transition: ICOMOS, Structural Safety, and Climate Adaptation

In earlier times, before the distinction between the professions of architecture and engineering, the empirical knowledge of building crafts, transmitted from masters to apprentices, provided the tradition and theory upon which structural design was based. The transformation of massive stonework into the delicate tracery characteristic of Gothic architecture is clear evidence of the powerful logic of trial-and-error methods employed by medieval builders, representing a triumph of skill over probability. But how to manage the threshold of change?

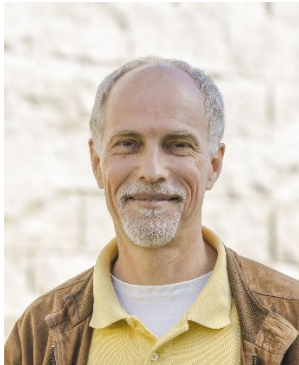
It is evident that the built heritage is a human-made environment resulting from civilization. The need to preserve it, and to transmit it into the future as part of our identity, is a major societal demand. Today, however, significant losses due to extreme events and lack of maintenance, together with the high costs associated with interventions, are increasingly evident, often implying loss of cultural value and uncertain levels of safety. This lecture addresses key concepts related to risk and erroneous perceptions, outlines ICOMOS recommendations for heritage structures, discusses challenges posed by climate adaptation at a critical threshold of change, and presents selected examples of interventions.

Paulo Lourenço is a Full Professor at the Department of Civil Engineering (DEC), University of Minho, Guimarães, Portugal, and the coordinator of the Group of Historical and Masonry Structures. He is currently Head of the Structural Group at DEC and Co-Head of the Institute in Sustainability and Innovation in Structural Engineering, involving the Universities of Minho and

Coimbra, with current contracted funding of more than 20 Million Euro and 100 PhD students. Professor Lourenço is experienced in the fields of NDT, advanced experimental and numerical techniques, innovative strengthening techniques and earthquake engineering. He is a specialist in structural restoration and has worked on more than fifty monuments, including World Heritage sites such as Cathedral of Porto, Monastery of Jerónimos (Lisbon), Cathedral of Canterbury (UK) and Qutb Minar (New Delhi). He is also a structural masonry expert, responsible for R&D projects with clay brick, concrete block and lightweight concrete block masonry. He has worked as consultant in large projects on innovative masonry structures using confined and reinforced masonry, and on masonry infills, including three Euro 2004 stadiums for the European soccer championship in Portugal.

He is the coordinator of an International Masters Course in Structural Analysis of Monuments and Historical Constructions. Editor of the International Journal of Architectural Heritage: Conservation, Analysis and Restoration and coeditor of the Conference Series, Structural Analysis of Historical Constructions. He participated in committees from ICOMOS, ISO-International Standards Organization, CEN-European Committee for Normalization, CIB-International Council for Research and Innovation in Building and Construction and RILEM-International Union of Laboratories and Experts in Construction Materials, Systems and Structures.

Supervisor of 50 PhD theses and coordinator of national and international research projects. Author or co-author of more than 1300 technical and scientific publications in the fields of masonry, timber and concrete structures, with an h-index of 45.



Cassia Davis. © 2024 J. Paul Getty Trust

CORNELIUS HOLTORF
Linnaeus University, Sweden
UNESCO Chair on Heritage
Futures

Heritage Futures: From Conservation to Change

It has been argued that to imagine different futures, we need different pasts. In this lecture I am considering what this may mean for conservation and cultural heritage. My journey will take you from the Venice Charter and the Getty Conservation Institute to the UN Pact for the Future, the Post-2030 Agenda, and back again.

Cornelius Holtorf studied Prehistoric Archaeology, Social Anthropology, and Physical Anthropology at the Universities of Tübingen, Reading, and Hamburg, having completed his first degree (M.A.) at Hamburg with a thesis on the contemporary meanings of megalithic monuments. He then moved on to the Department of Archaeology at the (then) University of Wales, Lampeter, first for an M.A. in Archaeological Theory and then for a Ph.D. entitled "Monumental Past: Interpreting the meanings of ancient monuments in later prehistoric Mecklenburg-Vorpommern (Germany)", defended in 1998.

In 1998-99 Professor Holtorf was a STINT Visiting Scholar at the (then) Institute of Archaeology at Göteborg. During that year, he started his field project at Monte da Igreja in southern Portugal and also participated in the field project on Monte Polizzo in Sicily. From 1999 until 2002 he conducted research and taught in the Department of Archaeology, University of Cambridge, two years of which he was replacing Ian Hodder while he was on leave at the University of Stanford. In 2002, he moved back to Sweden where he was awarded a European Commission funded Marie-Curie Fellowship for a 2-year research project on "The portrayal of archaeology in popular culture", based at the National Heritage Board (Riksantikvarieämbetet) in Stockholm. From 2005 until 2008 he was employed as an Assistant Professor at the Department of Archaeology and Ancient History, University of Lund.

Since 2008, Cornelius Holtorf has been working as Associate Professor (Lektor) in Archaeology at Linnaeus University in Kalmar (known as University College Kalmar before 2010). In 2011, he was promoted to Full Professor at the same University.

CLOSING EVENT

Friday | March 20th, 11:30-13:00

MUSEU DAS CONVERGÊNCIAS | MUSEUM OF CONVERGENCES
GUIDED TOUR - EXHIBITION: *FLUX. OBJECTS, PEOPLE and PLACES*
Followed by *CONVERSATION with:*



RUI OLIVEIRA LOPES

Rui Oliveira Lopes has been Director of Museu das Convergências since July 2024. He was a Professor at the Faculty of Arts and Social Sciences at the University of Brunei Darussalam between 2015 and 2024. He holds a Bachelor's degree in History (2003) and obtained a Master's degree in Art Theories (2006) and a PhD in Art Sciences (2011) from the Faculty of Fine Arts of the University of Lisbon. His research focuses on issues of transculturality and knowledge transfer through art and image, the ontological precepts of the image in the contexts of the sacred, the spiritual, and religious expression, and research on the processes of cultural and identity representation through artistic practices and museological and curatorial discourses.



ROBERTA ALTIN

Roberta Altin is Full Professor of Cultural Anthropology at the Department of Humanities, University of Trieste (Italy). Her research focuses on transnational migration, refugee studies, museum and media anthropology. She has been founder and coordinator of CIMCS - Centre for Migration & International Cooperation on Sustainable Development, University of Trieste (2017-2023), vice-president of SIAA - Italian Society of Applied Anthropology (2020-23), and director of the Blacksmith Art and Cutlery Museum - Maniago (PN) (2004-2021).

MUSEU DAS CONVERGÊNCIAS | MUSEUM OF CONVERGENCES
EXHIBITION: *FLUX. OBJECTS, PEOPLE and PLACES*



Museu das Convergências is a new cultural facility in the city of Porto, located in a former slaughterhouse, which is currently being rehabilitated for cultural purposes. The museum is presented as:

“an art museum dedicated to the arts and cultures of the world throughout time. It aims to be a space for reflection on global mobilities—how people, ideas, and creations intersect in history and in the present. Taking the transculturality of art as its central axis, the museum addresses the cultural mobilities and artistic circulations that have shaped—and continue to shape—human societies. The collections are not merely aesthetic testimonies; they are bearers of dialogues, artistic transfers, and cultural transformations.

With a collection of over two thousand pieces, from the Távora Sequeira Pinto Collection, the Museum of Convergences invites visitors to traverse centuries and continents, in a narrative that unites distinct worlds and reveals unexpected affinities. Its collection functions as a living atlas of experiences, imaginaries, and worldviews, presenting

objects that emerge from both harmonious encounters and tensions, asymmetries, and cleavages between cultures.”

The first temporary exhibition, ‘Flux - Objects, People and Places’ is held outside the museum, in the former Customs House of Porto – Alfândega do Porto. The exhibition presents 125 objects, mostly from the Museum of Convergences / Távora Sequeira Pinto Collection, with loans from various institutions, five religious communities in Porto, and contemporary artists.

After a conversation with Rui Oliveira Lopes and Roberta Altin, from the Department of Humanities at the University of Trieste, moderated by Laura Castro, a tour to the exhibition will be guided by the Director of the Museum.

About the Museum:

<https://museudasconvergencias.pt/en>

About the exhibition:

<https://museudasconvergencias.pt/en/events/1-flow>

PAPER PRESENTATIONS I

Wednesday | March 18th, 11:30

RECOVER-Heritage: from preparedness to recovery

Catarina Cortes Pereira ^{1,2}

Eduarda Vieira ¹

Karen Barbosa ¹

Maria Aguiar ¹

Martha Tavares ¹

¹ Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts;

² CIEBA - Research Centre for Studies in Fine Arts, Faculty of Fine Arts, Lisbon University

All around the world, emergencies affecting cultural heritage are becoming more frequent, more complex and more systemic, driven by climate-related hazards, infrastructural fragility and social disruption. In response, international cultural heritage agendas have invested significantly in preparedness, risk management and emergency planning (UNESCO, 2015). The recent establishment of a Portuguese committee of the Blue Shield reflects this growing engagement with emergency preparedness at national level. However, the post-emergency phase remains a critical threshold where these frameworks are repeatedly tested and often exceed their limits (ICOMOS & ICCROM, 2023).

This communication argues that the growing gap between preparedness models and post-emergency realities reveals the need for a paradigm shift in how heritage emergency response is conceptualised. Recovery contexts are characterised by scale, uncertainty and constraint: large volumes of affected material, limited access to specialised resources, overlapping institutional vulnerabilities and the urgent need to act before deterioration accelerates. In such conditions, effective response often depends less on ideal conservation procedures than on rapid stabilisation to prevent irreversible loss, prioritisation and coordination, frequently relying on temporary and non-standard measures (ICCROM, 2018; ICOMOS & ICCROM, 2023).

Emergency plans often rely on interoperability between institutions, shared infrastructures, designated storage facilities or technical resources. Yet recent recovery experiences demonstrate how these systems can fall short or collapse when the same emergency affects multiple institutions simultaneously, or when the volume of damaged heritage exceeds anticipated capacity (ICOMOS & ICCROM, 2023). In parallel, post-emergency contexts frequently involve spontaneous volunteers and affected communities seeking help, creating additional coordination needs if good intentions are to translate into safe and effective action (Daddoust et al., 2021). While conservator-restorers hold the technical knowledge required to guide post-emergency decisions, their impact remain fragmented in the absence of an institutional coordinating structure able to organise action across institutions, services and communities.

It is in this context that this communication introduces RECOVER – Response, Education and Conservation for Vulnerability, Emergency and Risk for Heritage (RECOVER-Heritage), a newly established working group at CITAR, School of Arts, Universidade Católica Portuguesa, positioned to help address this structural gap by supporting coordination in the post-emergency phase. RECOVER-Heritage does not aim to define conservation and restoration treatments for post-

emergency contexts, but to enable coordinated workflows by bringing together conservator-restorers, technical staff and volunteer teams, liaising with civil protection and municipal services, and supporting institutions and communities navigating the immediate aftermath of disaster. By reframing post-emergency recovery as a collective, coordinated process, the communication argues that the future of heritage in emergency contexts depends not only on preparedness frameworks, but on the ability of conservator-restorers to organise themselves as a coherent, institutionally engaged body capable of acting decisively when emergency response gives way to recovery (Harrison et al., 2020).

Keywords

Conservator-restorers; Cultural heritage; Emergency and risk; Post-emergency recovery; Heritage futures.

References

- Daddoust, L., Asgary, A., McBey, K. J., Elliott, S., & Normand, A. (2021). Spontaneous volunteer coordination during disasters and emergencies: Opportunities, challenges, and risks. *International Journal of Disaster Risk Reduction*, 65, 102546. <https://doi.org/10.1016/j.ijdrr.2021.102546>
- Harrison, R., DeSilvey, C., Holtorf, C., Macdonald, S., Bartolini, N., Breithoff, E., Fredheim, H., Lyons, A., May, S., Morgan, J., & Penrose, S. (2020). *Heritage futures: Comparative approaches to natural and cultural heritage practices*. UCL Press. <https://doi.org/10.14324/111.9781787356009>
- ICCROM. (2018). *First aid to cultural heritage in times of crisis: Handbook*. Rome: ICCROM. <https://www.iccrom.org/publication/first-aid-cultural-heritage-times-crisis>
- ICOMOS, & ICCROM. (2023). *Guidance on post-disaster and post-conflict recovery and reconstruction for heritage places*. <https://www.iccrom.org/publication/guidance-post-disaster-and-post-conflict-recovery-and-reconstruction-heritage-places>
- UNESCO. (2015). Sendai framework for disaster risk reduction 2015–2030. <https://www.undrr.org/publication/sendai-framework-disaster-risk-reduction-2015-2030>; <https://www.undrr.org/quick/11409>

Catarina Cortes Pereira

is a conservator-restorer at CCC Atelier – Catarina Cortes Conservação. She holds a PhD in Conservation and Restoration of Cultural Heritage from Universidade Católica Portuguesa (UCP), with a dissertation on the retouching of dry plate negatives in Portuguese collections from the first half of the 20th century. She holds a postgraduate qualification in Management and Museology, an MSc in Conservation Science from NOVA University Lisbon and a BA in Art – Conservation and Restoration from UCP. She is a researcher affiliated with CITAR (Research Centre for Science and Technology of the Arts), UCP, and with CIEBA (Centre for Research and Studies in Fine Arts), Faculty of Fine Arts, University of Lisbon. Her interests focus on the conservation and restoration of cultural heritage, with particular attention to photography, heritage valorisation as a form of protection, digitisation, and the safeguarding of collections in contexts of risk and emergency.

Eduarda Vieira

PhD in Conservation and Restoration of Historical and Artistic Heritage from the Polytechnic University of Valencia (Spain). She is an associate professor at the School of Arts of the Universidade Católica Portuguesa - Porto regional hub. She was director of the Centre for Research in Science and Technology of the Arts – CITAR between 2019 and 2022 and is currently an integrated member. She is also a collaborator researcher of TechnArt-IPT. She coordinated the PhD in Conservation and Restoration at E.A/U.C. P between 2012 and 2024. She is the author of several works presented at congresses, conferences and seminars with scientific arbitration. She was an associate researcher for the Bionanosculp and Bio4Mural projects. She was principal investigator of the HAC4CG project and is co-principal investigator of the Holy Bodies project (ongoing). She is the supervisor of several doctoral and master's theses, having supervised two post-doctorates. <https://ciencia.ucp.pt/pt/persons/eduarda-vieira> <https://www.cienciavita.pt/portal/8519-EBF3-DB52>
Orcid: <http://www.orcid.org.0000-0002-0620-080X>

Karen Barbosa

holds a PhD in Conservation and Restoration from Universidade Católica Portuguesa, a postgraduate degree in Conservation and Restoration of Movable Cultural Heritage from the Federal University of Minas Gerais, a Specialisation degree in Conservation of Cultural Heritage from the Federal University of Rio de Janeiro, and a bachelor's degree in Engraving from the School of Fine Arts at the Federal University of Rio de Janeiro. She is a researcher and conservator-restorer of movable cultural property with over 30 years of experience, 19 of which were dedicated to coordinating the conservation and restoration department at the Museu de Arte de São Paulo Assis Chateaubriand (MASP), one of the most important museums in Latin America. Her specialty is in painting conservation and restoration, preventive collection management, and air quality monitoring in museums, libraries, and archives.

Maria Aguiar

holds a PhD in Painting Conservation from the School of Arts of Universidade Católica Portuguesa (EA-UCP). She also earned a Master's degree in the Conservation and Restoration of Easel Paintings from Northumbria University (UK), a Master's degree in Conservation of Historic Objects from De Montfort University (UK), and a Bachelor's degree in Conservation and Restoration from the Instituto Politécnico de Tomar (Portugal).

She has been an Assistant Professor at the School of Arts of EA-UCP since 2002, teaching across all three cycles of higher education and supervising both Master's and PhD theses. She is researcher of CITAR and a Board Member of the European Network for Conservation-Restoration Education (ENCoRE). Since 2020, she has coordinated the project for the reorganisation of the storage facilities of the Museum of the City of Porto, including the relocation of its collections to the newly refurbished building.

<https://www.cienciavita.pt/F714-7C66-F509>

<https://orcid.org/0000-0001-5444-975X>

Martha Lins Tavares

Martha Lins Tavares is a conservator-restorer, PhD in Architecture, ICCROM specialist, SPC 1995, and holds a master's degree in art history. She specialises in conservation, restoration, and materials used in antique lime and plaster coatings. She conducts research in new materials for conservation and restoration techniques. She is a consultant in the field of historical heritage and has collaborated on various projects in the areas of built heritage, integrated assets, and intangible heritage.

Communicating Heritage Future(s) at a Threshold of Time: The Friuli Earthquake, Circular Narratives, and the Transferability of a Post-Disaster Model

Elisabetta Pozzetto

University of Trieste

The 1976 earthquake in Friuli (Northeast Italy) represents a pivotal moment in European disaster history, resulting in the destruction of vast medieval and Renaissance heritage. As the 50th anniversary approaches, there is a critical need to transcend traditional, nostalgic commemorations in favour of future-oriented narratives. A prime example is Venzone, a national monument reconstructed through radical anastylosis, which serves as a unique global benchmark for resilient heritage. This paper argues that communication functions as a form of “immaterial conservation,” influencing how such iconic sites are perceived not as static relics, but as dynamic assets for future sustainability. Within the EPoCH framework, the study investigates how current communication can bridge the gap between “heritage future(s)” (reconstruction history) and “future heritage(s)” (sustainable preservation for new generations). The research adopts a qualitative methodological framework. It combines a Critical Discourse Analysis (CDA) of regional institutional campaigns with targeted semi-structured interviews with key informants: heritage managers and young cultural innovators. This approach specifically explores how to “re-launch” the Friuli heritage (using Venzone as a core case) through contemporary lenses. The focus is on identifying “circular narratives”—strategies that treat

historical memory as a renewable resource rather than a closed chapter—ensuring the fieldwork is both deep and feasible within a specialised one-month timeframe.

The analysis reframes the Friuli experience as a “circular heritage narrative.” Preliminary findings suggest that for an anniversary to be effective today, communication must move beyond linear nostalgia. In the case of Venzone, the narrative shifts from “what was lost” to “how we build resilience.” For younger stakeholders, the heritage of the earthquake is increasingly linked to contemporary challenges such as climate-related risks and social transformation. The study identifies that the “circularity” of memory prevents celebratory closure and fosters a dynamic, sustainable heritage ecosystem that remains relevant in a globalised context.

The paper addresses the scalability of this model, answering the research question: How can post-disaster heritage be communicated to support responsibility and sustainability beyond its original context? It concludes that the Friuli case, particularly its successful re-launching of sites like Venzone, offers a transferable framework for international heritage-making. By explicitly involving youth perspectives, the model shifts from a commemorative “backwards-glimpse” to a “future-making” practice. This provides a roadmap for other regions facing rapid transformations, demonstrating how circular narratives can inform the ethics of conservation and cultural promotion in diverse contexts.

Keywords

Post-Disaster Communication; Circular Heritage; Intergenerational Transfer; Resilience Narratives.

References

- Cominelli, F., & Greffe, X. (2012). Intangible cultural heritage: Safeguarding for creativity. *City, Culture and Society*, 3(4), 245–250. <https://doi.org/10.1016/j.ccs.2012.10.003>
- Holtorf, C. (2018). Embracing change: How to use heritage to build resilience and sustainability. *World Archaeology*, 50(4), 639–650. <https://doi.org/10.1080/00438243.2018.1510340>
- Meskill, L. (2014). States of conservation: Protection, politics, and heritage sites in the twenty-first century. *Anthropological Quarterly*, 87(1), 217–238. <https://doi.org/10.1353/anq.2014.0007>
- Piskucha, K., & Ryberg-Webster, S. (2022). Heritage as a resource for resilience: A review of the literature. *Journal of Planning Literature*, 37(4), 547–565. <https://doi.org/10.1177/08854122221081552>
- Tweed, C., & Sutherland, M. (2007). Built cultural heritage and sustainable development: A theoretical framework for decision-making. *Progress in Planning*, 68(2), 62–69. <https://doi.org/10.1016/j.progress.2007.07.003>

Elisabetta Pozzetto

Elisabetta Pozzetto holds a Master’s Degree in Cultural Heritage Conservation (110/110 cum laude, University of Udine), with specialised experience at the Soprintendenza supervising the Tiepolo restoration in Udine Cathedral. This foundational background informs her current research as a Ph.D. candidate in Circular Economy at the University of Trieste (DEAMS). Her doctoral work focuses on the communication of circular economy and circular concepts, investigating how sustainability is framed within public sector strategies to address ecological and societal transformations.

As Deputy Editor-in-Chief of the Friuli Venezia Giulia Regional Press Agency, she manages institutional communication, EU reporting, and minority language strategies. A T4EU researcher, her recent work on Bulgarian circularity was published in *Circular Economy and Sustainability* (2025). Since 2020, she has served as a regional cultural expert for FVG evaluation committees and regularly moderates international academic conferences, including IFKAD (Matera, 2023) and the 50th EBES Conference (Lisbon, 2025).

PAPER PRESENTATIONS II

Wednesday | March 18th, 14:00

Breaking Through Oblivion. How to Preserve the Hardly Told Narratives of the Jewish Ghetto in Sosnowiec-Środula

Tomasz Grząślewicz

University of Silesia in Katowice

For many years after the Second World War, the short-lived existence of the Jewish ghetto in Środula – a district of Sosnowiec in southern Poland – was barely present in the consciousness of the local population. With most of the survivors already gone, their testimonies largely unknown, and a lack of proper commemoration within the space of the district, there seemed to be little hope for shaping any knowledge about the fate of Sosnowiec Jews. Moreover, since the end of World War II the former ghetto area has undergone a nearly complete transformation: most of the original buildings have either collapsed or been demolished for the construction of a new housing estate. If there are almost no visible traces left, then what is there to remember? Fortunately, the Środula ghetto is present in a number of notable literary works such as “Maus. A Survivor’s Tale” by Art Spiegelman, “Salamandra” by Ka-Tzetnik 135633 and “Płowa bestia” (The Blond Beast) by Paweł Wiederman. It also features in certain important survivor testimonies, including those given by members of the Jewish resistance movement. In recent years, this legacy seems to pave the way for establishing a new sense of collective memory among the local community, possibly to be extended to the descendants of Sosnowiec Jews. The broadly-understood literary sources served as the basis for several commemorative initiatives carried out in Sosnowiec on and around the 80th anniversary of the ghetto liquidation in 2023, including a theatre play, museum exhibitions, public lectures and discussions, guided tours, online lectures and documentary films.

The paper aims to investigate the impact of these various projects on increasing the awareness of the history of the place among the inhabitants of Sosnowiec. Reflecting on their nature, the author proposes further actions intended to preserve the memory of the Środula ghetto with a durable effect. Should the text-based commemoration go virtual or stay in books? Should it be interpreted in the form of a digital map, or maybe be rather read out in the field, within the space of the former ghetto?

Keywords

Jewish ghetto, Collective memory, Holocaust literature, Survivor testimonies.

References

Ka-Tzetnik 135633 (1978). *Sunrise Over Hell*. London: Corgi Books.

Spiegelman, A. (2003). *The Complete Maus. A Survivor’s Tale*. London: Penguin Books.

Wiederman, P. (1948). *Płowa bestia*. Munich: EUCOM Civil Affairs Division.

Tomasz Grząślewicz

is a PhD student at the Doctoral School of the University of Silesia in Katowice. He currently works on the PhD project “Mapping the Memory of the Jewish Ghetto in Sosnowiec-Środula”. His areas of research interest include Shoah literature and geography, Jewish community of Sosnowiec, ghettoisation and memory studies. He has been involved in a number of local initiatives in Sosnowiec as a lecturer, journalist and tourist guide. As the editor-in-chief, he co-authored “In the Footsteps of the Prose by Zbigniew Białyś.

A Literary Guide to Sosnowiec” (2021) and “We Won’t Get Deported. The Jewish Resistance Fighters in Będzin and Sosnowiec” (2023). Most recently, he has published “Sosnowiec According to the Spiegelmans” (2025).

Voice and Heritage? Crossed perspectives as preliminary research

Laetitia Kozlova

Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts

Ever since I recorded my grandmother’s voice as a gift for the whole family, I have known that a voice is a form of heritage. The voice we have heard since childhood — its tone, its affection and anger, its laughter and silences — has accompanied all her descendants. We share it and carry it within us, and its value increases over time. I can pass it on to my children.

Throughout my artistic research, I have tried to expand on this experience. My objective was to explore in what context, for whom, and in what conditions the recorded voice could be related with heritage. Contemporary sound studies are increasingly interested in the emotional, cultural, and relational aspects of human interaction with sound. Cultural heritage and the memory it embodies are essential to constructing identity and a sense of belonging to a community and territory. This paper discusses how the recorded voice can be incorporated into these processes. As the scholar Descamps points out, most steps in the heritage chain apply to oral collections, even though some are unstable. She argues that the “great present and future challenge for oral corpora is to be ‘visited’, listened to, ‘received’, reworked, reinterpreted, transmitted, revitalised, put on show, treated and exhibited as heritage objects (exhibits)” (Descamps, 2019, p. 116). Confronting the public appears to be one of the least advanced aspects of recognising and regenerating intangible cultural heritage, as set out in the 2003 UNESCO Convention. This could be an area where sound and cultural heritage researchers could collaborate. Accordingly, I will take the first steps as a sound artist.

Since the 2000s, museums and cultural institutions have launched numerous initiatives showcasing sound artefacts through various listening devices and setups. But does sound material accessed in these conditions have any heritage value? Are marginalised and dissenting voices audible? This study is supported by an alternative heritage discourse that prioritises community participation in the processes of designation, interpretation and preservation. Furthermore, displacing the voice so that it can be heard outside of its production context echoes the confiscation of artefacts in colonised countries, their exhibition in Western museums, and recent restitution initiatives. Can the meaning and value of a voice, like that of an artefact, withstand exile?

To contribute to this discussion, I will present two spoken voice-based installations that I created in 2024 in Dakar and between 2022 and 2025 in Tunis. Both consist of the spatialised playback of an individual’s voice recordings in the context of an art exhibition. It involves a discussion on the artistic and methodological options for sharing the recorded voice with an audience in a public space.

Keywords

Voice, Sound, Listening, Heritage, Transdisciplinarity.

References

- Descamps, F. (2019). *Archiving memory. From oral history to intangible heritage*. Paris, EHESS.
Deshays, D. (2023). *Liberties of listening. Sound as a vehicle for relationships*. Paris, MF.
Smith, Laurajane. *Uses of Heritage*. London & New York: Routledge, 2006.

Sørensen, Marie Louise Stig, and John Carman, eds. *Heritage Studies: Methods and Approaches*. London: Routledge, 2009.

Laetitia Kozlova

is a doctoral candidate in Arts Sciences and Technology (Universidade Católica Portuguesa, School of Arts, Research Centre for Science and Technology of the Arts). She is interested in new listening practices of recorded spoken voice, at the intersection of Sound studies, Performing arts and Cultural heritage studies. Her research project is supported by the Portuguese national agency FCT (Fundação para a Ciência e a Tecnologia), fellowship UI/BD/153521/2022. It is supervised by Laura Castro, and André Perrotta. It unfolds on two continents, Europe and Africa.

Ephemeral Signs: Land Art and Flows of Cultural Memory on the Threshold of Heritage Future(S)

Veronika Žvirblė¹

Jaroslavas Daveiko²

¹ Vilnius College - Institute of Sociology at the Lithuanian Social Sciences Centre.

² Vilnius College - Faculty of Design

Within this research, the concept of vital heritage is introduced and theoretically grounded to describe heritage as a living, processual system that is continuously produced through material practices, social interaction, and environmental change (Harrison, 2015). Drawing on relational and more-than-human perspectives, heritage is approached as a multi-agent assemblage in which human actors, materials, landscapes, and ecological processes co-produce meaning and value (Bennett, 2010; Latour, 2005).

The aim of the research is to reveal how Land Art public practices operate as forms of contemporary heritage regeneration situated on the threshold between preservation and transformation. Methods include theoretical analysis, comparative analysis, visual hermeneutics, and conceptual modelling. The study demonstrates the potential of Land Art as an active agent in heritage-making processes, contributing to heritage rebuilding through temporary, site-specific interventions that connect genius loci and contemporaneity within sustainable and socially engaged heritage ecosystems (Massey, 2005; Nora, 1989).

The novelty of the research lies in its interdisciplinary approach, in which Land Art is understood as a method of cultural communication and future-oriented sustainable practice. This approach enables heritage to be treated not as a static object, but as a living process in which art mediates relationships between people, place, materiality, and time at a moment of critical transition, contributing to the democratisation of culture, educational innovation, and socially responsible heritage futures.

Keywords

Land Art; Place memory; Genius Loci; Heritage futures; Vital heritage.

References

- Assmann, A. (2010). Canon and archive. In A. Erll & A. Nünning (Eds.), *A companion to cultural memory studies* (pp. 97–108). Berlin: De Gruyter.
- Assmann, J. (2011). *Cultural memory and early civilization*. Cambridge: Cambridge University Press.
- Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Durham, NC: Duke University Press.
- DeSilvey, C. (2017). *Curated decay: Heritage beyond saving*. Minneapolis: University of Minnesota Press.
- Haraway, D. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Durham, NC: Duke University Press.
- Harrison, R. (2013). *Heritage: Critical approaches*. London: Routledge.

- Harrison, R. (2015). Beyond “natural” and “cultural” heritage: Toward an ontological politics of heritage. *Heritage & Society*, 8(1), 24–42.
- Holtorf, C., Högberg, A. (2013). Heritage futures and the future of heritage. *Counterpoint: Essays in Archaeology and Heritage*, S. Bergerbrant, S. Sabatini (Eds.), Oxford: Archaeopress, 739–746.
- Holtorf, C. (2015). Averting loss aversion in cultural heritage. *International Journal of Heritage Studies*, 21(4), 405–421.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. Oxford: Oxford University Press.
- Latour, B. (2017). *Facing Gaia: Eight lectures on the new climatic regime*. Cambridge: Polity Press.
- Massey, D. (2005). *For space*. London: Sage.
- Nora, P. (1989). Between memory and history: Les lieux de mémoire. *Representations*, 26, 7–24.
- Smith, L. (2006). *Uses of heritage*. London: Routledge.

Veronika Žvirblė

is an artist and designer and researcher living in Lithuania and a third-year doctoral student at the Institute of Sociology at the Lithuanian Social Sciences Centre. Her research covers cultural heritage studies, sociology of art, and contemporary art. She holds bachelor’s degrees in design and art history and a master’s degree in heritage restoration from the Vilnius Academy of Arts, and she is an active interdisciplinary artist, particularly in the field of Land Art. Her doctoral research examines Land Art as an experimental and methodological approach to the revitalisation of cultural memory and landscape anthropology, with a focus on site-specific artistic interventions, social interaction, transformation and processual heritage. Alongside her academic research, she works as a lecturer at the Faculty of Arts and Design at Vilnius Design College, where she teaches courses on heritage and creative practice. Her research interests include living heritage, heritage futures, cultural memory, Land Art methods, and interdisciplinary approaches to heritage studies.

Jaroslavas Daveiko

is an artist, designer, and researcher, based in Lithuania, with a PhD in environmental and interdisciplinary art. He is affiliated with the Faculty of Design at Vilnius College, where he teaches interior design, spatial design, and creative technologies, including AI-assisted design tools. His artistic and research practice focuses on land art, sound and performative objects, and site-specific installations that explore the relationship between the human body, landscape, and sensory perception. His doctoral project, *Earth Pulse*, explores sound and vibration as artistic tools embedded in the natural environment, combining material experimentation with embodied experience. Jaroslav actively works at the intersection of artistic research, education, and public space, creating projects that emphasise process, interaction, and ecological sensitivity. His interests include environmental art, sound art, performative objects, interdisciplinary methodologies, and contemporary approaches to land art and artistic research.

Cultural Heritage and the Patrimonialisation of Black Territories

Alyne Fernanda Reis¹

Henrique Antunes Cunha Junior²

¹École D’Urbanisme de Paris

²Federal University of Bahia

The study analyses the relationships between Black territories and policies for the preservation of urban heritage, taking into account the challenges, tensions, and specificities that shape these spaces. It is grounded in the understanding that the cultural assets present in these territories play a fundamental role in the social and spatial organisation of communities, while also contributing to the symbolic construction of the very idea of the nation. These assets express singular practices, memories, and identities, produced through specific historical experiences that are not reproduced homogeneously in other urban contexts.

In a context marked by the absence, fragility, or insufficiency of state action, the preservation of cultural heritage has occurred largely through the mobilisation of the communities themselves and of those who hold cultural knowledge and practices. These actors assume a central role in the protection, continuity, and transmission of cultural assets, ensuring their permanence and ongoing renewal over time, while recognising the importance of Black sociability as a constitutive element of heritage.

By discussing the paradoxes that conceptually structure the field of cultural heritage, the study establishes a direct relationship between memory and territory. These paradoxes materialise in urban space, where memory is continuously inscribed, updated, contested, and, in many cases, erased.

In this sense, the study proposes to challenge hegemonic conceptions of heritage by tensioning their institutional and epistemological boundaries. By departing from the margins, represented by Black and peripheral territories, it questions the limits of traditional models of patrimonialisation and points to the need for alternative epistemologies capable of recognising forms of knowledge, practices, and spatialities that have historically been rendered invisible. These perspectives expand the understanding of urban heritage, displacing it from normative centres and bringing it closer to lived experiences, everyday practices, and collective forms of memory production.

Recognising these territories as fundamental supports of collective memory is therefore an indispensable condition for the preservation of cultural heritage, both tangible and intangible, ensuring its continuity and its enduring connection to the communities that produce, recreate, and transmit it.

Keywords

Black Territories, Cultural Heritage, Patrimonialisation, Memory.

References

- Cunha Junior, H. (2019). The urban spatiality of Black populations: Concepts for cultural heritage. In M. P. dos Santos, H. Cunha Junior, E. F. Bie, & M. S. da Silva (Eds.), *Afro cultural heritage*. Fortaleza: Editora Fi.
- Côrtes, C. (2023). Dialogues on *escrivivência* and silence. In C. L. Duarte, C. Côrtes, & M. do R. Pereira (Eds.), *Escrivivências: Identity, gender, and violence in the work of Conceição Evaristo* (2nd ed., pp. 121–129). Rio de Janeiro: Malê.
- Dos Santos, R. E. (2022). Spatial expressions of racial relations: Some notes. *Boletim Campineiro de Geografia*, 12(1), 11–28.
- Fernandes, N. da N. (2011). *The ideological kidnapping of the category “suburb”: Rio de Janeiro 1858–1945* (2nd ed.). Rio de Janeiro: Apicuri.
- Gonçalves, J. R. S. (n.d.). Heritage as a category of thought. In R. Abreu & M. Chagas (Eds.), *Memory and heritage* (pp. 25–33).
- Santos, C. N., & Vogel, A. (Eds.). (1985). *When the street becomes home*. Rio de Janeiro: Ibam/Finep, Projeto.
- Santos, C. N. F. dos. (1986, April). Preserving is not listing, renewing is not tearing everything down. *Projeto*, (86), 59–63. Paper presented at the Annual Meeting of ANPOCS, 1985.
- Santos, M. (2014). *Space and method* (5th ed.). São Paulo: University of São Paulo Press.
- Santos, M. (1996). *The nature of space: Technique and time, reason and emotion*. São Paulo: Hucitec.

Alyne Fernanda Cardoso Reis

Architect and Urbanist, specialised in Conservation and Restoration of Heritage Assets from SENAI (2014). She holds a Master’s degree in Heritage, Culture, and Society from the Federal Rural University of Rio de Janeiro (2020) and is currently a Ph.D. candidate in Architecture and Urbanism at the Federal University of Bahia, with a doctoral research internship at the School of Urbanism in Paris. Experience in architecture firms, developing projects using BIM modelling. Her research focuses on Historical Cultural Heritage and Urban Studies, initially at the Casa de Rui Barbosa Foundation (2014), with an emphasis on the study of Historical Gardens. In 2018, she joined the Department of Historical Heritage at the Casa de Oswaldo Cruz / Fiocruz, working on restoration, preservation, conservation, and dissemination of cultural collections under the institution’s care. She was awarded first place in the Public Competition for Theses and

Dissertations on the State of Rio de Janeiro – FRIPERJ / FAPERJ – IPP, with her dissertation entitled Cultural Heritage and Memory of the Suburb of Madureira, RJ: Cultural Mapping as a Tool for Valorisation. In 2024, recognised by the Rio de Janeiro City Council for her contributions to constructing new imaginaries for the Black population, for her dedication to developing more sensitive practices in urban design and space occupation, and for her commitment to promoting fairer and more equitable cities.

Henrique Antunes Cunha Junior

Ph.D., Polytechnic Institute of Lorraine, Nancy, France (1983). M.A. in History (DEA), Faculty of Letters, University of Nancy, France (1981). Postdoctoral Research in Engineering, Technical University of Berlin, DAAD Fellow – German Government (1985). Habilitation (Livre Docente) at the University of São Paulo, Brazil – postdoctoral title obtained through thesis and public examination (1993). Full Professor at the Federal University of Ceará, Brazil (1994). Professor at the University of São Paulo, Brazil (1984–1994). Senior Researcher and Head of Department, Institute for Technological Research of the State of São Paulo – IPT (1987–1995). Full Professor at the Federal University of Ceará (1994–2020). Professor at the Federal University of Bahia, Brazil (2020).

APAGADAS: Bio-mapping women@cartoteca ‘geoartística’ e ‘chronoreferenciada’

Fátima Lambert

inED - Centro de Investigação e Inovação em Educação/FCT
ESE-P. PORTO

Following the Erasmus+ BIOMAPS project: European Literary Map Library (2021-2023), a new proposal was developed on a personal basis. Biomaps responded to challenges articulated between geographers and professors from different scientific areas who formed a transnational team of researchers and educators from Spain, Portugal, and Hungary. The most intriguing aspect, intrinsic to the project, consisted of the use and application of the ARCGIS/ESRI software, initially conceived for geographers, for the submission of content developed in the fields of literature, aesthetics, art history, and culture, not neglecting the heritage sciences. Following Sophia's biomap, already in the final phase of the project, I opened a new digital proposal under the name The Erased: Bio-mapping Women@Cartoteca, linked to previous projects under the overarching theme The (In)visibility of Women in the History of Art and Thought. How to situate The Erased in time and space, considering the alleged "void" of names, in the face of a Portuguese historiography/literary heritage that is predominantly populated by male authors? This should restore and disseminate the (shared) situation of the erased figures in intellectual society. Countries of emigration, totalling 66 author entries, people active in the 19th, 20th, and 21st centuries.

The question then arose as to how much geolocation and georeferencing can contribute (or not) to the dissemination of literary heritage, to the awareness of authorial diversity, amplified in biobibliographical indexes that flow according to historical periods. In the Portuguese case, the historiographical circumstances, similar to what has been observed in most European countries, mean that creators are irregularly represented in the academic and cultural landscape (Hatherly, 1996 and 2004), as well as in their patrimonial recognition. The elaboration of this “collective” Biomaps aims at the systematisation of paths to be undertaken/undertaken that are reflected in ideas, words and works framed within the experience of the territory that welcomes critical thought and discourses – in digital mode – in contemporary times. Written and iconographic content was produced for online insertion, worked from printed works and in digital format: direct and indirect sources. Cross-disciplinary studies focused on intersections, aiming at destinations mapped in chronologies along the thread of time. The “literary cartothèque” became an intermedial geo/chronoreferenced cartothèque: it aggregated times and spaces to solidify/broaden historiographical understanding, in proximity to written and iconographic

personalities. The idea of mapping, of cartography, permeates the psycho-affective impact it evokes in readers and spectators, projected from the aesthetic reception of the authorial person. Conceptual and poetic “inspiration” was taken from the persistence of geographies/cartographies discussed in the Atlas of Emotion (Bruno, 2002) in reviving primordial authors who are so often omitted and made invisible. Place is singularised/pluralised and spatialised in the time composed of chronologies; it is subsumed to punctuated events in the traveled biographical maps – identity biomaps. More recently, in parallel with another investigation involving AI, prompt-into-image is generated respecting the selection of specific content from the identified authors/writers (Anastácio, 2013 and 2022), some with visual creation. Both research/creations subsume guidelines and reflections addressed by Helena Barranha’s Unplace – a museum without a place (2015) and Art, Museums and Digital Cultures → Rethinking Change (Barranha & Henriques (2023).

The coveted biographical collection of European women authors/artists, designed, conceived, and produced to “feed” the platform, has been transformed into a feminist and multidisciplinary aesthetic, through an innovative methodological dynamic that generates intellectual activism – from the perspective of the qualified recognition of contributions consigned in the form of digital heritage. It was recognised that the aforementioned software enables flexibility and adaptation, allowing for an epistemological organisation that, in this case, reveals (will reveal) a concrete proto-feminist (Bell, 1922) and feminist (Edfeldt, 2006 and Moura, 2014) perception of literary typologies, of critical thinking about Culture, Heritage, and Environment-Umwelt. As a scope, a set of relevant awareness-raising points is highlighted – consider, therefore, the terms embodied by the European Heritage Strategy for the 21st Century. It is worth highlighting the main recommendations to be applied in compliance with the “Policy makers, stakeholders and citizens are invited to address the challenges we are facing by following the Strategy’s Recommendations”, namely: Societal Changes; Development Changes and Knowledge Changes. The concatenation of reflections, sequenced in The Erased: Bio-mapping, Women@Cartoteca, contemplates particular and global perspectives, raising consecutive problematisations. This challenge was oriented towards the visual-verbal construction of maps, observing thoughts and works, identified in georeferenced locations and times.

Keywords

The Erased Ones, Bio-mapping, Women@Cartoteca, Feminist Studies, AI and digital platforms, (In)visibility and Authorial Creation.

References

- Almeida, D., Anastácio, V., Martos Pérez, M.D. (Eds.) (2018). Mulheres em rede / Mujeres en red: Convergências lusófonas. In *Convergência Lusófona*. Berlin: Lit-Verlag.
- Anastácio, V. (2013). *Antologia Improvável - A Escrita das Mulheres (Séc. XVI a XVIII)*. Relógio d’Água.
- Anastácio, V. (2022). Onde estão as mulheres? Um percurso didático pela história da literatura portuguesa. In *Convergência Lusíada*. v. 33 n. 48: Para depois de Eva: autoria, personagem, enunciação. <https://doi.org/10.37508/rcl.2022.n48a513>
- Barranha, H. & Henriques, J. (Eds.) (2023). *Art, Museums and Digital Cultures → Rethinking Change*. Lisboa: IHA/NOVA FCSH and maat.
- Bell, A. F. G. (1922). *Portuguese Literature*. Oxford: Clarendon Press. <https://ia800201.us.archive.org/26/items/portugueselitera00belluoft/portugueselitera00belluoft.pdf>
- Bruno, Giuliana (2002). *Atlas of Emotion*. New York: Verso.
- Edfeldt, C. (2006). *Uma história na História: Representações da autoria feminina na História da Literatura Portuguesa do século XX*. Câmara Municipal do Montijo. <http://www.diva-portal.org/smash/get/diva2:520703/FULLTEXT01.pdf>
- Hatherly, A. (1996). Tomar a Palavra: Aspectos de vida da Mulher na Sociedade Barroca. In *Revista da Faculdade de Ciências Sociais e Humanas*, 9. Edições Colibri. pp. 269-280. <https://core.ac.uk/download/pdf/157623997.pdf>
- Moura, A. M. (2014). Sobre "Uma história na História: Representações da autoria feminina na História da Literatura Portuguesa do século XX". Chatarina Edfeldt. In *Portuguese Literary and Cultural Studies*.

https://ojs.lib.umassd.edu/index.php/plcs/article/view/PLCS26_Moura_page222/545

Morujão, I. (1995). *Contributo para uma Bibliografia Cronológica da Literatura Monástica Feminina Portuguesa dos Séculos XVII e XVIII* (Impressos).

Fátima Lambert

Coordinating Professor at the School of Education / Polytechnic of Porto; Integrated Researcher at InED - ESE/Polytechnic of Porto, where she was director until 2016.

FCT Scholarship holder - PD. "Writing and Seeing"; PhD in Modern and Contemporary Philosophy/Aesthetics (1998), Faculty of Philosophy of Braga/Portuguese Catholic University: Philosophical Foundations of Aesthetics in Almada Negreiros; Master's degree in Philosophy /Aesthetics: Pessoa's Aesthetics in Portuguese Modernism, Faculty of Philosophy, UCP (Braga); Bachelor's degree in Philosophy: Faculty of Philosophy, UCP (Braga).

Director of the undergraduate program in Cultural Heritage Management and the Master's program in Heritage, Arts and Cultural Tourism. Member of the Board of the Cultural Centre of P.Porto.

Member of AICA (Portugal); ICOM (Portugal); ENCATC (Brussels); SEyTA (Spain). Independent curator, prioritising programming with Brazilian and Portuguese artists.

PAPER PRESENTATIONS III

Wednesday | March 18th, 16:30

Artificial Intelligence and Preventive Conservation: practical notes on automation, predictive analysis and strategic decision-making

Nuno Moreira

CIEBA - Research Centre for Studies in Fine Arts, Faculty of Fine Arts, Lisbon University

This presentation aims to explore and demonstrate how Artificial Intelligence (AI) is a transformative force in the practice of preventive conservation, positioning it at the intersection between tradition and technological innovation. The central argument is that AI does not represent a threat to human expertise, but rather an extension of conservators-restorers' capabilities, enabling them to manage collections more effectively, anticipate risks with greater precision, and optimise resources in contexts of increasing complexity, budgetary constraints, and permanent institutional challenges.

Preventive conservation, traditionally based on essentially humanised and periodic monitoring processes and on decisions grounded in individual experience, faces growing challenges: collections are expanding in quantity and material diversity, institutional environments have become more fragile, human resources remain limited, despite the need to constantly demonstrate their value and relevance to managers, politicians, and funders, most of whom lack any sensitivity to the issue. It is in this context that AI offers concrete solutions to these challenges through three main domains of application that we have identified in our research.

First, automatic monitoring and analysis of environmental data: IoT sensors continuously collect data on temperature, relative humidity, light, pollutants, and vibrations, generating volumes of information impossible to process manually. The support provided by machine learning algorithms identifies subtle patterns, detects anomalies in real time, and generates automatic alerts when conditions deviate from parameters defined as suitable for a given collection. This enables a more immediate and permanent level of response to critical events and a deeper understanding of complex environmental dynamics, such as the existence and control of microclimates in specific areas or the impact of growing visitor flows at a time when mass tourism also affects museums and collections.

Second, predictive analysis and risk management, which enables the definition of predictive models trained on historical data, better able to forecast potential future deterioration, identify objects at high risk before visible damage occurs, and simulate "what-if" scenarios to test intervention strategies. Automated risk assessment systems can also prioritise objects for curative intervention based on multiple factors (current condition, cultural value, material vulnerability, display conditions), enabling more strategic allocation of always-limited resources. In this sense, the ability to anticipate problems represents a paradigm shift from reactive preventive conservation to proactive preventive conservation.

Finally, resource optimisation and decision support that the use of algorithms offers suggests the possibility of, for example, more appropriate HVAC system configurations balanced between conservation needs and energy efficiency, significantly reducing operational costs. Similarly, the implementation of LIDAR methodology, which we have been developing within our research

project, enables the definition of automatic planning systems that generate more efficient inspection processes for collections varied in materials, dimensions, and environments, maximising coverage of limited personnel time. The future use of virtual assistants may come to answer various technical questions from conservators-restorers, facilitating access to increasingly specialised knowledge.

The proposed presentation does not ignore critical dimensions and ethical challenges, making it essential to recognise AI's limitations, namely: the fact that algorithms lack contextual understanding and may perpetuate biases from training data, and should never replace specialised human judgment and control the aspect that conservation is inherently interpretative and involves decisions about authenticity, cultural meaning, and values that no algorithm fully captures, and therefore AI should be used as a support tool and never as a substitute for human expertise.

It is therefore proposed to take into consideration eminently ethical aspects such as algorithmic transparency, avoiding incomprehensible "black boxes"; the importance of constant human supervision; data privacy, especially in sensitive collections; and equity and democratisation in access to technologies. The presentation advocates principles of "explainability" (explainable AI), where conservators understand how systems arrive at their recommendations and always maintain the capacity to challenge automated decisions.

Keywords

Artificial Intelligence, Preventive Conservation, Automated Monitoring, Predictive Analysis, Digital Ethics.

References

- Moreno, M., Prieto, A. J., Ortiz, R., Cagigas-Muñiz, D., Becerra, J., Garrido-Vizuete, M. A., ... Ortiz, P. (2022). Preventive Conservation and Restoration Monitoring of Heritage Buildings Based on Fuzzy Logic. *International Journal of Architectural Heritage*, 17(7), 1153–1170. <https://doi.org/10.1080/15583058.2021.2018520>
- Bile, A., Tari, H., Grinde, A., Frasca, F., Siani, A. M., & Fazio, E. (2022). Novel Model Based on Artificial Neural Networks to Predict Short-Term Temperature Evolution in Museum Environment. *Sensors*, 22(2), 615. <https://doi.org/10.3390/s22020615>
- Lee, W., & Lee, D. (2019). Cultural heritage and the intelligent internet of things. *Journal on Computing and Cultural Heritage*. Vol12. Issue 3 (21). 1 – 14. <https://doi.org/10.1145/3316414>
- Falcone, M., Origlia, A., Campi, M., Di Martino, S. (2021). From architectural survey to continuous monitoring: Graph-based data management for cultural heritage conservation with digital twins. *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, XLIII-B4-2021, 47-54. <https://doi.org/10.5194/isprs-archives-XLIII-B4-2021-47-2021>
- Jouan, P., & Hallot, P. (2020). Digital Twin: Research Framework to Support Preventive Conservation Policies. *ISPRS International Journal of Geo-Information*, 9(4), 228. <https://doi.org/10.3390/ijgi9040228>
- Dolinska, N. (2025). Integration of AI and IoT sensors for continuous monitoring and restoration of cultural heritage sites: Determining critical factors. *International Journal of Conservation Science*, 16(SI), 337-352. <https://doi.org/10.36868/IJCS.2025.SI.10>
- Fiorucci, M., Khoroshiltseva, M., Pontil, M., Traviglia, A., Del Bue, A., & James, S. (2020). Machine learning for cultural heritage: A survey. *Pattern Recognition Letters*, 133, 102-108. <https://doi.org/10.1016/j.patrec.2020.02.017>
- Ghaith, Kholoud (2024) AI Integration in Cultural Heritage Conservation – Ethical Considerations and the Human Imperative, *International Journal of Emerging and Disruptive Innovation in Education: VISIONARIUM*. Vol. 2. Iss. 1, Article 6. <https://doi.org/10.62608/2831-3550.1022>

Nuno Moreira

is a Researcher at CIEBA (Research Centre for Fine-Arts), Faculty of Fine Arts, Lisbon University, specialising in preventive conservation of contemporary art. Over the last 30 years, he has coordinated laboratories and teams in Portuguese museums, developing preventive conservation plans, environmental

monitoring, and technical consultancy. He teaches in master's and postgraduate programs in Museology and Conservation and served as director of the Conservation and Restoration bachelor's program at ESTAL. As Permanent Consultant for the Portuguese Museum Network (Ministry of Culture), he promoted preventive conservation practices nationwide. He holds a BA in Conservation and Restoration, an MSc in Project Management, an MBA, and a PhD in Art and Heritage Sciences. His work bridges theory and practice, notably through his pioneering LIDAR plan for contemporary art conservation.

The Critical/Ethical Artificial Intelligence turn on urban arts heritage: sociological reflections and A.I. art on urban cultural heritage destruction via the war on Ukraine

Pedro de Andrade

Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts

The author's core aim is to present a research conducted on contemporary economic, ecologic, political and cultural phenomena, that may articulate the emerging Critical/Ethical Artificial Intelligence turn to urban arts heritage. One example exposed is the critique of the annihilation of urban cultural heritage, through the war on Ukraine.

Simultaneously, a socio-cultural and ethical discussion about urban arts at risk is recently rising, through urgent conceptual deconstructions / reconstructions and case studies. As a contextual perspective, the present essay refers the contributions of three central sociologists: Ulrich Beck (1992, 2016), who coined the concept 'Risk Society'; Manuel Castells (2015), who initiated an influent discussion on the 'Network Society'; and John Urry (2007, 2011), who argues that 'urban mobilities' are central in order to interpret the daily sociocultural life across the urban fabric. Such discussions are considered here, in order to analyze the augmented global risk vehiculated via Artificial Intelligence, which may soundly contribute to metamorphose our social formations into a 'Lying society' (Andrade, 2024).

These questions and postures are revisited applying a qualitative and quantitative sociological method that the author developed, named Hybrid Discourse Analysis-HDA. It utilises, among other hermeneutical tools, the Alphabet of Interconceptual Relations, concerning the content of a corpus including diverse text, images and video sources on Artificial Intelligence and Urban Arts. Hybrid Discourse Analysis focus on the articulation of social phenomena, in particular hybrid social processes, through the (de/re)construction of subjacent discourse propositions. Such propositions may be identified as collective or individual logical sentences, socially and culturally produced, disseminated and consumed, via natural and national language sentences, that are spoken or written within an everyday basis by social agents.

Critical/Ethical Artificial Intelligence on Urban arts heritage, comprehended by Hybrid Discourse Analysis methodology and techniques, may appear as particularly useful for the development of urban arts studies, and for reflection and practical use by diverse stakeholders circulating across the local/global urban fabric. The author will present as well one of his art works that reflect on Artificial Intelligence applied on Urban arts. Its title is A.I. Self_Made Art #1. A Chat on Cultural Heritage at War, and presents a chat between an A.I artist and a sociologist on Sociology of A.I.

Keywords

Critical/Ethical Artificial Intelligence turn, Urban arts heritage; War on Ukraine; Lying society; Hybrid Discourse Analysis-HAD.

References

- Andrade, P. (2024). The Lying Society and Fake News in the City: Urban Communication Studies via Mixed Qualitative Data Analysis and Critical Artificial Intelligence Methodologies. *UXUC_ User Experience & Urban Creativity Journal: Dossier Ubiquity*. 6, 2, pp. 47-95.
<https://journals.wisethorough.com/index.php/UXUC/issue/view/69>
- Beck, U. (1992). *Risk society: Towards a new modernity*. Sage Publications.
- Beck, U. (2016). *The metamorphosis of the world*. Polity Press.
- Castells, M. (2015). *Networks of Outrage and Hope: Social Movements in the Internet Age*. Cambridge: Polity Press.
- Urry, J. (2007). *Mobilities*. Polity Press.
- Urry, J., & Larsen, J. (2011). *The tourist gaze 3.0*. Sage Publications.

Pedro de Andrade

is a sociologist and artist, Permanent Researcher at Universidade Católica Portuguesa, CITAR. Collaborator Researcher and former Permanent Researcher at University of Minho. He taught at the Universities of Coimbra, Lisbon and Minho, on Critical Sociology of Culture, Communication, Sociological Methods, Digital Humanities. Research about urban cultures, art communication, art/science museums, literacies, digital social networks (Web 2.0/3.0), innovative methodologies. Coordinator of international funded projects on science/art museums and their audiences, funded by Foundation for Science and Technology-FCT, Lisbon.

Average evaluation: Excellent. Participation within international university networks e.g., Virginia Commonwealth Univ., USA; member of project Manifesto Art and Social Inclusion in Urban Communities (UK). Author of 214 published texts, books and scientific papers published in international journals with peer review, indexed in global bibliographic databases (Web of Science, etc.). Director of the 1st Portuguese-French scientific journal, *Atalaia-Intermundos* (since 1995). Director of Social Web Lab: Mobile Cultures and Touristic Communication, Lisbon.

The controversial revival of a colonialist monument in an Oporto's historic square

José Guilherme Abreu

Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts

The Monument to the Portuguese Colonial Effort (MECP), which stands in Praça do Império, Porto, is an eloquent, well-known and well-studied case of the nationalist, authoritarian and apologetic drift of monumentalism celebrating the epic of overseas Portuguese expansion and colonisation. Erected to serve as the ex-libris of the 1934 Portuguese Colonial Exhibition, the MECP was the first statement of what would become the 1940 Portuguese World Exhibition, which marked the beginning of a new Era of Grandeur, through the celebration of national history, whose discourse was largely staged by the statuary.

This fabulous theme was first studied by José Augusto França in *Arte em Portugal no Séc. XX* (Art in Portugal in the 20th Century), 1974. Then, in 1982, by Artur Portela in his study *Salazarismo e as Artes Plásticas* (Salazarism and the Visual Arts). In 1991, Margarida Acciaiuoli's doctoral thesis *Os Anos 40 na Arte Portuguesa. The Country, the Regime and the Arts. Restoration and Celebration*, which built a consistent theoretical framework on the subject. In Joaquim Saial's master's thesis, *Portuguese Statuary of the 1930s. (1926-1940)*, also from 1991, the MECP was described in detail. In 1997, Artur Portela revisited the theme in *Francisco Franco e o Zarquismo* (Francisco Franco and Zarquismo), where he forged the concept of national historicism as a definition of Portuguese statuary, based on Francisco Franco's 1928 statue of João Gonçalves

Zarco. In his 1999 master's thesis, *Sculpture in Porto's Public Space. Inventory, History and Perspectives for Interpretation*, José Guilherme Abreu studied the historical trajectory of the monument: inaugurated in 1934, in staff form; in 1935, it was converted to granite; in 1943, it was removed to the East Garden of the Crystal Palace; in 1951, it was dismantled, together with the ancient Crystal Palace.

For thirty-three years, the granite blocks of the monument were piled up in the gardens of the Crystal Palace, while the figures were scattered around different municipal warehouses. In 1984, fifty years after its creation, the MECP was reborn in Praça do Império, by decision of the Porto City Council, with the somewhat hasty and controversial intention of making people believe that the country had overcome its colonial trauma, enclosing its symbolic and narrative content in a kind of Pandora's box in which it was intended to imprison the Genius of History, as if it could be reduced to the innocuous dimension of eras that had, meanwhile, passed.

Facts show that this is not the case. The continued existence of the Monument to Portuguese Colonial Effort, erected in 1984 in Praça do Império, is indeed disturbing (Henriques and Pastor, 2022), as documented by the inscriptions and paintings that regularly claim against its insistent presence.

Our communication therefore aims to reflect, discuss and propose intervention strategies that are appropriate for neutralising the imperialist, colonialist and nationalist message implicit in it, by comparing it with interventions in similar cases, as we shall see.

Keywords

Statuary, Monumentalism, Countermonument, Civic Participation.

References

- Abreu, J.G. (2012) *A Escultura no Espaço Público do Porto. Classificação e Interpretação*, Porto: UCP Editora.
- Acciaiuoli, M. (1991) *Os Anos 40 na Arte Portuguesa. O País, o Regime e as Artes. Restauração e Celebração*. Lisboa: UNL.
- França, J.A. (1974) *A Arte em Portugal no Século XX*. Lisboa: Bertrand Editora.
- Henriques, F. e Pastor, M. (2022) O Percurso Errático e Incomodativo do Monumento ao Esforço Colonizador (Porto). In *International Conference Public Art as a Bridge over Troubled Places*, CITAR-UCP, 18/11/2022.
- Portela, A. (1982) *Salazarismo e Artes Plásticas*, Lisboa: Ministério da Educação e Cultura
- Portela, A. (1997) *Francisco Franco e o "Zarquismo"*, Lisboa: Imprensa Nacional-Casa da Moeda
- Saial, J. (1991) *A Estatuária Portuguesa dos Anos Trinta. (1926-1940)*. Lisboa: Bertrand Editora.

José Guilherme Abreu

José Guilherme Abreu, Porto, 1957, holds a PhD in Contemporary Art History from the Faculty of Social and Human Sciences of the New University of Lisbon. He is a researcher at the Centre for Research in Science and Technology of the Arts, of the School of Arts of the same University. He is a member of the International Advisory Board of the journal EURE (Instituto de Estudios Urbanos, Pontificia Universidad Católica de Chile), the Advisory Board of the journal Arte Y Ciudad (Universidad Complutense de Madrid) and the Scientific Committee of the journal on the W@terfront (Centro de Recerca Polis, Universitat de Barcelona). He is Secretary of the Association Raymond Abellio de Recherches et Études (ARARE) based in Toulouse.

As a researcher, he is specialised in Public Art. He is the author of books and monographs, and his doctoral thesis was awarded the Ignasi de Lecea Prize for Public Art by the POLIS Research Centre at the University of Barcelona in 2009. Since 2018, he has been the coordinator of the Public Art Information, Research and Intervention Network (R3iAP). He is currently retired from teaching.

PAPER PRESENTATIONS IV

Thursday | March 19th, 10:30

PAW (Plasma-Activated Water): the “new solvent” of the future?

Cláudio Monteiro¹

Alexandra Figueiredo²

¹ Techn&art Centre of the Polytechnic Institute of Tomar

² Instituto Politécnico de Tomar

Plasma-Activated Water (PAW) has been gaining prominence as a sustainable solution for disinfection, cleaning, and chemical stabilisation of surfaces, mainly due to its ability to generate reactive oxygen and nitrogen species (RONS) capable of degrading dirt, oxidative compounds, and biological agents. However, the use of PAW in Conservation and Restoration (CR) remains completely unexplored. The present study represents a pioneering approach by applying a continuous high-voltage DC electric field, around 30 kV, to activate the water absorbed within historical materials, producing PAW directly inside the cellulosic matrix without visible discharges and without mechanical or conventional chemical contact.

The method is based on exposing materials to a static electric field of very high intensity, capable of inducing molecular polarisation, dielectric reorganisation, and partial activation of the water molecules present in pores and fibres. This activation promotes the in-situ formation of reactive species, in a process similar to what occurs in corona discharges and post-glow plasma, but achieved here without macroscopic ionisation of air or visible plasma. The water premoistened in the paper becomes chemically reactive, behaving as PAW, capable of oxidising undesirable compounds and modifying surface chemical bonds.

Two types of historical paper were tested: aged newspaper and Kraft paper taken from the back of a 19th century frame. The samples were carefully moistened and exposed to the electric field until complete drying. Results were assessed through direct observation, transmitted light microscopy, and chemical analysis using EDS.

The results showed deep cleaning, visible both to the naked eye and under the microscope. Effective degradation of oxidative chromophores responsible for darkening and yellowing was observed, resulting in a colour recovery closer to the original tonality. The fibres exhibited greater brightness and uniformity, with no changes in surface texture.

A particularly significant result was the increase in mechanical strength in the more fragile papers. Exposure to the electric field appears to have promoted a favourable reorganisation of cellulose hydrogen bonds, removal of weakening oxidative by-products, and improved internal moisture redistribution, resulting in greater flexibility, reduced fragmentation, and improved structural cohesion.

EDS analyses revealed a reduced iron content in treated areas, consistent with the removal of superficial oxidation, as well as a stronger presence of the elements characteristic of cellulose. Microscopy reinforced these findings, showing cleaner, more translucent fibres with fewer deposits.

The observed effects suggest that PAW generated through direct electrical activation, without mechanical intervention or harsh chemicals, may function as a “new green solvent” capable of deep cleaning, stabilisation, and physical enhancement of sensitive materials such as historical paper.

Thus, this study demonstrates that the high voltage DC field method represents an innovative, safe, and sustainable pathway for future applications in Conservation and Restoration,

warranting further investigation through techniques such as FTIR, Raman spectroscopy, colorimetry, and accelerated aging tests.

Keywords

Plasma-Activated Water (PAW); Sustainable Technologies for the Conservation, Degradation and Restoration of Paper; Reactive Oxygen and Nitrogen Species (RONS); Non-Thermal Electric Field Treatment.

References

- Tiño, R.; Vizárová, K.; Krčma, F.; Reháková, M.; Jancovičová, V.; Kozáková, Z. (eds.) (2018). *Plasma technology in the preservation and cleaning of cultural heritage objects*, Springer.
- Vizárová, K.; Kaliňáková, B.; Tíno, R.; Vajová, I.; Čížová, K. (2021). Microbial decontamination of lignocellulosic materials with low-temperature atmospheric plasma, *Journal of Cultural Heritage* 47, 28–33, <https://doi.org/10.1016/j.culher.2021.02.004>
- Jiao, R.; Sun, F.; Zeng, S.; Li, J. (2023). Application of low-temperature plasma for the conservation of cultural heritage: A brief review, *Journal of Cultural Heritage* 63 240–248, <https://doi.org/10.1016/j.culher.2023.08.009>
- Stefanova, M.; Kamenarov, Z. (2020). Using atmospheric pressure plasma as a tool in the cleaning of icon paintings, *IOP Conference Series: Materials Science and Engineering* 949(1) 012087, <https://doi.org/10.1088/1757-899X/949/1/012087>
- Laguardia, L.; Vassallo, E.; Cappitelli, F.; Mesto, E.; Cremona, A.; Sorlini, C.; Bonizzoni, G. (2005). Investigation of the effects of plasma treatments on biodeteriorated ancient paper, *Applied Surface Science* 252(4) 1159–1166.

Cláudio Inácio Monteiro

is a conservator and archaeologist with more than three decades of experience in cultural heritage. He holds a degree in Conservation and Restoration and a postgraduate qualification in Underwater Archaeology from the Polytechnic Institute of Tomar, and completed his PhD in Quaternary, Materials and Cultures at the University of Trás-os-Montes and Alto Douro. He is a researcher at the TECHN&ART Centre of the Polytechnic Institute of Tomar, a collaborator with the Institute of Earth Sciences at the University of Porto, and with the Research Centre in Historical Sciences at the Autonomous University of Lisbon. Since 2015, he has served as President of CAA Portugal, coordinating funded scientific projects in the fields of conservation and archaeology. Throughout his career, he has led interventions involving organic heritage, cellulosic materials, wood and paper, in both terrestrial and underwater contexts. As the author of numerous scientific publications, he stands out for the application of advanced technologies in the recording, monitoring and conservation of archaeological materials, making a significant contribution to innovation in archaeology and conservation.

Alexandra Águeda Figueiredo

is an archaeologist and lecturer at the Polytechnic Institute of Tomar, where she has taught since 1999 and serves as a general council member. She holds a PhD in Prehistory and Archaeology from the University of Porto and is a specialist in megalithism, prehistory, and underwater archaeology. Throughout her career, she directed the Departmental Unit of Archaeology, Conservation and Restoration and Heritage until 2016, and she is responsible for the Laboratory of Archaeology and Conservation of Underwater Heritage. She coordinates several postgraduate programs in Archaeology, Heritage Management and Education, as well as in Underwater Archaeology. Her scientific activity includes leading numerous national and international projects in archaeology and heritage, and she has published more than one hundred works. She represents Portugal in Commission 4 of the International Union of Pre- and Proto-Historic Sciences and in the international association Computers Applications in Archaeology. Her contribution stands out for applied research, advanced training, and her role in fostering innovation in the study and conservation of archaeological heritage.

Cellulose-modified poultices to address salt weathering problems in cultural heritage

Ana Quilez-Molina
Suset Barroso Solares
Oscar Fadón-Loro
Jorge Torre Ordás
Carlos Sanz-Velasco
Violeta Hurtado-García
Javier Pinto

Study, Preservation, and Recovery of Archaeological, Historical and Environmental Heritage (AHMat) Research Group, Condensed Matter Physics, Crystallography, and Mineralogy Department, Faculty of Science, University of Valladolid, Spain;
BioEcoUVA Research Institute on Bioeconomy, University of Valladolid, Spain

Salt weathering is a key factor in deterioration that threatens the structural integrity of building constructions and cultural and historical heritage worldwide (1,2). The situation is predicted to worsen in the following years due to climate change, tourism massification, and high levels of pollution in urban areas (3). Salt weathering can be caused by various types of salts, such as fertilisers and de-icing treatment, which penetrate, rise through capillary action, and crystallise, expanding and detaching the structure (1). The most common actual treatment method includes the use of cellulose fibres that are detached using high-pressure air, which can cause damage to the structure. Therefore, there is a high interest in developing innovative materials to address, more efficiently, the progressive decline of the world's cultural heritage due to salt weathering (2).

In this presentation, I will report the results of the Spanish project DESALTHEIRAGE (PLEC2021-007705), a collaboration between a construction materials company (Tolsa), an advanced materials manufacturer (CellMat Technologies), a restoration company (TRYCSA), and a university research group (AHMat), where I belong. In this project, new composites based on chemically modified cellulose enhanced with adsorbent sepiolites were fabricated to adsorb salts from different rock surfaces. These composites generally exhibited excellent capabilities to remove sulphate from different representative international heritage rock substrates. These tests were performed using powerful techniques, such as X-ray fluorescence (XRF), to monitor the presence of sulphate salts on the surface of rocks. Besides, advanced X-ray radiography assays were performed to evaluate the penetration depth of the salt extraction. Last but not least, the notable capacity of these composites was also tested on monuments under restoration, such as the Santa Cruz Palace (Valladolid, Spain).

Keywords

Active material, Sepiolite, Salt adsorbent.

References

- (1) Charola, A. E., & Bläuer, C. (2015). Salts in masonry: an overview of the problem. *Restoration of Buildings and Monuments*, 21(4-6), 119-135. <https://doi.org/10.1515/rbm-2015-1005>
- (2) Oguchi, C. T., & Yu, S. (2021). A review of theoretical salt weathering studies for stone heritage. *Progress in Earth and Planetary Science*, 8(1), 32. <https://doi.org/10.1186/s40645-021-00414-x>
- (3) Otero Hermo, J. (2022). Heritage conservation future: Where we stand, challenges ahead, and a paradigm shift. *Global Challenges*, 6(1), 2100084. <https://doi.org/10.1002/gch2.202100084>

Ana Quilez-Molina

Lecturer at the Department of Condensed Matter of Physics, Crystallography and Mineralogy at the University of Valladolid and member of the “Historical and Archaeological Materials Research Group” (AHMat). Skilled in the development and characterisation of sustainable polymeric composites with advanced functional properties (e.g., catalysts, sensors, ultraviolet radiation blockers, antioxidants...) with main application in water cleaning or packaging of intelligent food with low environmental impact. She was awarded the best Young Researcher for her participation in the congress Science and Art X edition for the work carried out on the development of new materials to combat the damage to cultural and historical heritage associated with the formation of salts.

Suset Barroso Solares

Lecturer at the Department of Condensed Matter of Physics, Crystallography and Mineralogy at the University of Valladolid and member of the AHMat research group. Skilled in the physical-chemical study of the archaeological materials from the Pintia site, in particular pre-Roman glass beads, using techniques such as Raman spectroscopy, infrared spectroscopy, microscopy, colourimetric diffraction of rays, X-ray fluorescence, and participating in measurement campaigns at large facilities such as the Louvre Museum particle accelerator and the BESSY-II synchrotron in Berlin. She also develops functional materials from porous polymers, highlighting the implementation of new manufacturing and characterisation techniques that allowed the foaming and study of electrospun fibres, with applications in various fields, from sensors to treatment of contaminated water.

Oscar Fadón-Loro

PhD in Geology at the University of Salamanca and member of the AHMat research group. Experienced geoscientist with a long-standing career at SIEMCALSA before returning to academia in 2021. Specialised in mineralogy, metallogeny, mineral resource exploitation, and geo-sustainability, with recent research focused on archaeometry and heritage science. Lecturer at the Universities of Valladolid, Salamanca, Huelva, and the International University of Andalusia. Author of more than 60 publications, participant in over 50 national and international conferences, and contributor to more than 40 research projects, with additional experience as an external consultant in over 30 projects.

Jorge Torre Ordás

PhD student at the University of Valladolid. His professional career is distinguished by a marked interest in advanced technologies applied to materials sciences, especially in deep learning and AI systems. His work focuses on the advanced characterisation of porous polymeric materials through various techniques, using knowledge acquired in the study of their properties (thermal insulation, mechanical strength, etc.). His publications support his skill in characterisation techniques via image analysis, IR and Raman spectroscopy, and X-ray tomography.

Carlos Sanz-Velasco

Heritage restorer specialised in interventions on cultural assets associated with buildings: mural paintings, plasterwork, coffered ceilings, and, above all, stonework. His work in these fields encompasses everything from the physical execution of the intervention to the development of preliminary studies, intervention projects, master plans, research, and construction management. His professional practice led him to prioritise the effective implementation of interdisciplinary teamwork. In this way, the cultural asset to be conserved is understood as part of a whole to which events happen. This allowed him to work on different types of monuments and sites, such as the cathedrals of Segovia, Ávila, Burgos, Palma de Mallorca, Santiago de Compostela, and others. Castles as diverse as Coca (Segovia) or Alcalá la Real (Jaén), or monuments from different eras such as the Roman Arch of Medinaceli or the Aqueduct of Segovia and facades from the beginning of the 20th century in Madrid.

Violeta Hurtado-García

Her work has focused on the archaeometric characterisation of archaeological materials, like ceramics, glass and mortars. She developed a spectroscopic database (ART, DRIFT) of historical pigments. On the other hand, it focuses on the development of polymeric nanocomposite materials for water desalination and cultural heritage. He has participated in a training course on palaeontology dating techniques given by the National Centre for Research on Human Evolution (CENIEH), as well as in measurement campaigns

of the IPERION programme at the AGLAE centre in Paris. Participated in the RAA (International Conference on the Application of Raman Spectroscopy in Art and Archaeology, Athens, 2023).

Javier Pinto Sanz

is the PI and founder of the AHMat research group and a materials Science specialist with extensive experience in production and characterisation techniques, including spectroscopic methods, synchrotron radiation, and X-ray-based technologies. In particular, Prof. Pinto has participated in the development of tomography equipment, image analysis tools and their application to polymeric and archaeological samples, as well as in various measurement campaigns in accelerators. he helped pioneer the field of nanocellular polymers, producing the first generation of nanocellular polymer samples in Europe. Under his leadership, AHMat has secured four publicly funded research projects—regional and national—totalling over €1,000,000, focused on the archaeometric study of pre-Roman glass beads and the development of innovative porous polymer nanocomposites for cultural heritage conservation, including a consortium of three companies coordinated by him.

PAPER PRESENTATIONS V

Thursday | March 19th, 11:40

Between Two Temporalities: The Medieval Painting of Saint John the Evangelist and the Ethical Challenge of Removing the Baroque Repainting

Gabriel Vasconcelos¹

Maria Aguiar²

¹ Universidade Católica Portuguesa, School of Arts;

² Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts

The painting of Saint John the Evangelist located in the sacristy of the Monastery of Ancede is the exclusive focus of this study. It is a large-scale panel painting on a wooden support that originally formed part of a Crucifixion scene and was entirely repainted during the Baroque period. The repainting reduced the original scale and profoundly altered the expressive features of the representation, reflecting an iconographic adjustment to accommodate new aesthetic preferences and to adapt the image to the spatial framing of the sculpture of the Crucified Christ. Despite this later remodelling, beneath the Baroque overpaint survives a rare medieval painting, with unmistakable characteristics of the Portuguese Gothic, evident in its stylistic features typical of the period. The presence of this underlying painting—exceptional in Portugal due to the extensive loss of panel painting from the fourteenth and fifteenth centuries—confers extraordinary documentary value on the work for the study of medieval iconography and artistic practice.

The relevance of the painting, however, extends beyond its stylistic rarity. It exemplifies the confrontation between different historical temporalities: the medieval devotional intent, shaped by Gothic aesthetics, and the Baroque intent, which reshaped the work according to the taste and liturgical needs of the seventeenth and eighteenth centuries. This coexistence of material and ideological layers places the painting at the centre of a classic ethical dilemma in conservation: when, how, and why a repainting that also constitutes a historical record should be removed. The Baroque repaint of Saint John the Evangelist is not merely an aesthetic alteration; it is evidence of a legitimate historical practice of “updating” sacred images, motivated by changing religious sensibilities and by their physical integration into a different devotional framework.

The decision to remove a repainting inevitably involves a tension between values. On the one hand, there is the need to uncover the original medieval image, whose artistic and historical significance is particularly high given the near extinction of panel painting from that period in Portuguese territory. On the other hand, there is the recognition that the Baroque repaint holds its own meaning, revealing practices of reuse, stylistic reinterpretation, and spatial adaptation. An intervention of this nature therefore entails a judgement grounded in the evidence that the repainting compromises an expanded historical reading, restricts the visual integrity of the object, and prevents the study of a work that makes a significant contribution, especially to the history of art field.

The Ancede painting thus presents a singular case in which the restitution of the medieval reading does not erase historical information but rather clarifies it. By re-exposing the primary underlying representation, one recovers not only a rare and nearly lost example of Portuguese medieval production, but also the complete narrative of the work: its creation, its stylistic re-adaptation, and its critical return. This study argues that the ethical balance, in this case, is achieved by allowing the material and iconographic integrity of the underlying medieval painting

to prevail, while simultaneously preserving the records of the Baroque intervention through rigorous and accessible documentation. The work is reborn not as a “purified” object, but as a reinforced historical document—thereby expanding its artistic, academic, and museological relevance.

Keywords

Portuguese Painting, Repainting, Ethics.

References

- Afonso, L. U. (2003). *O ser e o tempo: As idades do homem no gótico português*. Caleidoscópio.
- ___ (2010). Em demanda da pintura medieval portuguesa (1100-1400). In *Primitivos Portugueses (1450-1550). O século de Nuno Gonçalves*, pp. 94-107. Athena.
- Lameira, F. (2005). *O retábulo em Portugal: das origens ao declínio*. Centro de História de Arte da Universidade de Évora.
- Lorena, M. (2016). Tríptico do Mestre de Ancede. In *Baião: Em torno do ano 1500*, Joel Ferreira Mata (Ed.) pp. 70-74. Caleidoscópio.
- Serrão, V. (2006). «Renovar», «repintar», «retocar»: estratégias do pintor-restaurador em Portugal, do século XVI ao XIX. Razões ideológicas do iconoclasma destruidor e da iconofilia conservadora, ou o conceito de «restauo utilitarista» versus «restauo científico». *Conservar Património*, 3-4, pp. 53-71.

Gabriel Vasconcelos

Gabriel Vasconcelos holds a Bachelor’s degree in Conservation and Restoration from the School of Arts of Universidade Católica Portuguesa (EA-UCP) and is currently a master’s student in Conservation and Restoration of Cultural Heritage (EA-UCP), supported by the D. Júlio Tavares Rebimbas Merit Scholarship awarded by the Irmandade dos Clérigos. He is also a Lawyer and holds a Master’s degree in Law from the Faculty of Law - Porto School of the Universidade Católica Portuguesa (EDP-UCP), specialising in Cultural Heritage.

Maria Aguiar

holds a PhD in Painting Conservation from the School of Arts of the Universidade Católica Portuguesa (EA-UCP). She also earned a Master’s degree in the Conservation and Restoration of Easel Paintings from Northumbria University (UK), a Master’s degree in Conservation of Historic Objects from De Montfort University (UK), and a Bachelor’s degree in Conservation and Restoration from the Instituto Politécnico de Tomar (Portugal). She has been an Auxiliar Professor at the School of Arts of EA-UCP since 2002, teaching across all three cycles of higher education and supervising both Master’s and PhD theses. She is researcher of CITAR and a Board Member of the European Network for Conservation-Restoration Education (ENCoRE). Since 2020, she has coordinated the project for the reorganisation of the storage facilities of the Museum of the City of Porto, including the relocation of its collections to the newly refurbished building.

From Fragment to Space: Digital Reconstruction and Possible Futures for the Mural Heritage of the Café Rialto (Porto)

Leticia Crespillo¹

Patrícia Tonel Monteiro²

¹ Universidad de Málaga;

² Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts

This proposal examines the digital reconstruction of the Café Rialto (Porto) as a case study through which to reflect on the futures of mural heritage in contexts of loss, inaccessibility and decontextualization. The project is structured around an initial phase focused on the

photogrammetric recording of the mural paintings by Dordio Gomes that are still preserved in situ in the former Café Rialto (currently a private branch of the Millennium BCP Club), beyond visual reach and public access. This process is conceived not merely as a documentation strategy, but as a tool for material, technical and spatial research, enabling the analysis of aspects of the execution process (mortars, working days, chromatic distribution and the relationship with architecture) and the formulation of well-founded hypotheses regarding their prior state in the face of certain irreversible alterations, such as the application of a yellowish layer foreign to their original materiality, which significantly altered their chromatic qualities.

The research does not seek a digital “reversion” to the original state of the murals, but rather the construction of chromatic simulations that are explicitly hypothetical, based on the visual calibration of photogrammetric renders and comparison with historical documentation. These are understood as analytical and reflective instruments, necessarily provisional and open to future verification through complementary chemical and computational chromatic analyses.

The second phase of the project addresses the three-dimensional reconstruction of the Café Rialto itself, drawing on historical plans, photogrammetric models, old black-and-white photographs, brochures and documentary descriptions. This reconstruction is explicitly framed as a spatial hypothesis intended to restore the architectural and decorative context in which the murals were originally conceived. The 3D model makes it possible to recontextualise the paintings within their environment, overcoming their current condition as isolated fragments and facilitating an integrated reading of their symbolic, social and aesthetic functions. A central component of the project is the incorporation of oral testimonies from individuals who frequented the Café Rialto and retain a living memory of the space. These accounts reveal both its affective and social value and the constraints that prevent its physical restitution (private ownership, legal and bureaucratic frameworks, lack of investment and the multiplicity of stakeholders involved), positioning digital reconstruction as a mediating space between technical and scientific research and collective memory.

The proposal therefore contributes to a critical recovery of the history of the Café Rialto through the informed simulation of a past that no longer exists materially, grounded in methods derived from conservation–restoration within the framework of the digital humanities. At the same time, it symbolically returns this past to the community of Porto by visualising shared memories and underscoring the heritage, social and cultural significance of a space that once served as a site of sociability, conversation and encounters among artists, writers and thinkers. This case study is presented as a specific critical approach from which to rethink the role of digitalisation in mural heritage that is subject to restricted access and lacks legal protection. Far from dematerialising the physical work, digital reconstruction is conceived as a strategy to make these assets visible, generate critical knowledge and contribute to their future recognition and preservation, positioning the conservator–restorer as a mediator between the past, the present and possible futures.

Keywords

Cultural Heritage, Cultural Property Preservation, Dordio Gomes, Photogrammetry, 3Dreconstruction

References

- Castriota, B. (2019). Authenticity, identity, and essentialism: Reframing conservation practices. En F. Mairesse & R. F. Peters (Eds.), *What is the essence of conservation? Materials for discussion* (p. 44). IFOCOM.
- Kamel-Ahmed, E. (2015). What to conserve? Heritage, memory, and management of meanings. *ArchNet International Journal of Architectural Research*, 9(1), 74.
- Magnani, M., Douglass, M., Schroder, W., Reeves, J., & Braun, D. R. (2020). The digital revolution to come: Photogrammetry in archaeological practice. *American Antiquity*. Advance online publication, 1–24. <https://doi.org/10.1017/aaq.2020.59>
- Szmelter, I. (2013). New values of cultural heritage and the need for a new paradigm regarding its care. *CeROArt: Conservation, Exposition, Restauration d’Objets d’Art*, HS.

Leticia Crespillo

holds a PhD in Art History and a Higher Degree in Tourism from the University of Málaga. She has been a researcher in several research groups led by Prof. Nuria Rodríguez Ortega and in Educational Innovation Projects coordinated by Prof. Sonia Ríos Moyano. She completed master's degrees in Social Developments of Artistic Culture (UMA), Teacher Training (Secondary, Upper Secondary and Vocational Education), and Virtual Heritage at the University of Alicante. She has held successive academic positions at UMA, including a predoctoral contract, reintegration contract, Substitute Lecturer, and is currently an Assistant Professor. She coordinates postgraduate training in AR/VR and photogrammetry applied to cultural heritage and is Co-PI of an FCT-funded project on modern mural heritage. Her expertise focuses on heritage virtualisation, digital museography, and immersive, inclusive technologies.

Patrícia Tonel Monteiro

is a PhD student in Conservation and Restoration of Cultural Heritage at the School of Arts of Universidade Católica Portuguesa (UCP), FCT scholarship holder (2021.06635.BD), and researcher at the Centre for Research in Science and Technology of the Arts (CITAR). Thesis project, "Murals from Porto, mural paintings and terrazzo, 1940-1970: characterisation, context and valorisation issues". In this context, she has been exploring different approaches to the active involvement of communities for the valorisation, promotion, and preservation of heritage. Master's degree in Conservation of Cultural Heritage and a degree in Art - Conservation and Restoration at UCP. She has presented and published the results of her academic research in scientific articles and conferences - in particularly focusing on the documentation, study, and conservation of art, as well as new approaches to the active involvement of communities.

PAPER PRESENTATIONS VI

Thursday | March 19th, 14:00

Heritage management strategies for future communities

Kadri Kallast

Estonian Academy of Arts

The challenges associated with implementing the Faro Convention principles (see also Rossetti et al. 2025) frequently stem from a critical issue: many contemporary communities do not feel a genuine connection to their local heritage. This disconnection may arise from various factors, including migration patterns that diversify demographic landscapes, gentrification processes that alter the fabric of communities, and legacies of politically and ideologically charged histories that create dissonance in heritage narratives. In the context of increasing aspirations for energy-efficient homes and the broader sustainability framework, heritage authorities face the pressing challenge of developing smart management strategies that not only motivate homeowners to engage with and maintain heritage values but also support them in undertaking respectful renovations.

This study is grounded in qualitative research utilising empirical material from the LIFE heritageHOME research project in Estonia, which aims to improve renovation services for owners of protected historic buildings. A key component of this project encompasses participatory seminars that facilitated open dialogues among heritage homeowners, allowing them to share their experiences, perceptions, and insights regarding the management and preservation of architectural heritage as well as the challenges they face when set out to improve their property's energy efficiency. The renovation process is a demanding task that requires navigating numerous regulations, consulting with various specialists, obtaining permits, and coordinating with contractors, all while striving to secure funding and gain consensus among multiple stakeholders, particularly in multifamily homes. In this context, homeowners face not only the practical challenges of renovation but also the emotional resilience needed to manage these pressures. A notable aspect of the LIFE heritageHOME project also involved collaboration with interaction designers, who focused on mapping the renovation journey of heritage homeowners and examining the emotional and cognitive challenges associated with this process. Psychologists have noted that contemporary pressures—exacerbated by the complexities of modern life, digital interactions, and societal expectations—can lead to diminishing resilience among individuals (see Das, Thomas, Shrestha 2025). This reality underscores the necessity of considering these emotional and psychological factors when designing supportive services for heritage homeowners.

The primary method employed in this research is discourse analysis, enabling a nuanced examination of the language and narratives used by homeowners. By analysing the speech of heritage homeowners alongside the findings from the interaction designers, the study investigates the agency, roles, and value systems of the homeowners, as well as the power dynamics influencing heritage conservation decisions. Additionally, the paper will draw upon previous research that analysed the authorised heritage discourse in Estonia. This comparative analysis aims to reveal the disconnect between the needs of both current and future generations of heritage custodians and the resources currently provided by heritage authorities. The insights gained underscore the necessity of redesigning heritage management strategies to better align with the evolving expectations and emotional realities faced by community members.

Keywords

Heritage Management, Sustainability, Renovation, Discourse Analysis, Heritage Communities.

References

- Das, I., Thomas, A., & Shrestha, P. L. (2025). Impact of digital engagement on mental health and neuroplastic changes in adults. *SXC Journal*, 2(1), 1–20. <https://doi.org/10.3126/sxcj.v2i1.81658>
- LIFE heritageHOME research project. Estonian Ministry of Culture. <https://www.kultuuriministeerium.ee/en/projects/life-heritagehome>
- Rossitti, M., Oteri, A. M., & Torrieri, F. (2025). The social value of built heritage: An interdisciplinary discourse. *Built Heritage*, 9(5). <https://doi.org/10.1186/s43238-025-00173-4>

Kadri Kallast

Kadri Kallast is the project leader of the LIFE heritageHOME research initiative at the Estonian Ministry of Culture. A PhD candidate at the Estonian Academy of Arts, she specialises in cultural heritage and conservation, focusing on 21st century cultural heritage discourses in the contexts of urban development, climate crises, sustainability, and national security. Kallast holds an MA in Semiotics and Cultural Theory and an MSc in Cultural Heritage Preservation, both from the University of Tartu. Awarded the 1st prize in the Estonian National Heritage Board's research contest for MA and PhD studies for her Master's thesis, she also received the Curator's Prize at the Estonian Museum Awards in 2015 for her work at the Estonian National Museum. As a dedicated member of the ICOMOS Estonia Committee, she is committed to promoting innovative approaches to heritage management that align with contemporary societal needs.

New challenges for the conservation of the Côa Valley Open-air Rock Art: the development and implementation of a conservation plan

Mariana Pinto¹

Fernando Carrera-Ramírez²

Thierry Aubry³

Eduarda Vieira¹

¹ Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts;

² Universidade de Vigo;

³ Fundação Côa Parque, UNIARQ

The Open-air rock art of the Côa Valley is known worldwide as the largest open-air rock art site from the Upper Palaeolithic – concentrated in 200 km². This recognition led to its classification as a “National Monument” in 1997, which was consolidated a year later with its inclusion in the UNESCO World Heritage List. Their “Outstanding Universal Value” is undeniable; however, this status also poses a major conservation challenge. The discovery of the first engravings in 1991, at the beginning of the hydroelectric dam on the Côa River, made open-air rock art an emergent topic within the Portuguese society, since the Tejo Rock art in the latest seventy. A large protest movement was implemented towards its safeguarding to avoid the previous planned dam. Since that, the conservation of the Côa Valley rock art has been a priority, with numerous research studies published across different disciplines. Within the specific field of conservation, particular relevance should be given to the work developed by António Batarda Fernandes during the beginning of the 21st century, including a management plan proposal, intervention priority scale, and the implementation of “type-rock” interventions.

However, since that period, conservation-focused work has been limited and centred on the physical condition of individual engraved rocks. Today, conservation strategies require a comprehensive reassessment capable of responding to current environmental and anthropogenic changes. Accordingly, contemporary approaches increasingly recognise rock art as part of a broader cultural ecosystem, in which the materiality of the panels is inseparable from the surrounding territory and its environmental and anthropogenic dynamics. Currently, circa of 1,500 engraved and painted rocks have been recorded and inventoried, distributed across 102 identified archaeological sites, dating from Upper Palaeolithic to the 20th century). This extensive and widespread open-air heritage generates daily challenges related to its management and safeguarding. These include conflicts between conservation and management of cultural heritage and economic activities, the absence of a specific legal framework for the designation of an “archaeological park”, increasing tourist pressure on visitable sites and the unauthorised visits, as well as vandalism. However, the “present” major conservation challenge is related to a cofferdam constructed in 1993. The “future” of the Côa Valley depends on the implementation of a long-term, preventive and sustainable conservation policy aimed at preserving the engravings (and paintings) within their natural/cultural/economic ecosystem. PhD research undergoing, seeks to contribute to the development of an adaptive management plan for each archaeological site within the area of Archaeological Park of Côa Valley, integrating risk analysis and mitigation measures, documentation, monitoring and curative interventions.

Keywords

Open-air Rock Art, Côa Valley, Preservation, Risk Management, Conservation Plan.

References

- Carrera-Ramírez, F., & Caetano, V. M. (2026). VuRA: A proposal for calculating vulnerability and risk in rock art sites. The experience in Foz Côa. *Journal of Cultural Heritage*, 77, 117–126. <https://doi.org/10.1016/j.culher.2025.10.027>
- della Torre, S. (2010). Conservazione programmata: i risvolti economici di un cambio di paradigma. In M. Montella (Ed.), *Il capitale culturale: Studies on the Value of Cultural Heritage* (Vol. 1, pp. 47–55). Università di Macerata.
- Fernandes, A. B. (Ed.). (2008). A arte da conservação. Técnicas e métodos de conservação em arte rupestre: Volume 2. In *Actas das Sessões do III Congresso de Arqueologia de Trás-os-Montes, Alto Douro e Beira Interior*. (pp. 1–144). Associação Cultural Desportiva e Recreativa de Freixo de Numão.
- Fernandes, A. B. (2012). *Natural processes in the degradation of open-air rock-art sites: an urgency intervention scale to inform conservation*. Bournemouth University.
- ISO 31000:2018 - Risk management — Guidelines, International Organisation for Standardisation (ISO) (2018).

Mariana Durana Pinto

holds a degree in Art Conservation and Restoration (2017-2020) and a master’s degree in Conservation and Restoration of Cultural Heritage (2020-2023) from the School of Arts of the Universidade Católica Portuguesa. She is currently attending the Doctoral Program in Conservation and Restoration of Cultural Heritage at the same institution (since 2024). Her research focuses on the implementation of the concept of preventive conservation (with emphasis on risk management and disaster response) in archaeological sites/parks, as her doctoral project is the development and implementation of a conservation plan for the Côa Valley Archaeological Park.

Fernando Carrera-Ramírez

holds a PhD in History (Universidade Nacional de Educação à Distância, Madrid, 2005). Although now retired, he spent his teaching career at the Escola Superior de Conservação e Restauro de Bens Culturais da Galiza, specialising in the conservation of archaeological materials. His professional and scientific career has always been linked to the conservation of archaeological sites and, in particular, sites with prehistoric art. Numerous research projects, publications and participation in conferences attest to this.

His work on the characterisation and conservation of megalithic art has been particularly intense, but his experience ranges from the Palaeolithic to non-prehistoric rock art. This research activity remains fully active.

Thierry Jean Aubry

Ph.D. in Quaternary Geology and Prehistory in 1991 from the University of Bordeaux. Since 1996, he has been responsible for the study of the Palaeolithic occupation in the Côa Valley and established the chronology of the main graphical phases and context of the Palaeolithic open-air rock art. He has participated in several archaeological works in Brazil, Portugal and France, was responsible of archaeological survey and excavations, scientific projects and organised scientific meetings. Author of more than 200 articles of which 25 in ISI journals. Since 1996 he has been working at the Côa Valley Archaeological Park, 2010 at the Côa Museum, and 2011 at the Côa Foundation, and since April 2020 is the Technical and scientific responsible for the Côa Museum and Côa Valley Archaeological Park.

Eduarda Vieira

has a Ph.D. in Conservation and Restoration of Historical and Artistic Heritage from the Polytechnic University of Valencia (Spain). She is an associate professor at the School of Arts of the Universidade Católica Portuguesa. She was director of the Centre for Research in Science and Technology of the Arts – CITAR between 2019 and 2022 and is currently an integrated member. She is also a collaborator researcher of TechnArt-IPT. She is the author of several works presented at congresses, conferences and seminars with scientific arbitration. She was an associate researcher for the Bionanosculp and Bio4Mural projects. She was principal investigator of the HAC4CG project and is co-principal investigator of the Holy Bodies project (ongoing). She is the supervisor of several doctoral and master's theses, having supervised two post-doctorates.

<https://ciencia.ucp.pt/pt/persons/eduarda-vieira>

<https://www.cienciavitae.pt/portal/8519-EBF3-DB52>

Orcid: [http:// www.orcid.org. 0000-0002-0620-080X](http://www.orcid.org.0000-0002-0620-080X)

From extractive practices to regenerative futures: reframing PoTaRCH heritage in Europe's sustainable transition

Dunja Demirović Bajrami

Geographical Institute "Jovan Cvijić" Serbian Academy of Sciences and Arts

Although forest by-products such as potash, tar, resin and charcoal (PoTaRCH) have a long-standing tradition in Europe, they have become an increasingly marginalised heritage of forest-based livelihoods over time (Zborowska et al., 2024). Historically, these products were an important part of local economies, ecological cycles and community knowledge systems, and were considered one of the earliest forms of circular and bio-based production (Tunón, 2022). However, with the industrialisation, a fossil fuel-based economy, and land-use change, PoTaRCH has been pushed out of modern production systems (Smith, 2006; Warde et al., 2018). In this sense, this paper asks how the legacy of PoTaRCh can be reinterpreted on the threshold of Europe's sustainable transition, but not as a nostalgic reminder, but as a potential resource for a regenerative future. This paper is based on a qualitative and multi-source research design integrating three components. First, a historical-functional analysis synthesises existing historical, archaeological, and ethnographic literature to map PoTaRCh practices according to their ecological logic, material functions, and modes of knowledge transmission. Second, a policy-oriented analysis examines European strategies related to bioeconomy, circular economy and forest management strategies in order to identify gaps or opportunities for integrating traditional forest knowledge. Third, drawing on heritage ethics and future-oriented thinking, the paper develops an exploratory interpretive framework suggesting possible pathways for future

positioning of PoTaRCh's heritage. The analysis shows that PoTaRCh practices have historically functioned as integrated socio-ecological systems, combining the use of renewable resources, material multifunctionality and intergenerational knowledge transfer. However, contemporary European bioeconomy and forest management strategies largely ignore this traditional ecological knowledge, favoring technological and industrial approaches while leaving limited space for heritage-based innovation. Further, three scenarios were predicted: continuous marginalisation that may lead to loss of knowledge, selective museumisation that may result in static preservation, and regenerative integration, in which PoTaRCh is part of contemporary bioeconomic innovation and sustainable tourism. These three scenarios indicate the need to protect PoTaRCh as an intangible cultural heritage and to provide support to the bearers of tradition. This paper challenges conventional understandings of heritage by positioning PoTaRCh as a dynamic knowledge resource with relevance for contemporary sustainability challenges. The study demonstrates that heritage futures are closely intertwined with sustainability transitions, which involve not only technological change but also decisions about which forms of knowledge are recognised, valued, and carried forward. In this context, the paper highlights emerging responsibilities for heritage governance and sustainability policy to ensure that traditional ecological knowledge and tradition bearers are not marginalised, but actively integrated into regenerative bioeconomic and place-based development pathways.

Keywords

PoTaRCh Heritage; Heritage Futures; Bioeconomy Transition; Traditional Ecological Knowledge; Sustainable Tourism.

References

- Smith, L. (2006). *Uses of heritage*. Routledge. doi: 10.4324/9780203602263
- Tunón, H. (2022). Historical and contemporary views on non-wood forest products in Sweden — contrasting reflections. In A. Z. M. M. Rashid, et al. (Eds.), *Non-Wood Forest Products of Asia: Knowledge, Conservation and Livelihood* (pp. 13–39). Springer. doi: 10.1007/978-3-030-99313-9_2
- Warde, P., Robin, L., & Sörlin, S. (2018). *The environment: A history of the idea*. Johns Hopkins University Press. doi: 10.1353/book.99575
- Zborowska, M., Brózdowski, J., Starlander, J., Woitsch, J., Ribechini, E., Ion, R.-M., Nelle, O., Deforce, K., Varga, A., Szabó, P., Badea, E., Tintiner-Olifiers, J., Tikka, K., & Lucejko, J. J. (2024). Network for forest by-products charcoal, resin, tar, potash (COST Action EU-PoTaRCh). *Open Research Europe*, 4, Article 176. doi: 10.12688/openreseurope.18160.2

Dunja Demirović Bajrami

Dunja Demirović Bajrami is a Senior Research Associate and Head of the Cartography Department at the Geographical Institute "Jovan Cvijić", Serbia. In 2025, she was a Visiting Researcher at the Institute of Geographic Sciences and Natural Resources Research, Beijing, China, while from 2019 to 2022 she contributed as a Senior Researcher at the South Ural State University, Chelyabinsk (Russia). In 2019, she was a postdoc researcher at the Ryerson University, Toronto (Canada). During her career, she had study visits to several universities at Austria, Czech Republic, and Poland. Her research area is focused on tourism marketing, sustainable tourism, employee wellbeing, and consumer behaviour. She has authored more than 130 articles and book chapters, and one book (in Serbian). In 2024 she received an award from the Serbian Ministry of Science and Technological Development for the Excellence in Science.

Mapping the Aesthetic Imaginaries through the Atmosphere of Extractive Zones in Lausitz of Germany

Hok Nang Tam

Brandenburg University of Technology Cottbus-Senftenberg

This paper explores the aesthetic and affective dimensions of extractive zones, arguing that tending to atmosphere is a way to overcome the static and scenic landscape framing that is deeply ingrained in heritage practices. A key problem of the prevailing industrial heritage discourse is that it often adheres to a formalistic narrative, reducing history of mining into a set of technological inventions and iconic architecture, celebrating a nostalgic past. This study addresses this problem by engaging with the often-neglected theme of atmosphere, which enables a more nuanced narrative of extractive landscape.

Drawing on Gernot Böhme's atmospheric aesthetics and Tim Ingold's "wayfaring," this study develops a conceptual framework that refuses the dichotomy of nature and culture on which heritage and extractive practices rely on. This framework reveals that aesthetic engagement is not about passive contemplation but active positioning of oneself in a landscape, which, in turn, shape the relationship between human society and the environment.

This study aims to contribute to an analysis of the direct impact of artists' perceptions of extractive landscapes on the physical transformation of the region before and after German reunification. Focusing on the thematic nexus of air, land, and water, it examines a paradigmatic shift in aesthetic representations of extractive industrial landscapes in Lausitz, East Germany, through a comparative analysis of two art biennales: Internationales Energiepleinair (1977–1989) during the late German Democratic Republic (GDR) era, and Europa-Biennale Niederlausitz (1991–1995) following German reunification. These biennales, while independently conceived and organised at different times, offer a historically grounded yet nuanced perspective on the shifting socio-environmental imaginaries associated with lignite mining in the region. By juxtaposing these initiatives, this analysis explores how landscape painting and land art served as vehicles for constructing and transforming perceptions of human-nature relations amidst significant political upheaval and environmental turmoil. Given the paucity of existing research on these biennales, it fills a gap in understanding the aesthetic shifts beyond anthropocentric ontologies during a period of social and political transformation.

The paper concludes that moving away from an aesthetic of disembodied dominion toward a relational and atmospheric sensibility is crucial to mitigate and respond to evolving environmental crises. This shift is essential for establishing a future-oriented heritage practice that transcends material preservation to foster ecological literacy, integrate the agency of non-human entities, and facilitate regenerative co-governance in landscapes profoundly wounded by extraction.

Keywords

Aesthetic Imaginaries, Atmosphere, Industrial Heritage Landscape, Extractivism, Visual Arts.

References

- Baird, M. F. (2023). Waste Sits in Places: Post-Extractive Landscapes as Heritage. In Giacomo Pettenati (ed.), *Landscape as Heritage: International Critical Perspectives*. Oxon/New York: Routledge, pp.204–215. <https://doi.org/10.4324/9781003195238-18>
- Baird, M. F. (2024). Landscapes and Environment. In Rachel King and Trinidad Rico (ed.), *Methods and Methodologies in Heritage Studies*. London: UCL Press. <https://doi.org/10.2307/jj.11316378>
- Böhme G. (2017). *The Aesthetics of Atmospheres*. Oxon/New York: Routledge.
- Casey, E. S. (2005). *Earth-mapping: Artists Reshaping Landscape*. Minneapolis/London: University of Minnesota Press.

DeSilvey, C., Fredheim, H., Fluck, H., Hails, H., Harrison, R., Samuel, I., and Blundell, A. (2021). When Loss is More: From Managed Decline to Adaptive Release. *The Historic Environment: Policy & Practice* 12(3–4):418–433. <https://doi.org/10.1080/17567505.2021.1957263>

Ingold, T. (2010). Footprints through the Weather-world: Walking, Breathing, Knowing. *Journal of the Royal Anthropological Institute* 16:S121–S139. <http://www.jstor.org/stable/40606068>

Hok Nang Tam

Hok Nang Tam is a curator, researcher, and lecturer specialising in contemporary art and heritage. His current research focuses on artistic practices that critically examine the notion of heritage and the intertwined themes of extraction, accumulation, and dispossession. He is currently undertaking a research project exploring artists' engagement with ecological restoration in post-mining landscapes. This research delves into the Anthropocene, post-extractivism, and their various aesthetic imaginaries, with a particular focus on social and environmental sustainability. Tam has also initiated a number of projects that engage with history, memory, and place-making. He is a co-founder of Play Depot, a community playground in a former industrial district in Hong Kong. This initiative encourages social interaction, creative play, and public engagement within the local community. Prior to his current role, Tam served as the founding Centre Executive of the Centre for Research and Development in Visual Arts at the Hong Kong Baptist University.

PAPER PRESENTATIONS VII

Thursday | March 19th, 16:30

Artificial Intelligence Applied to Safeguarding Historic Tiles: The AI4Az Project and TileWatch platform

Sílvia Pereira¹

Hugo Benavente¹

Mariana Santos¹

Liane Lin¹

Sara Pires¹

Marluci Menezes¹

Gonçalo Jesus¹

António Antunes¹

Dora Roque¹

Lurdes Esteves²

Jose Saporiti Machado¹

Anabela Oliveira¹

¹ LNEC - National Laboratory for Civil Engineering

² National Tile Museum – Museus e Monumentos de Portugal, EP

Azulejos constitute a defining element of Portuguese cultural heritage, embodying centuries of artistic, historical, and architectural expression. Preserving this legacy that is outspread throughout the country and beyond requires methodologies capable of documenting, supporting continuous monitoring and allow informed conservation decisions. Addressing this challenge, the AI4Az Project – Artificial Intelligence for Tile Heritage Safeguard – integrates field-based digital data collection, advanced Artificial Intelligence (AI), and Geographic Information Systems (GIS) to develop tools for the documentation and analysis of tilework integrated into architectural environments.

A central component of the project is the development of TileWatch (observatório do azulejo), a collaborative digital platform designed to document and visualise multi-source information on the conservation status of tile heritage. TileWatch incorporates data acquired through ArcGIS Survey123, enabling specialists, professionals and managers to capture standardised in-situ records, including photographic evidence, geolocation, typological classification, and conservation information. By employing structured survey forms, Survey123 ensures data consistency while supporting both specialised professionals, managers and large-scale citizen-science participation, thus expanding observational capacity and fostering community engagement.

To enhance automated analysis, the project integrates Ai YOLO-based neural network specially trained models for the detection and classification of tile deterioration patterns visible in photographic records. These deep-learning pipelines are trained to recognise anomalies such as cracks, glaze loss, biological growth, detachment indicators, and surface deposits. When combined with visual, hyperspectral, and contextual metadata, these outputs feed TileWatch's GIS visualisation platform, improving the precision and reproducibility of condition assessments. GIS integration enables spatial visualisation of conservation state and temporal monitoring of degradation dynamics, supporting proactive and evidence-driven conservation strategies.

By merging structured survey workflows, AI-assisted image analysis, and geospatial information visualisation, AI4Az promotes interdisciplinary digital approaches to strengthen heritage

management routines and promote more efficient and participatory safeguarding of tile heritage.

Keywords

Azulejo, GIS, Artificial Intelligence, Neural Networks, Machine Learning, Citizen Science.

References

- Fonseca, A., Roque, D., Pereira, S., Mendes, M. T., & Mimoso, J. M. (2015). Digital Image Processing: Application to automatic classification of tile panel pathology. *Glazearch* 2015, 6.
- Karimi, N., Mishra, M., & Lourenço, P. B. (2024). Deep learning-based automated tile defect detection system for Portuguese cultural heritage buildings. *Journal of Cultural Heritage*, 68, 86–98. <https://doi.org/10.1016/j.culher.2024.05.009>
- Sánchez-Aparicio, L. J., Masciotta, M.-G., García-Alvarez, J., Ramos, L. F., Oliveira, D. V., Martín-Jiménez, J. A., González-Aguilera, D., & Monteiro, P. (2020). Web-GIS approach to preventive conservation of heritage buildings. *Automation in Construction*, 118, 103304. <https://doi.org/10.1016/j.autcon.2020.103304>
- Santos, B., Gonçalves, J., Almeida, P., Martins Nepomuceno, A.M.T. (2023). GIS-based inventory for safeguarding and promoting Portuguese glazed tiles cultural heritage. *Heritage Science* 11, 133. <https://doi.org/10.1186/s40494-023-00976-7>

Sílvia Pereira

Chemical Engineer, LNEC (National Laboratory for Civil Engineering) Assistant researcher, studying, since 2010, azulejos characterisation, decay and conservation, coordinator of AI4Az project, spereira@lnec.pt

Hugo Benavente

LNEC Information Systems and Technologies Specialist, hbenevente@lnec.pt

Mariana Santos

Conservator-Restorer, junior research fellow for the AI4Az project carrying out a Master thesis within the scope of the AI4Az project, MSantos@lnec.pt

Liane Lin

Computer Engineer, junior research fellow for the AI4Az project, llin@lnec.pt

Sara Pires

Geospatial Engineer, junior research fellow for the AI4Az project, SPires@lnec.pt

Marluci Menezes

Anthropologist, LNEC Principal researcher and member of the AI4Az project team, marluci@lnec.pt

António Antunes

Computer Engineer, LNEC Assistant Researcher, member of the AI4Az project team, aantunes@lnec.pt

Gonçalo Jesus

Computer Engineer, LNEC Principal Researcher, member of the AI4Az project team, gjesus@lnec.pt

Dora Roque

Geographic Engineer, LNEC Assistant researcher, member of the AI4Az project team, droque@lnec.pt

Lurdes Esteves

Conservator-Restorer, National Tile Museum – Museums and Monuments, Head of the Conservation Restoration department of the National Tile Museum, member of the AI4Az project team lurdes.esteves@museusemonumentos.pt

Jose Saporiti Machado

Forest Engineer, LNEC Principal researcher, Head of Natural and Built Conservation Unit, member of the AI4Az project team, saporiti@lnec.pt

Anabela Oliveira

Civil Engineer, LNEC Coordinating researcher, Head of the Information Technologies and Computer Infrastructures and member of the AI4Az project team, aoliveira@lnec.pt

Digital Invisibility: Can Digitisation Include “Unauthorised” Voices? Expanding the Conservator-Restorer’s Role

Catarina Cortes Pereira ^{1, 2, 3}

¹ Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts;

² CIEBA - Research Centre for Studies in Fine Arts, Faculty of Fine Arts, Lisbon University;

³ CCConservação.

Digitisation is becoming a primary form of access to archives, libraries, and museum collections. It expands potential users, supports discovery at a distance, and, from a conservation perspective, can reduce handling of fragile originals. At the same time, it is reconfiguring cultural visibility: for many users, what “exists” is what can be found online. Heritage that is not digitised, or that becomes unavailable online, risks falling out of view even when it remains preserved and consultable on site. A condition framed here as digital invisibility, a shift in which absence from networked discovery is increasingly interpreted as absence from heritage itself.

Building on research about what is lost when photographic collections are digitised, namely the dissociation between a digital surrogate and the material, technical, and contextual realities of the original object (Pereira et al, 2019), the focus shifts from representation to selection and access. The impossibility of digitising everything, due to time limits, funding, staffing, storage capacity, rights management, and technological change, makes selection inevitable. Yet selection is never neutral. Digitisation priorities, de-duplication rules, descriptive metadata, and platform constraints privilege some narratives over others, producing a digitally reinforced historical and cultural storyline while leaving other materials effectively unfindable.

Two short vignettes illustrate the paradox. In one case, digitised periodicals were removed from online access because of copyright restrictions, prompting reactions that equated the loss of remote access with the loss of heritage, even when consultation remained possible on site. In another, when an institution digitised large photographic sets, repetitive themes were reduced to a representative subset. This is a reasonable strategy, but it can erase details that future researchers might consider decisive.

Three guiding questions are addressed: (1) How does the shift from physical to networked access redefine cultural existence, particularly for archival and bibliographic heritage? (2) Who decides and what forms of bias are introduced through digitisation triage, sampling, and access regimes? (3) What is the conservator-restorer’s ethical and practical role in mitigating digital invisibility while still supporting the benefits of access and risk reduction?

This communication draws on work that understands heritage as a set of future-making practices (Harrison et al., 2020) to argue that digitisation infrastructures and selection policies are now among the most consequential mechanisms through which heritage futures are assembled. At the same time, following Laurajane Smith’s concept of authorised heritage discourse (Smith, 2006), it asks whether digitisation can inadvertently consolidate “authorised” voices by turning institutional priorities, metadata practices, and visibility platforms into a new layer of gatekeeping. In response, it is argued an expanded conservator-restorer role that moves beyond the workshop: as an active advocate for material literacy in the digital sphere; as a mediator who communicates limits, losses, and uncertainties to the public both on site and online; and as a participant in governance, helping to design transparent selection criteria and to open

digitisation priorities to plural, “non-authorised” voices. Rather than opposing digitisation, the argument is for conservation-restoration to act as a bridge between material stewardship and the politics of digital visibility.

Keywords

Digital Invisibility, Selection Bias, Authorised Heritage Discourse, Conservator-Restorer, Archival Heritage.

References

Harrison, R., DeSilvey, C., Holtorf, C., Macdonald, S., Bartolini, N., Breithoff, E., Fredheim, H., Lyons, A., May, S., Morgan, J., & Penrose, S. (2020). *Heritage futures: Comparative approaches to natural and cultural heritage practices*. UCL Press. <https://doi.org/10.14324/111.9781787356009>

Pereira, C. C., Castro, L., Barata, C., & San Andrés, M. (2019). Digitising collections: A reflection on negative archive collections, prioritising procedures and what is lost. In M.-L. Beauchamp (Ed.), *Topics in Photographic Preservation* (Vol. 18, pp. 192–201). Photographic Materials Group, American Institute for Conservation.

<https://resources.culturalheritage.org/pmg-topics/2019-volume-eighteen/>

Smith, L. (2006). *Uses of heritage* (1st ed.). Routledge. <https://doi.org/10.4324/9780203602263>

Catarina Cortes Pereira

is a conservator-restorer at CCC Atelier – Catarina Cortes Conservação. She holds a PhD in Conservation and Restoration of Cultural Heritage from Universidade Católica Portuguesa (UCP), with a dissertation on the retouching of dry plate negatives in Portuguese collections from the first half of the 20th century. She holds a postgraduate qualification in Management and Museology and a BA in Art – Conservation and Restoration from UCP, an MSc in Conservation Science from NOVA University Lisbon. She is a researcher affiliated with CITAR (Research Centre for Science and Technology of the Arts), School of Arts, UCP, and with CIEBA (Centre for Research and Studies in Fine Arts), Faculty of Fine Arts, University of Lisbon. Her interests focus on the conservation and restoration of cultural heritage, with particular attention to photography, heritage valorisation as a form of protection, digitisation, and the safeguarding of collections in contexts of risk and emergency.

POSTER SESSION I
Wednesday | March 18th, 11:00

Biofilms colonising outdoor stone monuments and climate change: learning outcomes from a year of the Assistens Kirkegård project

Michela Gambino

The Royal Danish Academy - Institute of Conservation

Climate change exposes outdoor monuments to new and uncharted conservation challenges, especially regarding biodeterioration. With limited options for controlling the climate and thus microbial growth, conservators are forced to recurrent cleaning treatments that risk compromising the integrity of the monuments. Here, we investigate how microorganisms colonising outdoor stone monuments respond to cleaning treatments and climate change.

Six historical monuments at the Assistens Cemetery in Copenhagen have been sampled before conservation treatment to isolate bacteria, fungi and algae. The isolated microorganisms are known stone, soil and plants inhabitants. The isolates have been tested for sensitivity to commonly used biocides and for growth at higher temperatures, mimicking climate change. Moreover, microbial communities of three tombstones before and after conservation have been studied by amplicon sequencing, revealing a complex community that responded to conservation treatments in different ways depending on the sampling point.

This research lays the foundation to optimise and design the next generation of conservation treatments for stone monuments.

Keywords

Biodeterioration, Stone Heritage, Climate Change.

Michela Gambino

Associate professor at the Institute of Conservation, in Copenhagen, I am an artwork conservator and a microbiologist with a PhD in Biological and Molecular Sciences. My multidisciplinary track record spans from cultural heritage, soil and wastewater to animal gastrointestinal tract and food. While developing antibiofilm strategies and phage products, I contributed to save our heritage by investigating the ecology and response to stress of the microbial communities colonising it.

The use of new technologies for protection of the cultural heritage held in museums

Olivia Rybak-Karkosz

University of Silesia in Katowice

According to the ICOM definition, a museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets, and exhibits tangible and intangible heritage. In other words, museums are responsible for preserving both the tangible and intangible aspects of natural and cultural heritage. They undertake a range of activities to this end. In carrying out their tasks, museums increasingly use new technologies. They are applied not only to enhance the attractiveness of their offer but also to prepare interactive

exhibitions, thereby responding to the needs and expectations of their audiences. New technologies are also applied to secure museums and their collections, to ensure sufficient care, and to preserve cultural heritage for future generations. This is particularly important in the face of growing threats, as evidenced by the alarming number of museum thefts. Other threats include the loss of archival materials and documentation, as well as the destruction of artworks. Increased tourist traffic also poses a problem, as do disasters and wars. In this context, forensic science and its experience with new technologies in business security and the examination of the authenticity of works of art may prove helpful. This presentation provides an overview of the possibilities for applying new technologies to the protection of heritage held in museums and to preserve it for future generations. The analysis was divided into three areas: the security and protection of museums and collections; the conservation and care of museum objects; and the documentation of museum objects. The opportunities and challenges associated with the use of drones, blockchain technology, and NFTs, artificial intelligence, as well as 3D scanning and VR/AR, were discussed. The issues addressed are illustrated with examples.

Keywords

NFT, AI In Protection of Art, Cultural Heritage in Museums, Forensic Science in Museum.

References

Rybak-Karkosz, O. (2023). NFTs in museums – challenges and persuasion in the eye of an article 2 of Act on Museum. *Santander Art and Culture Law Review*, 1, 19-36.

DOI:10.4467/2450050XSNR.23.003.1811

Rybak-Karkosz, O. (2023). Cybercrime at the crypto-art market - types of crimes committed against NFT's creators and owners. *Przegląd Policyjny*, 3 (151) 5-15. DOI:10.5604/01.3001.0053.9747

Rybak-Karkosz, O. (2023). Creation and sale of NFTS as an opportunity and challenge for contemporary museums. *Muzealnictwo*, 64, 68-73. DOI:10.5604/01.3001.0053.7143

Rybak-Karkosz, O. (2025). Forensic handwriting examination of painter signatures for family similarities between graphisms in case of direct line relatives (based on the example of signatures of Jacek and Rafał Malczewski). *Teka Komisji Prawniczej PAN Oddział w Lublinie*, 1 (XVIII), 337-349. <https://doi.org/10.32084/tkp.9067>

Rybak-Karkosz, O (2026). The challenges and possibilities of using convolutional neural networks (CNN) in art authentication. *Wiadomości konserwatorskie* (in print)

Olivia Rybak-Karkosz

PhD. in law, forensic scientist, art historian, graduate of Postgraduate Studies in Museology, Jagiellonian University in Cracow. Assistant Professor at the Institute of Law at Faculty of Law and Administration at University of Silesia in Katowice, Poland. Member of Polish Forensic Association. Court expert in handwriting, artists' signature analysis and art print authenticity. Her scientific research is connected with handwriting analysis, forensic aspects of crimes against artworks.

Monitoring Climate Vulnerability of Cultural Heritage: Case Studies from Brazil and Spain

Ernestina Rita Meira Engel ¹

Lisiane Ilha Librelotto ²

Laia Haurie ³

Aleix Alva ⁴

¹ Federal University of Santa Catarina (UFSC), Florianópolis, Brazil;

² Department of Architecture and Urbanism, Federal University of Santa Catarina (UFSC), Florianópolis, Brazil;

³School of Building Construction (EPSEB), Polytechnic University of Catalonia (UPC), Barcelona, Spain;

⁴Barcelona School of Architecture (ETSAB), Department of Architectural Technology, Polytechnic University of Catalonia (UPC), Barcelona, Spain

Extreme climate events have intensified over recent decades, exerting direct impacts on cities, their infrastructures and their users. According to the IPCC Climate Change Report (2023), human activities are the primary drivers of global warming, resulting in rising average temperatures, alterations in thermal regimes and an increased frequency of extreme events. Within this context, cultural heritage becomes particularly vulnerable, as historic sites are subject to continuous processes of transformation affecting their natural, human, tangible and intangible components, in accordance with the Valletta Principles (ICOMOS, 2011). Recent studies indicate that climate change tends to intensify degradation processes in historic buildings, accelerating pathologies associated with material porosity, thermal stress, humidity, salinity and corrosion (UNESCO, 2007). This scenario highlights existing gaps in the development of integrated monitoring and adaptation strategies. In response, this research aims to propose integrated monitoring strategies to assess the impacts of climate change on cultural heritage, supporting its adaptation and promoting urban sustainability. The study is guided by questions concerning the identification of technologies applicable to the monitoring of historic buildings and their urban contexts, as well as the analysis of how monitoring and adaptation strategies can contribute to heritage preservation and the strengthening of urban resilience. The research adopts a mixed-methods approach, structured into sequential stages that integrate vulnerability analysis, sustainability assessment, environmental monitoring and future climate simulations. Initially, climate vulnerabilities and sustainability are analysed in two distinct contexts: the Lagoa da Conceição district in Florianópolis (Brazil) and the city of Barcelona (Spain). This stage involves the collection of climatic and environmental data, risk analysis and the assessment of the sustainability of buildings and their urban surroundings, based on selected indicators from the USAT/ESA-B model (Librelotto, 2024). Subsequently, a pilot climate monitoring model is developed and applied to a heritage-listed building in Florianópolis, using internal and external sensors to collect temperature and humidity data, complemented by surveys such as photogrammetry. In the international stage, the model is refined and enhanced through a case study conducted at the Church of Sant Rafael, located in the Nou Barris district of Barcelona, incorporating previous experiences of hygrothermal and thermal monitoring in historic buildings. Future climate scenario simulations are then planned, integrating real measurements with climate projections in order to assess potential medium- and long-term impacts. At present, the research is ongoing and is currently at the stage of sensor installation and initial data collection. The study is expected to result in the validation of a replicable climate monitoring model capable of supporting adaptation strategies for cultural heritage under climate change and informing urban sustainability-oriented public policies. By articulating technology, heritage preservation and urban planning, the research seeks to contribute to the strengthening of urban resilience and community preparedness, in alignment with the United Nations Sustainable Development Goals (UN, 2023).

Keywords

Climate Change; Cultural Heritage; Monitoring Technologies; Sustainability.

References

- Intergovernmental Panel on Climate Change. (2023). Climate change 2023: Synthesis report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change. IPCC.
- International Council on Monuments and Sites. (2011). The Valletta principles for the safeguarding and management of historic cities, towns and urban areas. ICOMOS.

Librelotto, L. I., et al. (2024). Integração de escalas para gestão integrada e participativa da sustentabilidade: Do bairro ao edifício. *Revista Transverso*, 1(15).

<https://revista.uemg.br/index.php/transverso/article/view/9029>

Organização das Nações Unidas. (2023). Agenda 2030 para o desenvolvimento sustentável.

<https://brasil.un.org/pt-br/91863-agenda-2030-para-o-desenvolvimento-sustent%C3%A1vel>

UNESCO. (2007). Case studies on climate change and world heritage (A. Colette, Ed.). UNESCO World Heritage Centre.

Ernestina Rita Meira Engel

PhD candidate in Architecture and Urbanism at PósArq/UFSC, in the area of concentration Design and Technology of the Built Environment. Visiting PhD Student at the Universitat Politècnica de Catalunya (UPC). Master's degree in Architecture and Urbanism (UFSC). Specialist in Smart Cities: Technology and Innovation (UPF). Bachelor's degree in Architecture and Urbanism (UFFS). Researcher and collaborator at the Built Environment Laboratory (LabAm) and member of the Virtuhab Research Group at UFSC.

Lisiane Ilha Librelotto

Civil Engineer, Specialist in Quality and Productivity Management (UFSM). Master's and PhD in Production Engineering (UFSC). Postdoctoral researcher in Sustainable Construction, Polytechnic Institute of Leiria – IPLeiria – ESTG – School of Technology and Management, Leiria, Portugal. Associate Professor at the Federal University of Santa Catarina (UFSC), Architecture and Urbanism programme. Researcher with the Virtuhab Group. Areas of expertise: Technology, Construction Systems, Management, Sustainability and Innovation.

Laia Haurie Ibarra

PhD and Bachelor's degree in Chemical Sciences, University of Barcelona. Professor in the field of materials, Department of Architectural Technology, Universitat Politècnica de Catalunya (UPC), since 2012. Head of the Fire Laboratory (Fire Lab), Barcelona School of Building Construction (EPSEB). Teaching in the Bachelor's degree in Architectural Technology and Building Construction and the Master's programme in Advanced Construction. Researcher with the Interdisciplinary Group on Building Science and Technology (GICITED)

Aleix Alva

Lecturer in Mathematics at the Barcelona School of Architecture (ETSAB) – Universitat Politècnica de Catalunya (UPC) and a researcher with the Interdisciplinary Group on Building Science and Technology (GICITED). His career has evolved from theoretical biophysics and fire safety engineering to his current focus on sustainable architecture and nature-based solutions. Alva specialises in the monitoring and evaluation of green roofs and urban regeneration strategies. He actively contributes to the "Verd de Proximitat BCN" project and the "Regenerar Barcelona" initiative, the latter recognising him as a finalist at the World Smart City Awards 2024 and a winner at the XVII Spanish Biennial of Architecture and Urbanism. A strong advocate for transparency in research, he received the 2025 UPC Open Science Award.

POSTER SESSION II
Thursday | March 19th, 11:10

Tile Watch Digital Collaborative Platform: Engaging Diverse Stakeholders in
Safeguarding Tile Heritage

Marluci Menezes

Matilde Cabrita

Mariana Santos

Sara Pires

Dora Roque

Sílvia Pereira

LNEC – National Laboratory for Civil Engineering

Tile is a key element of Portuguese material culture, framed within the notion of heritage. The AI4z Project (FCT)–Artificial Intelligence for the Safeguarding of Tile Heritage–investigates the development of AI tools for evaluating and monitoring the conservation status of tiles (azulejos). One of the project's tasks is to collect perceptions from three different stakeholder groups: conservators, restorers and/or specialists linked to tile heritage; managers and/or owners of buildings with tiles; and the general public. This data collection initiative seeks to understand the sensitivity toward tile degradation and the significance attributed to its conservation, while also inviting stakeholders to voluntarily submit images that reflect current conservation status of azulejos in Portugal. The recording of these perceptions will be conducted via the digital platform–Tile Watch. This platform will facilitate the gathering and sharing insights, thereby enriching technical and scientific knowledge and fostering greater awareness of tile safeguarding. The study is grounded in the premise that sociocultural appreciation of this heritage can be enhanced through the engagement of diverse social agents, united by the perspective that its conservation serves common interest. However, conceiving cultural heritage as a common social convention may provoke controversy and be subject to contestation, as stakeholders involved in the study may – due to lack of knowledge or personal interests – express divergent views on tile safeguarding. A further challenge lies in how to effectively engage these stakeholders and ensure equitable representation of their perspectives and responsibilities. Moreover, the eventual generalisation and homogenisation of findings through AI tools may obscure underlying social tension and disputes regarding tile safeguarding, thereby failing to highlight the specific sensibilities and responsibilities associated with state of tile heritage conservation. This proposal aims to reflect on these issues, emphasising the potential of specialised digital platforms to enhance sensitivity and co-responsibility in tile heritage conservation.

Keywords

Tile, Safeguarding, Collaborative, Stakeholders, Collective Intelligence.

References

Casebourne, I., & Wegerif, R. (2025). *AI and Education for collective intelligence: A futures perspective*. UNESCO.
<https://www.unesco.org/en/articles/ai-and-education-collective-intelligence-futures-perspective>

Ceccaroni, L., Bibby, J., Roger, E., Flemons, P., Michael, K., Fagan, L., & Oliver, J. L. (2019). Opportunities and risks for citizen science in the age of artificial intelligence. *Citizen Science: Theory and Practice*. <https://doi.org/10.5334/cstp.241>

Kehler, T. P., Page, S. E., Pentland, A., Reeves, M., & Brown, J. S. (2025). Amplifying human creativity and problem solving with AI through generative collective intelligence (arXiv:2505.19167). arXiv.

<https://doi.org/10.48550/arXiv.2505.19167>

Lévy, Pierre (1994). *L'intelligence collective: pour une anthropologie du cyberspace*. Paris: La Découverte.

Menezes, M., & Pereira, S. (2024). Challenges in developing a qualitative approach on the perception of tiles decay. *GlazeArt 2024 – International Conference Glazed Ceramics in Cultural Heritage*. Lisbon: LNEC. DOI: 10.34638/q1mh-3h48.

Menezes, M., Pereira, P., Esteves, M. L., Pais, A. N. (2024). Co-creating scientific knowledge towards the technological memory of the glazed ceramics production. Challenges in developing a qualitative approach on the perception of tiles decay. *GlazeArt 2024 – International Conference Glazed Ceramics in Cultural Heritage*. Lisbon: LNEC. DOI: 10.34638/q1mh-3h48

Pereira, S., Roque, D., Matias, L. Menezes, M., Mota, R., Correia, M. J., Cruz, C., et al. (2024). Old azulejos through new lenses: Integration of digital and non-digital methodologies for the assessment and monitoring of azulejo panels decay. *GlazeArt 2024 – International Conference Glazed Ceramics in Cultural Heritage*. Lisbon: LNEC.

DOI: 10.34638/q1mh-3h48. https://glazeart2024.lnec.pt/LIVRO_GlazeArt_2024_PUB_ONLINE-1.pdf

Sustainability Directory (2025). AI ethics in cultural heritage preservation: Scenario. PRISM Sustainability Directory.

<https://prism.sustainability-directory.com/scenario/ai-ethics-in-cultural-heritage-preservation/>

Tiribelli, S., Pansoni, S., Frontoni, E., & Giovanola, B. (2024). Ethics of Artificial Intelligence for Cultural Heritage: Opportunities and Challenges. *IEEE Transactions on Technology and Society*, 5(3): 293-305. DOI: 10.1109/TTS.2024.3432407.

<https://ieeexplore.ieee.org/document/10680564>

UNESCO (2022). UNESCO's Recommendation on the Ethics of Artificial Intelligence: key facts.

<https://digitallibrary.un.org/record/4062376?v=pdf>

Marluci Menezes

Anthropologist, LNEC (National Laboratory for Civil Engineering) researcher, and member of the Ai4Az project team, marluci@lnec.pt

Matilde Cabrita

Anthropology student, junior intern at LNEC as part of the Ai4Az project, a52597@campus.fcsh.unl.pt

Mariana Santos

Conservator-Restorer, research grant holder carrying out a Master's thesis within the scope of the Ai4Az project, MSantos@lnec.pt

Sara Pires

Geospatial Engineer, Master's student, junior research fellow for the Ai4Az project, SPires@lnec.pt

Dora Roque

Geographic Engineer, LNEC researcher, and member of the Ai4Az project team, droque@lnec.pt

Sílvia Pereira

Chemical Engineer, LNEC researcher, and coordinator of Ai4Az project, spereira@lnec.pt

“How can I protect my region’s heritage?”: Education for the conservation and its challenges in Alto Douro and Côa Valley Schools

Mariana Pinto¹

Thierry Aubry²

Eduarda Vieira¹

¹ Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts;

² Fundação Côa Parque, UNIARQ.

The concept of heritage is closely associated with the values that communities attribute to objects, practices, monuments, oral traditions and landscapes. It plays a central role in the construction and maintenance of collective identities. While it is commonly assumed that these values are transmitted across generations, contemporary challenges such as population decline, geographical dispersion and migration have increasingly disrupted this process, weakening the identity-based relationship between communities and their heritage.

The Alto Douro and Côa Valley region is a prime example of this. Despite its rich and multifaceted cultural and natural heritage, much of it remains unknown or undervalued by local communities. In this context, heritage education is crucial for raising awareness of the importance of safeguarding and preserving regional heritage, particularly among younger generations.

Adopting a participatory action research (PAR) approach, this paper discusses the challenges and potential of two educational activities developed within an ongoing doctoral research project in the Vale do Côa. (a) “How can I protect the heritage of my region?” and (b) “Save the Rock Art of the Vale do Côa!”, the latter of which was inspired by the participatory game inSight (ICCROM). Both activities were structured in two complementary stages: The first phase focused on learning basic concepts through a mixed expository–interrogative method, while the second phase was based on active learning and problem-solving, confronting participants with real conservation challenges.

Interpretation of the results obtained so far indicates that, despite the interest and engagement demonstrated by young participants, significant obstacles remain. These include a limited understanding of the concept of heritage, and difficulties in identifying the culturally significant elements of their local areas, particularly about archaeological heritage. These constraints highlight the need for sustained participatory and territorially grounded educational strategies. All activities were conducted as part of the annual programme at the Côa Museum, a Ciência Viva Centre, and involved participants aged between 14 and 18. The study emphasises the importance of heritage education in strengthening the future of heritage by fostering more informed, critical and participatory relationships between young people and their local areas.

Keywords

Heritage Education, Conservation, School Community, Côa Valley, Alto Douro.

References

Cervo, I. B., & Ceretta, C. C. (2024). A educação patrimonial a partir das vivências da educação infantil. In *Educação em transformação: perspectivas globais e inovações 2* (pp. 33–43). Atena Editora. <https://doi.org/10.22533/at.ed.4522431073>

Cornish, F., Breton, N., Moreno-Tabarez, U., Delgado, J., Rua, M., de-Graft Aikins, A., & Hodgetts, D. (2023). Participatory action research. *Nature Reviews Methods Primers*, 3(1), 34. <https://doi.org/10.1038/s43586-023-00214-1>

ICCROM. (2020). InSight: A participatory game capturing community held knowledge for Disaster Resilience and Sustaining heritage. International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM).

Miguel-Revilla, D., López-Torres, E., Ortuño-Molina, J., & Molina-Puche, S. (2024). Cultural heritage and iconic elements for history education: a study with primary education prospective teachers in Spain. *Humanities and Social Sciences Communications*, 11(1), 1590.

<https://doi.org/10.1057/s41599-024-04123-w>

Tóbiás, K., & Boros, L. (2025). Participatory Planning and Gamification: Insights from Hungary. *Land*, 14(3), 573. <https://doi.org/10.3390/land14030573>

Mariana Durana Pinto

Mariana Durana Pinto holds a degree in Art Conservation and Restoration (2017-2020) and a master's degree in Conservation and Restoration of Cultural Heritage (2020-2023) from the School of Arts of the Universidade Católica Portuguesa. She is currently attending the Doctoral Program in Conservation and Restoration of Cultural Heritage at the same institution (since 2024). Her research focuses on the implementation of the concept of preventive conservation (with emphasis on risk management and disaster response) in archaeological sites/parks, as her doctoral project is the development and implementation of a conservation plan for the Côa Valley Archaeological Park.

Thierry Jean Aubry

Ph.D. in Quaternary Geology and Prehistory in 1991 from the University of Bordeaux. Since 1996, he has been responsible for the study of the Palaeolithic occupation in the Côa Valley and established the chronology of the main graphical phases and context of the Palaeolithic open-air rock art. He has participated in several archaeological works in Brazil, Portugal and France, was responsible of archaeological survey and excavations, scientific projects and organised scientific meetings. Author of more than 200 articles of which 25 in ISI journals. Since 1996 he has been working at the Côa Valley Archaeological Park, 2010 at the Côa Museum, and 2011 at the Côa Foundation, and since April 2020 is the Technical and scientific responsible for the Côa Museum and Côa Valley Archaeological Park.

Eduarda Vieira

has a Ph.D. in Conservation and Restoration of Historical and Artistic Heritage from the Polytechnic University of Valencia (Spain). She is an associate professor at the School of Arts of the Universidade Católica Portuguesa - Porto regional hub. She was director of the Center for Research in Science and Technology of the Arts – CITAR between 2019 and 2022 and is currently an integrated member. She is also a collaborator researcher of TechnArt-IPT. She is the author of several works presented at congresses, conferences and seminars with scientific arbitration. She was an associate researcher for the Bionanosculp and Bio4Mural projects. She was principal investigator of the HAC4CG project and is co-principal investigator of the Holy Bodies project (ongoing). She is the supervisor of several doctoral and master's theses, having supervised two post-doctorates.

<https://ciencia.ucp.pt/pt/persons/eduarda-vieira>

<https://www.cienciavita.pt/portal/8519-EBF3-DB52>

Orcid: [http:// www.orcid.org. 0000-0002-0620-080X](http://www.orcid.org.0000-0002-0620-080X)

Performative Silence as Cultural Practice: Reflections from the Luso-Japanese Encounter (16th century)

Filipa Iglésias

Universidade Católica Portuguesa, CITAR – Research Centre for Science and Technology of the Arts

This paper examines silence as a culturally embedded practice in the early modern encounter between Portuguese Jesuits and Japanese society during the second half of the sixteenth

century. Focusing on the writings of the Jesuit Luís Fróis, particularly the *Tratado das Contradições e Diferenças de Costumes entre a Europa e o Japão* and selected passages from the *História de Japam*, the study analyses how silence appears not as the absence of communication, but as a socially meaningful form of action shaping interaction, hierarchy, and appropriate conduct.

European observers arriving in Japan encountered modes of behaviour that challenged familiar communicative expectations. Among these, silence repeatedly emerges as a point of attention and difficulty. This paper approaches strangeness as an analytical starting point: it is precisely the challenge of interpreting silence that leads Fróis to describe it carefully, to compare it with European practices, and to organise it as a recognisable social pattern. Through close textual analysis based on original and critical editions of the sources, the paper shows how silence is consistently associated with restraint, social order, and relational awareness, and how these meanings are articulated through systematic comparison.

The analysis treats silence as a lived cultural practice and transmitted tradition, embedded in everyday interaction and learned behaviour. From this historical grounding, the paper reflects on contemporary discussions of heritage by considering how non-material, performative, and relational practices complicate prevailing ways of identifying and valuing cultural legacies. Early modern descriptions of silence thus provide a means of questioning how certain forms of social practice become visible, recognised, or marginalised within heritage frameworks that have traditionally privileged material and monumental expressions.

Keywords

Performative Silence, Cultural Practice, Luso-Japanese Encounter, Jesuits, Early Modern Japan.

References

Fróis, Luís. *Tratado das Contradições e Diferenças de Costumes entre a Europa e o Japão* (1585). Edited by Rui Manuel Loureiro. Lisbon: Livros de Bordo, 2019.

Fróis, Luís. *História de Japam*. Edited by José Wicki. 5 vols. Lisbon, 1976–1984.

Boxer, C. R. (1951). *The Christian Century in Japan, 1549–1650*. Berkeley: University of California Press.

Elison, George. (1973). *Deus Destroyed: The Image of Christianity in Early Modern Japan*. Cambridge, MA: Harvard University Press.

Filipa Iglésias

Jurist. PhD in Heritage Studies, with a focus on intangible cultural heritage. Postdoctoral studies in Democracy and Human Rights. Master's degree in Creative Industries Management. Law graduate, with professional activity in data protection and intellectual property. Collaborator Researcher at the Universidade Católica Portuguesa, Centro de Investigação em Ciência e Tecnologia das Artes (CITAR), Porto. Research focuses on cultural heritage, ethics, technology, and law.

ORGANISATION



PARTNERSHIPS



FUNDAÇÃO  LIVRARIA LELLO



VENERÁVEL ORDEM TERCEIRA
DE SÃO FRANCISCO DO PORTO