Digital Heritage and the Global South
Tuesday, 15 July 2025, Online

Presentation Abstracts (in scheduled order)

Dr Bijan Rouhani
School of Archaeology, University of Oxford

Introduction to the conference
Digital Heritage and the Global South: Ethics, Politics, Futures

The *Digital Heritage and the Global South* explores how digital technologies and artificial intelligence (AI) are reshaping the ways cultural heritage is documented, interpreted, preserved, and presented—while simultaneously generating profound ethical, political, and ecological challenges. As digital tools increasingly mediate access to and representations of the past, questions of ownership, authenticity, authority, and inclusion become more urgent—especially in the context of the Global South, where historical legacies of colonialism intersect with contemporary digital inequalities.

This initiative brings together scholars and practitioners to critically examine how digital heritage can either reproduce or resist extractive and exclusionary practices. It interrogates digital colonialism, algorithmic bias, infrastructure dependency on Big Tech, and the erasure of local agency, while foregrounding community-led and decolonial approaches to digital heritage. Particular attention is given to the ratification and governance of cultural heritage data—asking who decides what is preserved, reconstructed, and made visible in digital form, and through what ethical frameworks.

As cultural heritage becomes increasingly *datafied*—rendered into digital formats that circulate globally—it is subjected to new forms of validation, exclusion, and control, often shaped by external market logics rather than local epistemologies or community needs.

Framed by the urgent need for digital impact assessments akin to environmental and cultural assessments, this conference contends that digital heritage is not neutral data, but a political system with material, environmental, and cultural implications—one that shapes collective memory, cultural rights, and future imaginaries.

Professor Mario Santana Quintero
Carleton University (Ottawa, Canada), Honorary President, ICOMOS/ISPRS Heritage Documentation (CIPA)

Ethical framework for documentation for conservation, promotion, and protection of cultural assets

Given a rapid development of generative tools and increasing threats to cultural heritage, adoption of ethical frameworks for the responsible acquisition, processing, and dissemination of digital assets of cultural heritage has become more urgent and complex. This presentation focuses in explanation the provisions of an ethical framework to guide documentation practices aimed at the conservation, promotion, and protection of tangible and intangible cultural assets. Grounded in principles of inclusivity, transparency, and respect for cultural values, the framework addresses key challenges such as community engagement, data ownership, representation, and the potential misuse of digital documentation. By examining case studies from diverse global contexts, the study illustrates how ethical considerations can influence technical choices, project outcomes, and long-term impacts on heritage sites and communities. The framework emphasizes the need for collaborative methodologies that ensure documentation processes that contribute to the respect of stakeholders, sustainable practices, and equitable heritage promotion. This contribution aims to support heritage professionals, policymakers, and technologists in making informed, ethically grounded decisions that uphold the integrity and dignity of cultural heritage in both local and global contexts.

Professor Simona Tiribelli
University of Macerata, Italy
Institute for Technology and Global Health, MIT-founded research lab, USA

Decolonising AI Ethics in Cultural Heritage: What It Means, Why It Matters, What to Do

As artificial intelligence becomes increasingly embedded in the preservation, interpretation, and dissemination of cultural heritage, it also brings with it the risk of reproducing colonial logics, unfair biases, and exclusions disproportionally harming the global south. This talk explores the ethical imperative to decolonize AI (Tiribelli and Mhlambi 2023) in the cultural heritage sector, by addressing both the historical legacies and current power asymmetries that shape data practices, algorithmic design, and institutional narratives. Decolonizing AI ethics in this context means challenging Western-centric assumptions, ensuring inclusive representation of marginalized communities, and recognizing non-Western epistemologies, practices, and modes of knowledge transmission. It matters because AI technologies risk re-inscribing and exacerbating historical injustices – such as the erasure, misclassification, or commodification of Indigenous and colonized cultures – under the guise of technological neutrality. Moreover, failing to decolonize AI could undermine efforts to democratize access to cultural memory and exacerbate epistemic injustice (Tiribelli et al. 2024). The talk outlines actionable strategies, including participatory design with descendant communities, ethical data stewardship, and institutional accountability and audit mechanisms. Ultimately, it argues that decolonizing AI ethics in cultural heritage is a matter of global justice and the necessary condition for the creation of a truly trustworthy, inclusive, and fairer digital heritage future.

Doa Sarmad Khan
Archives and Digital Media Lab

Implementing the FAIR and CARE Principles in the Global South: experiences from Pakistan and beyond

The FAIR Guiding Principles for scientific data management and stewardship facilitate the discovery and reuse of research data while the CARE Principles for Indigenous Data Governance address the impact of data, its arrangement, management, and ownership on Indigenous peoples, values, and cultures. Both sets of principles are now being adopted outside their original domains, but their use by Global South-led initiatives remains limited. This paper explores the feasibility of implementing these principles within a Global South context outside the domain of Indigenous Studies but within contexts dictated by post- and neo-colonial politics and the impacts of climate change.

It presents findings from a FAIR data pilot project conducted at the National College of Arts Archives, Pakistan, from 2021 to 2023, a period coinciding with the COVID-19 pandemic, political unrest, and the 2022 heatwave and subsequent floods. This project aimed to trial the incremental implementation of the FAIR Principles within the archives of Pakistan's oldest art school and major public-sector institution. This paper is also informed by discussions on the CARE Principles conducted from 2023 to 2024 between heritage professionals from across the Global South.

The paper, in particular, explores the (im)possibilities of implementing Global North standards and best practices within contexts where infrastructural capacities and political will are persistently eroded through imperial violence and political interference originating from the Global North, and where the Global South is not only disproportionately impacted by climate change but its responses to the climate emergency are also undermined by neocolonial political and socio-economic dynamics.

Chao Tayiana Maina
African Digital Heritage

Memory Making, Cultural Heritage Labour, and the Infrastructures of AI

In January 2023, *Time* magazine published an exposé revealing the exploitative conditions faced by Kenyan workers hired to help train OpenAI's ChatGPT. These workers, many from economically precarious backgrounds, were paid less than $2 an hour to process and categorize some of the internet's most disturbing content in order to make the AI safer for public use. Despite these essential contributions, this kind of labour remains largely invisible in dominant narratives, which continue to portray artificial intelligence as autonomous, innovative, and devoid of human input.

This presentation expands the discussion of labour and AI to the cultural heritage sector. For heritage professionals in the Global South, digital technologies are both an opportunity and a burden: indispensable for documenting endangered or marginalised cultures, yet constrained by chronic underfunding, inadequate infrastructure, and extractive digital systems. With limited institutional protection and little control over how their work is used, cultural heritage professionals in the Global South find themselves in a paradox. Participation in digital spaces may lead to increased reach and exploitation, while refusal may result in invisibility.

Drawing on the interconnected themes of digital labour, data colonialism, and global resource inequality, this talk argues that the future of AI in cultural heritage must centre the value of the human labour that sustains it. Without ethical data practices and equitable investment in those safeguarding cultural memory, AI risks becoming the next frontier of cultural exploitation. The challenge we face now is urgent and ethical: how do we reclaim AI as a tool not of erasure, but of preservation, recognition, and justice?

Mohamed Ziane Bouziane and Thomas Rigauts
UNESCO World Heritage Centre

UNESCO's Dive into Heritage: Global Digital Access to World Heritage Sites

The rapid advancement of digital technologies is transforming how cultural heritage is documented, preserved, and shared. UNESCO's Dive into Heritage project aims to democratize global access to World Heritage sites through 3D digital representations, utilizing cutting-edge technologies such as 3D laser scanning, photogrammetry, and mixed reality. By leveraging these technologies, the project makes cultural heritage accessible to audiences worldwide, while also empowering local communities to digitally explore, preserve and present their own heritage.

This presentation will explore the goals and impact of the Dive into Heritage project in promoting inclusive digital heritage. The project emphasizes the importance of building local capacities, equipping communities including emerging professionals with the tools and knowledge necessary to engage in

digital documentation and preservation. Through this capacity-building approach, UNESCO aims to foster a sense of digital stewardship within local young experts.

Phase 1 of the project (2022-2025) has focused on the Arab States region, where the capacity-building programme has provided invaluable hands-on experience in digital documentation. The positive feedback from local communities has underscored the programme's impact and its importance in empowering emerging professionals and youth to take an active role in heritage documentation and preservation. As the project aims to expand to the African region in Phase 2, the lessons learned from this phase will be critical for its continued success.

As a culmination of the project's Phase 1, the scheduled launch of the platform in summer 2025 will mark a significant milestone in making World Heritage more accessible, ensuring the long-term sustainability of cultural preservation, and promoting the inclusive representation of diverse cultural narratives for future generations.

Professor Arjun Ghosh

Department of Humanities and Social Sciences, Indian Institute of Technology Delhi

Multilinguality as Heritage: Scripts and Digital Infrastructures in South Asia

Multilinguality is not only a lived reality in South Asia — it is an intangible cultural heritage of the Indian subcontinent. 1.8 billion people speaking hundreds of languages have inherited a linguistic legacy shaped by centuries of trade, pilgrimages, and migration. The region is not only densely multilingual but also multiscriptal. In manuscripts, inscriptions, and epigraphic art we find multiple script-language pairs. The onset of colonialism and the introduction of print arrested this ecology of exchange. Colonial language policy, with its logics of typographic fixity and administrative rationalization, privileged certain spoken languages and reclassified fluid speech communities into rigid language-dialect hierarchies. It also reduced diverse script-language combinations into standardized forms. Postcolonial states further accentuated these through administrative reorganization into linguistic states with corresponding educational and bureaucratic systems.

Digital technologies, being performative and multimodal, enable transliteration, script switching, and hybrid scripting, offering possibilities to overcome print's rigidities and rekindle the subcontinent's multilingual heritage. Manuscripts in obsolete scripts like Kaithi, Modi, Tankri, and Mahajani are now largely inaccessible due to the decline in linguistic and paleographic transmission. Contemporary digital tools, if adequately developed, could accelerate inter-lingual borrowing and interaction. But this depends on investment in language-specific digital infrastructures—Unicode standards, keyboard layouts, OCR, NLP—without which linguistic diversity remains constrained.

This paper studies policy documents from public and private language technology initiatives to examine how technological design and platform governance affect the preservation and transformation of multilinguality as heritage. Current efforts remain skewed toward dominant print languages, undervaluing multilinguality's cultural and historical significance.

Dr Paula Westenberger

Senior Lecturer in IP Law (Brunel University of London) / BRAID Research Fellow (with RBG Kew)

Decolonising the heritage, AI and copyright interface: a cultural rights approach

Artificial Intelligence (AI) is being increasingly used in heritage contexts. Different types of AI can be used, for example, as tools for heritage research and management, including for the reconstruction of heritage sites and artefacts. While the benefits and challenges of AI for heritage is being currently explored by various disciplines, for example in digital humanities and computer science, there is still a gap as regards the legal challenges arising from such practices, particularly relating to intellectual property (IP) rights. Discussions and consultations are taking place in various countries on approaches to the regulation of AI and copyright. However, these debates focus mostly on creative and technology

industries, with the specific concerns, needs and applications in the cultural heritage sector being insufficiently considered. Importantly, the role that copyright law and practice may have in issues such as bias and digital cultural colonialism are not being sufficiently addressed. This presentation will advocate for the need to approach the AI regulation discussions from a heritage perspective, arguing that the human rights discipline, and in particular cultural rights, offer important mechanisms for the development of policies and for the recalibration of legislations such as copyright to responsibly address the use of AI in heritage contexts. This approach will help achieve the appropriate balance between the values at stake i.e. protecting core interests of creators and communities, and promoting preservation and access to culture in a responsible and ethical manner, including by addressing bias and decolonial concerns."

Dr Ameera Kawash
PhD (Royal College of Art), Founder and Creative Technologist

Digital Self-Determination and Decolonial Heritage: Localising AI through Critical Archival Practices

Centralisation is a fundamental feature of colonial archives, rooted in the violent relocation of looted indigenous objects to imperial capitals and the imposition of systems of standardisation and classification. The advent of dominant AI systems has ushered new waves of data centralisation, with far-reaching consequences including the entrenchment of the AI divide, shifts in labour markets and deskilling, and the acceleration of authoritarian and repressive technologies. This study explores decolonial archival practices as strategies for reconfiguring and decentralising data systems and AI infrastructures, focusing on localisation, digital self-determination, and more efficient resource usage. Grounded in the ethics and politics of AI, this research examines interventions by Global South artists, archivists, and collectives who use localised, decolonial, and community-centred approaches to develop digital resilience and address historical and technological injustices. By advancing new archival architectures, conceptual geometries, metadata practices, and infrastructure-building capabilities, these interventions challenge the centralisation of knowledge through conventional archival systems as well as the repository as a static construct disconnected from living communities and bodies. Understanding the archive across temporal and spatial vectors, this study considers how AI can complicate notions of retrieval, preservation, and authorship and destabilise colonial archival concepts.
Whereas localisation in commercial contexts typically refers to adapting media content to specific regions or cultures, this study develops localisation as a decolonial archival practice involving self-representation and capacity-building across modalities. As such, localisation operates through multiple layers of the stack including infrastructure, energy sources, AI models, and content production. In conclusion, this research positions critical archival practices as decolonial heritage work that advances digital self-determination, especially in Global South contexts where limited computational resources, language barriers, systemic biases, and economic marginalisation reinforce AI inequalities.

Joanna Rivera-Carlisle
University of Oxford

Interfacing Futures: Challenging Spatial Coloniality through Augmented Reality

This paper addresses how AI-supported AR (Augmented Reality) applications can facilitate complex negotiations of intergenerational responsibility in relation to colonial legacies. It draws on three case studies to highlight different aspects of this potential: (1) local spatial data annotation and ownership, (2) critical content interactions, and (3) interconnectivity of globally dispersed sites. The first case study addresses how vital local, lay participation is in the creation of digital tags for public sites. Particularly in spaces with histories of colonial violence or connections thereto, who gets to describe, annotate, and contextualise a site reflects existing power dynamics and identity-building agencies. By

encouraging public participation in AR-facilitated annotation, these power dynamics can be shifted, and previously marginalised perspectives centred. The second case study illustrates the potential of interactive content creation as a site of intergenerational negotiation. This includes backward-facing confrontations with past legacies and worldviews, but also proactive steps towards encasing current perspectives for future generations. A central aspect of this process is managing polyvocality with a focus on decolonial content, and using AI tools to bridge skill gaps for lay contributors. The third case study pertains to the potential of using AI-supported AR to highlight connections between spatially dispersed decolonial challenges. It uses a museum-based restitution example to examine the structural, institutional, and cultural dimensions of this interactive dialogue. Collectively, these three case studies outline strategic ways in which participatory, AI-supported AR applications can challenge spatial coloniality and foster polyvocal narratives to be embedded in our shared heritage.

Dr Rozhen Kamal Mohammed-Amin
Kurdistan Institution for Strategic Studies & Scientific Research (KISSR)

From the Ground Up: Localising and Decolonising Digital Heritage in Iraq

This presentation summarises the Cultural Heritage Organisation's (CHO) efforts in launching and leading interdisciplinary and community-centred digital heritage research practice in the Kurdistan Region and the rest of Iraq. It also discusses how localised and decolonial approaches in digital heritage can empower local communities through technology and capacity building and contribute to the sustainable preservation of vulnerable cultural heritage and cultural rights. Through case studies, the presentation illustrates how CHO's initiatives leverage immersive technologies such as Augmented Reality (AR) and Virtual Reality (VR) to protect, promote, and engage with local heritage (tangible and intangible) while addressing local and global challenges such as education, human rights, digital literacy, women empowerment, and climate change. The presentation also discusses the challenges of digital heritage efforts in Iraq and highlights opportunities and potential of the field in making cultural, social, economic, and even environmental impacts. It also reflects on the ethical questions around accessing and using data, heritage resources, and digital technologies in the fragile contexts and conflict-affected communities and countries like Iraq, addressing questions of ownership and representation. The presentation aims to provoke critical reflections on the role of locally led digital heritage efforts in empowerment and safeguarding against digital colonialism while enduring existential challenges from limited infrastructure, capacity, and resources, especially in fragile conflict and post-conflict communities.

Dr Neha Gupta
The University of British Columbia, Okanagan

A cultural rights approach in archaeology and digital heritage from First Nations contexts in British Columbia, Canada

A cultural rights approach, combined with Indigenous data governance principles, can make clear paths for Indigenous Peoples to reclaim their heritage, and build capacity in digital methods and practice. This talk presents two scenarios from First Nations contexts in British Columbia, Canada, where communities are decision-makers in digital heritage research. Both cases reflect possibilities for digital heritage research when an Indigenous community's cultural rights and interests are activated and respected. These developments overlap with growing awareness amongst archaeologists and heritage professionals from closely related fields that digitization and digitalization does not, in of itself, preserve or safeguard cultural heritage, nor does it protect the cultural rights of communities. Scholarly attention is shifting to developing ethical practices in the human rights framework so that source communities and their rights are recognized, and that they are active decision-makers in all stages of

research, including the design of research and the use of culturally appropriate methods in selecting, identifying and protecting cultural heritage.