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Paper Presentations

Session 1: Wednesday March 26th, 2025, 1:30 - 2:30 p.m.

PRESENTATION #1: 1:30 p.m. - 2:00 p.m.

Title: Digitization to International Cultural Heritage Standards: A Review of Best Practices

Author: Thomas Rieger

Presenter: Thomas Rieger

Abstract:

The Cultural Heritage community worldwide has been preserving our shared heritage for hundreds of years, starting with cave drawings, evolving to cuneiform tablets, then to illuminated manuscripts, printed books, documents, and so much more. The last century or so brought us new and ever evolving forms of our heritage: photography, audio, born digital, data, architecture, video, games, the web…. 2D, 3D, MISHA!

The earlier forms of cultural heritage have stood the test of time better than the more recent. Too much of our heritage from the last century is either already lost or at risk. Today we have turned to digital technologies as a major tool for heritage preservation.

At the start of the digital era, there were no standards or understanding of the science and technology we began to rely on. Most of what we have digitized to date is far below preservation quality. At best, the work meets access standards. If we can find it. If it is not already degraded itself.

Recognizing the issue in the late 1980's work began on formulating *Best Practices* and *Standards* for the digitization of reflective and transmissive materials. Forty five years or so later we finally have a set of tools that guide our efforts worldwide towards the goals of very high quality and uniformity across all practitioners. Why is this so hard?

This presentation centers on the human visual side of the challenge and provides an overview of best practices.

PRESENTATION #2: 2:00 p.m. - 2:30 p.m.

Title: Supporting the Work of the Endangered Archive Programme: Delivering Digitisation Workshops Around the World

Authors: Jonathon Vines & Eugenio Falcioni

Presenters: Jonathon Vines & Eugenio Falcioni

Abstract:

The British Library Endangered Archives Programme (EAP) plays a crucial role in facilitating the preservation of cultural collections at risk of degradation or loss, particularly in regions facing significant challenges in safeguarding their heritage. This presentation explores the EAP's international training initiatives, specifically the digitisation workshops conducted in partnership with the EAP regional hubs around the world. These workshops aim to equip participants with essential skills for digitising cultural materials, while also raising awareness of the EAP's work. The presentation will provide an overview of the digitisation training offerings provided by the British Library, sharing insights from workshops delivered in countries such as Lesotho, India, Lebanon, and Jamaica, along with reflections on the challenges and rewards of carrying out such work in diverse global contexts.

Session 2: Wednesday March 26th, 2025, 3:00 p.m. - 4:30 p.m.

PRESENTATION #3: 3:00 p.m. - 3:30 p.m.

Title: The Lost Manuscripts of Mosul (LMM): A Digital Humanities Initiative for Post-Conflict Reconstruction of Written Heritage

Author: Yahya Haidar, Rochester Institute of Technology (Dubai)

Presenter: Yahya Haidar, Rochester Institute of Technology (Dubai)

Abstract:
The Lost Manuscripts of Mosul (LMM) is a Digital Humanities initiative dedicated to the revival and reconstruction of the manuscript collections of Mosul's Library of Religious Endowments (Maktabat al-Awqāf al-ʿĀmma), a treasure trove of 5,708 volumes, most of which were looted, burned, or lost during ISIS's occupation of the city (2014–2017). Given the near-complete absence of digitized copies and the unknown fate of these manuscripts, the project uses as its starting point the nine-volume published catalogue by Sālim ʿAbd al-Razzāq (1975–1980) to extract descriptive data related to actors (authors, copyists, waqf donors, owners, commentators), locations (cities,educational institutions, historical sites), subjects, and more. This effort seeks to elucidate the dynamics of scribal and intellectual activity and exchange across various regions and historical periods. The retrieval of knowledge concerning these lost manuscript collections is essential for the ultimate goal of reconstructing the library's contents,

as it significantly enhances public awareness and accessibility to these invaluable cultural assets.

The LMM initiative develops a four-stage model for the gradual reconstruction of lost or damaged written heritage once preserved in private or public physical collections. These stages are: Knowledge Production; Knowledge Accessibility; Public Awareness; Digital and Physical Reconstruction.

In the Knowledge Production stage, the project aims to extract, preserve, classify, and translate historical and descriptive data using Optical Character Recognition (OCR), a multi-layered verification process, and international metadata standards. This stage involves the recovery and digitization of available data to ensure accuracy and interoperability. On the backend, the collected data is stored in relational and graph databases.

The Knowledge Accessibility stage focuses on enhancing the versatility of data navigation and analysis, transforming raw data into meaningful, dynamic historical knowledge. This is achieved through user testing for enhanced User Experience (UX). Specifically, the project aims to augment the scholarly value of the lost manuscripts by designing interactive display instruments, both textual and visual, using maps, diagrams, and advanced design templates and tools to create an interactive platform.

In the Public Awareness stage, the project seeks to widely disseminate the initiative among scholarly and lay audiences, enhancing the value of the Mosul manuscript collections for local history and social responsibility. This involves the use of AI-driven marketing strategies to launch the platform,along with public outreach and awareness campaigns, social media campaigns, and the development of educational programs.
Finally, the Reconstruction stage aims to engage public and institutional stakeholders in the gradual reconstruction of the manuscript collections' contents. This involves the use of advanced imaging technologies (MISHA) and OCR for digital reconstruction, as well as an international plan of action for physical reconstruction. The project also encourages crowdsourcing efforts and partnerships with international libraries and institutions to support the reconstruction process.

PRESENTATION #4: 3:30 p.m. - 4:00 p.m.

Title: Cultural Heritage 3D Mapping with UAS

Author: Agon Nimani, RIT Kosovo

Presenter: Agon Nimani, RIT Kosovo

Abstract:
The preservation of cultural heritage sites is crucial for maintaining historical identity and continuity. Unmanned Aerial Systems (UAS) provide a powerful tool for 3D mapping, enabling the creation of high-resolution digital replicas of cultural heritage objects and buildings, which can also be used for their preservation. This presentation showcases the application of UAS-based photogrammetry to document and preserve Kosovo's cultural heritage, including deteriorating structures and the ones still being explored. These digital models will serve as essential resource for restoration efforts while also offering interactive opportunities such as virtual tourism, education, gaming, and augmented reality experiences. Additionally, they can support urban planning, academic research, and AI-driven historical reconstructions. By leveraging UAS technology, the approach presented enables and enhances accessibility, engagement, and protection of cultural heritage in innovative and sustainable ways.

Keywords: Cultural heritage, 3D mapping, Unmanned Aerial Systems (UAS), restoration, augmented reality, digital preservation.

PRESENTATION #5: 4:00 p.m. - 4:30 p.m.

Title: In the Room Where it Happened: The use of augmented reality to revive historical spaces

Authors: Joe Geigel, Susan Lakin, Tamar Carroll , Melissa Warp, Gary Jacobs

Presenters: Joe Geigel, Tamar Carroll & Melissa Warp

Abstract:
This talk explores how location-based augmented reality (AR) can inform and enhance physical historical sites. Through two recent case studies, we demonstrate how AR can bring history to life and allow users to rediscover the past.

Our first example focuses on Clarissa Street, once the vibrant center of a diverse neighborhood in Rochester, New York. In the mid-20th century, this area was home to Black-owned businesses and a mix of ethnic residents. The Pythodd Jazz Club, located in the heart of the neighborhood, attracted international musicians and an interracial, intergenerational audience. Today, the site of the Pythodd is a vacant lot, a consequence of urban renewal in the 1970s that displaced many Black property owners. By using AR, we enable visitors to experience Clarissa Street before urban renewal, fostering a deeper understanding of African American history in Rochester and highlighting the impacts of racial dispossession from policies like redlining.

The second example involves The Livingston-Backus house, a mid-1800s structure and one of the many historical buildings maintained by the Genesee Country Village & Museum outside of Rochester, New York. Using AR, we present an avatar likeness of Dr. Frederick Backus, who tells personal stories of his life, recounting the major issues of his lifetime in the house in which he once resided. Using a conversational interface, we allow visitors to engage in a Q&A dialog with the avatar guided by artifacts maintained in the residence.

Session 3: Thursday March 27th, 2025, 11:00 a.m - 12:00 p.m.

PRESENTATION #6: 11:00 a.m. - 11:30 a.m.

Title: Multispectral imaging of archival photographic materials

Author: Anna Seweryn

Presenter: Anna Seweryn

Abstract:
In 2024, a multispectral imaging laboratory was established in the National Archives in Krakow. This is the first lab of this type in the network of state archives in Poland. The work was created as part of an implementation doctorate carried out in cooperation with the AGH University of Science and Technology in Krakow, planned for 2022-2026. The task of the studio is to implement an imaging system in the institution and to create a catalog of good imaging practices adapted to the archival materials and the needs of the archive and its users. Currently, research work focuses on photographic materials as the least explored in terms of the multispectral imaging process, and at the same time very diverse and technologically complex.

The research is carried out on three types of photographic materials: the technological collection, on the archival resources of the National Archives in Krakow and on prepared samples. The research is intended to answer the questions: Is it possible to technologically identify photographs using MSI? Is it possible to make more visible a photographic image that is degraded, dirty, damaged as a result of a disaster or a microbiological infection? What is the best way to document the object - its state of preservation, conservation processes carried out, original layers (e.g. retouching)? So far, tests have been carried out for photos that are faded, contaminated, damaged by fire and flooding, and microbiologically infected. Photographs subjected to imaging are made in different techniques and have different functions, including police photographs and photographs taken using the magic photography technique. The presentation will also discuss multispectral imaging of the presence of

microorganisms on the surface of archival materials.

PRESENTATION #7: 11:30 a.m. - 12:00 p.m.

Title: Use of spectral imaging for print analysis of digital and conventional prints

Author: Ante Poljicak

Presenter: Ante Poljicak

Abstract:
Spectral imaging is a print analysis technology offering a detailed spectral understanding of materials beyond the capabilities of conventional RGB imaging. In this paper an example of spectral imaging application on contemporary printed materials is shown. The research includes the approach to spectral acquisition and the analysis of print characteristics, providing an evaluation of print quality and authenticity.

By manipulating individual color channels of the printed image (Cyan, Magenta, Yellow and Black) a difference in pixel values is created. This difference can be hidden in the Human Visual System (HVS) using modern ink saving techniques such as Gray Component Replacement (GCR). The afore mentioned manipulation can therefore only be detected using imaging equipment such as hyper/multi-spectral cameras and infra-red cameras.

This approach, usually used in data hiding and steganography, could find applications in the analysis of both contemporary and ancient prints.

Session 4: Thursday March 27th, 2025, 1:30 p.m. - 2:30 p.m.

PRESENTATION #8: 1:30 p.m. - 2:00 p.m.

Title: Multispectral imaging for discovery of the Sarajevo Haggadah's Hidden History

Author: Aleksandra Buncic

Presenter: Aleksandra Buncic

Abstract:
This paper explores research results of the multispectral imaging of the Sarajevo Haggadah, a fascinating fourteenth-century Jewish illuminated manuscript housed at the National Museum of Bosnia and Herzegovina. It showcases how modern technology and advanced scientific analysis allow scholars to study medieval manuscripts in ways that were not possible before. My presentation will focus in particular on the application of image processing algorithms for text recovery that led to significant discoveries about the ownership and provenance of the Sarajevo Haggadah at the beginning of the 16th century.

By examining data sets of the selected folios and by revealing details not visible to the naked eye, my presentation will seek to establish new understandings of the manuscript's history, shed new light on the non-invasive methods for material analysis, and finally, suggest how the results of this collaborative research, may, in turn, provide the key to unlocking some of the Sarajevo Haggadah's most intractable mysteries.

PRESENTATION #9: 2:00 p.m. - 2:30 p.m.

Title: The Byzantine Gospel Book as Vessel of Memoria

Author: Megan A. Coates

Presenter: Megan A. Coates

Abstract:
The manuscript Princeton University Library Garrett MS 7 is a 12th century, Byzantine gospel book that features several inserted folios. Four of the inserted folios contain miniatures that are the subject of great scholarly debate. The images are often referred to as line drawings, or wash-drawings. They have also been categorized as model drawings. If that in fact is the case, the miniatures are of great significance to Byzantine Art History because they would be the only surviving evidence of the use of model or pattern books in Byzantine illumination. An owner of the gospel book then added to these images, including the addition of a prayer on one of the miniatures written in a special monastic "code". Although this code has been observed in other manuscripts, this is the sole instance in which the code was written on an image. It seems that this owner also inserted a palimpsest folio on which lines of an earlier text are partially visible. With the use of multi-spectral, photometric, and topographic imaging scholars are now equipped with the technology to uncover an artifact's most deeply hidden secrets. The case study of Garrett MS 7 will provide further insights into the endeavor.

Session 5: Thursday March 27th, 2025, 3:00 p.m. - 4:30 p.m.

PRESENTATION #10: 3:00 p.m. - 3:30 p.m.

Title: Sharing cultural sites through digital twining: A case study of the Campbell house

Authors: Atia Newman & Alissa deWit-Paul

Presenter: Alissa deWit-Paul

Abstract:
The idea of digital preservation and dissemination is a growing area of interest in historic preservation. Many scholars are speaking up about the need to expand authentic research and bring it into the public realm.

Creators Atia Newman and Dr Alissa de Wit-Paul present an interdisciplinary case study of a unique 3D visualization technique. This process combines traditional digital twinning methods with 3D game creation techniques to preserve historic sites. The animation and architecture industries naturally combine to create an innovative approach to storing relevant metadata on historical sites that can be made accessible to public audiences as well as to academic researchers. This method was developed for the Genesee Country Village and Museum using their Campbell house historic structure focusing on building technology of the 19c in western New York. The structure is revealed through digital scanning and integrated into an interactive and immersive virtual space.

For academics interested in the links between architecture, museum studies, preservation and animation this process will open up new possibilities for ways to create sustainable spaces. Viewers, including the general public, can experience firsthand the advantages of virtual simulations and creation of historic spaces.

The projected advantages of using this method would be to preserve a monument in appropriately high-resolution detail for future research, and also to acquire and catalog this data more efficiently while still making it available for educational and entertainment purposes. In doing so, we hope to make cultural heritage sites and scans more broadly accessible to public audiences.

PRESENTATION #11: 3:30 p.m. - 4:00 p.m.

Title: Reviving Art History: Augmented Reality (AR) for Immersive Learning and Engagement

Authors: Lisa Lokshina & Shachar Weis

Presenters: Lisa Lokshina & Shachar Weis

Abstract:
In this presentation, we will showcase our project, "Victorious Athlete in Augmented Reality," which brings to life the history of one of the Getty Villa's most cherished artifacts, a 2,000-year-old life-sized bronze statue. Through photogrammetry, 3D reconstruction, and immersive technology, we transform a traditional museum artifact from a static display into a dynamic educational journey for museum visitors.

Using "Victorious Athlete in AR" as our primary case study, we explore the opportunities and challenges of employing immersive technology in various aspects of cultural heritage, including research, conservation, tourism, and art history education. Key points will include:

- Sharing our design and development process for creating location-based AR experiences for art institutions, addressing technical, logistical, and design challenges.
- Discussing techniques for integrating immersive technology while preserving the integrity of historical objects.
- Highlighting strategies for crafting interactive experiences that enhance educational outcomes while maintaining visitor engagement.

Our presentation will demonstrate how innovative technologies like AR can bridge the gap between past and present, offering museum visitors a richer, more engaging connection with cultural heritage. We will conclude by reflecting on the broader implications of our findings for the future of cultural heritage experiences.

PRESENTATION #12: 4:00 p.m. - 4:30 p.m.

Title: What Lies Beneath the Surface: Cultural Heritage Imaging and Museum Exhibitions

Author: Nancy Norwood

Presenter: Nancy Norwood

Abstract:

Over the last decade, The Memorial Art Gallery of the University of Rochester (MAG) and the Garman Art Conservation Department at the State University of New York Buffalo have partnered on several imaging and conservation projects. This paper explores how extensive imaging studies conducted on two paintings in MAG's collection—Claude Monet's Waterloo Bridge, Veiled Sun and Rembrandt van Rijn's Portrait of a Young Man in an Armchair—were key interpretive elements in focus exhibitions for each work.

The 2018 exhibition Monet's Waterloo Bridge: Vision and Process brought together eight versions of Monet's series. An imaging protocol designed at the Garman was conducted on MAG's painting as well as four other versions. These technologies were accessible to exhibition visitors through state-of-the-art touchscreen interactives that served as a playground for the curious, engaging visitors young and old in active exploration.

The 2024 exhibition Under the Microscope: Rembrandt's Portrait of a Young Man in an Armchair was a forensic study of MAG's painting. The painting underwent a wide range of imaging and scientific analysis at the Garman to learn more about its composition and history. This information formed the basis for an interactive computer program that allowed visitors to explore the history of its conservation as well the scientific analysis that looks beneath the surface.

Session 6: Friday March 28th, 2025, 9:30 a.m. - 12:00 p.m.

PRESENTER #13: 9:30 a.m. - 10:00 a.m.

Title: MISHA and the documents of the State Archives in Dubrovnik

Authors: Tanja Ladišić, Vedan Šerbu & Paula Zglav, State Archives in Dubrovnik

Presenters: Tanja Ladišić, Vedan Šerbu & Paula Zglav, State Archives in Dubrovnik

Abstract:
The State Archives in Dubrovnik is one of the richest archives in this part of Europe, next to the Vatican, Vienna, Venice, and Constantinople. Dubrovnik always paid attention to the written word and careful preservation of the documents. During history, the most important documents and charters were kept in the post-sacred place, in the Dubrovnik Cathedral among the relics of the saints. The most valuable archives are those from the fonds of the Dubrovnik Republic. These archival fonds from the time of Dubrovnik Republic (1022 – 1808) have been entered into the prestigious UNESCOs list "Memory of the World". The introduction of modern technologies into archives is a trend that significantly enhances the research of historical documents. One

such example is the use of multispectral imaging (MSI), which allows for the discovery of information invisible to the naked eye. Since October 2023, the MISHA system has been available at the State Archives in Dubrovnik. The MISHA system was introduced to our institution through a collaboration between the Ministry of Culture and Media of the Republic of Croatia, RIT (Rochester Institute of Technology), and the State Archives in Dubrovnik. RIT, in addition to being based in Rochester, also has a presence in Dubrovnik and Zagreb. One of the prominent lecturers in Croatia is Prof. Dr. Francis Brassard, a regular user of the State Archives in Dubrovnik. Thanks to his understanding of the volume and nature of the materials we preserve, Dr. Brassard played a key role in establishing collaboration between researchers from Rochester and our archivists. This multidisciplinary collaboration was crucial for bringing the MISHA system to our archive. This paper will discuss the multispectral imaging of selected archival materials from the collections of the Dubrovnik Republic held in the State Archives in Dubrovnik. These include documents where the entire text is marked with a tannin coating, ship documents that have served and still serve as document covers, and an item from the Natural History Museum in Dubrovnik.

PRESENTER #14: 10:00 a.m. - 10:30 a.m.

Title: Good to MISHA: Building Relationships and Imagining a Collaborative Book Science Lab in Toronto

Authors: Alexandra Gillespie & Jessica Lockhart

Presenters: Alexandra Gillespie & Jessica Lockhart

Abstract:
In this paper we will give an account of our experiences in borrowing a MISHA at the University of Toronto for the month of September 2024, as part of a multi-pronged approach to beginning to build a centre for book science at the University of Toronto. Our paper will include findings from our studies of owner inscriptions in a number of locally held objects, including the earliest books printed in Istanbul by the Hebrew Ibn Nahmias press, a forged first edition of Bertonio’s *Vocabulario de la Lengua Aymara* (1612), and the so-called “Rosebud” First Folio of Shakespeare’s plays.

However, the emphasis of our paper will be our reflections on the relationship- and infrastructure-building necessary to create a hub for this kind of work that can serve a larger research community. Many of the beginner pitfalls of book science teams are caused by a failure to build a sustainable and mutually beneficial relations across the different types of specialists who contribute to projects. In our large institution, where roles and responsibilities

are usually already prescribed, we have learned that we do best when we work in “a good way”: respecting and harnessing the existing strengths and interests of diverse collaborators.

PRESENTER #15: 11:00 a.m. - 11:30 a.m.

Title: The Hereford Gospels: A Case Study in Low-Cost Multispectral Recovery

Author: Bill Endres

Presenter: Bill Endres

Abstract:
The need for a low-cost solution to multispectral imagining is undeniable. For example, in a survey of European libraries, Gregory Heyworth found that there exists at a minimum 60,000 pre-fifteenth-century manuscripts with illegible content. To recover this content, the cost of commercial systems is prohibitive, running well over $100,000. To address this issue, Dave Messinger and Juilee Decker led a team at the Rochester Institute of Technology and developed a low-cost, built-it-yourself multispectral imaging system, referred to as MISHA. With a cost under $10,000, MISHA delivers multispectral imaging into the hands of librarians, archivists, and individual scholars. In my talk, I will discuss my early building of a MISHA and my work to use it to recover palimpsest pages in the late 8th-century Hereford Gospels. These palimpsest pages are of particular interest to scholars. It is rare for a manuscript of the Hereford Gospels’ status and period to contain them. While the Hereford Gospels is not a deluxe gospel-book, it performed the duties of one for Hereford Cathedral, including recording land deeds and legal settlements. Because England was a prime location for raising cattle for vellum, palimpsest pages are rare for manuscripts of this period, even for lesser ones.

While I will make introductory remarks about building a MISHA (through a computer & electrical engineering capstone course) and transporting it (using a backpack), the focus of my talk will be on the results of imagining, experiments with ways to diffuse light, and strategies to extract additional recovered text from PCAs and MNFs. These strategies include decorrelation stretch, alternative color spaces, and machine-generated super-resolution models.

PRESENTER #16: 11:30 a.m. - 12:00 p.m.

Title: Illuminating Heritage: Case Studies in Enhancing Research and Preservation through Collaborative Imaging Projects

Author: Andrew R. Mancuso

Presenter: Andrew R. Mancuso

Abstract:
This paper examines how interdisciplinary collaborations with external technology experts enhance cultural heritage preservation through advanced imaging techniques. Through four case studies of projects within the Preservation Services department of the Kelvin Smith Library at Case Western Reserve University, it highlights the role of multispectral imaging (MSI, specifically the MISHA system) in fostering institutional networks and discoveries, automated Reflectance Transformation Imaging (RTI) for student engagement and the surface analysis of Roman coins, CT scanning with the Cleveland Clinic for the conservation of a 16th-century Graduale, and X-ray fluorescence (XRF) and scanning electron microscopy (SEM) with the Swagelok Center for Surface Analysis of Materials to identify arsenical bindings and Roman coins.

Together, these case studies illustrate the transformative potential of imaging technologies in cultural heritage. They underscore the significance of technological innovation and partnerships with external technology experts as avenues to connect diverse research communities, enhance educational opportunities, and improve conservation practices. This paper aims to guide practitioners in leveraging collaboration to foster significant academic and practical advancements in heritage imaging and preservation.

Poster & Demo Presentations

****** Note: All Poster & Demo Presentations will happen on March 26th & March 27th from 4:30 p.m. to 5:30 p.m.***

POSTER #1

Title: Discovering the ‘hidden’ Greek: case studies from the Biblioteca Capitolare of Verona

Authors: Panagiotis Leontaridis, Konstantina Tsakona, Giacomo Marchioro & Paolo Scattolin

Presenters: Panagiotis Leontaridis & Giacomo Marchioro

Abstract:
The poster discusses the tools and methods used during the MSCA DN project AntCom for the study of the palimpsest manuscripts of the Biblioteca Capitolare of Verona. These manuscripts preserve Greek texts within their erased layers, either as the primary text or as marginal commentaries within a Latin context. Among our case studies is the Veronensis CXXXIV, a liturgical book composed of three codices antiquiores. The primary challenge lies in the palimpsest nature of the manuscript, compounded by the application of chemical reagents on some folios during earlier attempts by scholars to read the scriptio inferior. We employ various non-invasive methods, such as Multispectral Imaging (MSI), to facilitate a more accurate deciphering of the obscured script, a more confident palaeographical analysis, identification and study of its contents. The different materials and conservative history of the artefact require multiple diagnostic techniques and specialised tools to analyse the produced data. The results of this study include an overview of the techniques used to reveal the underlying texts along with suggestions for the visualisation of the palimpsest’s structure in its current and original state with IIIF and compliant with the latest standards.

POSTER #2

Title: Documenting the Sculpture of H.C. Westermann

Author: Joe Tallarico

Presenter: Joe Tallarico

Abstract:
The Art Institute of Chicago recently received a donation of sculptural works by the artist H.C. Westermann which coincided with the release of the documentary film about his life and art

entitled *Westermann: Memorial to the Idea of Man If He Was an Idea* by Pentimenti productions. Westermann's oeuvre largely contains intricately crafted sculptural forms which utilize a wide variety of materials. He converted his skill and craftsmanship as a carpenter into artmaking during his studies at the School of the Art Institute of Chicago which he attended in between Naval service during World War II and the Korean War. Much of Westermann's work is a response to his time serving in the military and an admonishment of the many horrors he witnessed during his service. Westermann's influences can be seen in the movements of Surrealism, Dadaism, Comic Art and Folk Art while also being relevant to the Minimalism popular during his time. I would like to present the photographs I produced over several weeks of studying and lighting these objects, the many quirky details that were discovered during photography, and the process of how to photograph details hidden "inside" several of the works. These photographs will be utilized for an upcoming publication which will accompany the installation of these works in the museum.

POSTER #3

Title: A Proposal for Uniform Provenance Standards for Museum Collections

Author: Danielle Wolfson

Presenter: Danielle Wolfson

Abstract:
Cultural heritage faces a pervasive challenge: a significant majority of cultural objects lack adequate provenance information. This article analyzes the typological variations in the documentation field, comparing the provenance efforts at three major cultural institutions—the Getty Research Institute, the National Gallery of Asian Art, and the Museum of Fine Arts, Boston—to advocate for a uniform digitization standard in provenance documentation. This standard aims to promote transparency and ethical collection practices. Provenance research safeguards cultural objects and serves as a tool for decolonization, empowering communities to reclaim their heritage. Ultimately, this article argues for the adoption of a uniform provenance standard to strengthen museums' roles as custodians of global cultural heritage, enabling institutions' ability to safeguard, preserve, and present equitable cultural heritage.

POSTER #4

Title: Artifact to Experience: The Role of Technology in Cultural Storytelling

Author: Eli Groborchik

Presenter: Eli Groborchik

Abstract:
In the modern era, museums have become a prime space to combine emerging technologies with cultural preservation. Technologies such as projection mapping are proving to be important tools for museums, allowing static objects to be transformed into dynamic, multi-sensory, and narrative-driven experiences.

This case study explores the role of interactive projection mapping in museums by documenting and analyzing the creation of an interactive display for the Rochester Museum and Science Center that educates visitors on traditional Hodinöšyö:nih pottery. The interactive nature of this project not only allows visitors to view traditional pottery designs but also opens the door for narrative exploration. Creating an engaging narrative is often hard to achieve in an exhibit, relying heavily on visitors reading all of the provided text to fully grasp the message of the display. By moving some displays away from traditional passive observation towards active participation, museums give visitors a chance to not only understand the content but become fully immersed in the exhibit's message and story.

This study discusses not only the methods, technical challenges, and creative solutions involved in the project's development, but also the broader implications of utilizing technology as cultural storytelling devices in a museum setting. This project set out with the goal of not only creating an interesting piece to fit within a broader exhibit, but also contributing novel methods to the ever-evolving approach of using digital means to further cultural preservation through Storytelling.

POSTER/DEMO #5

Title: Finger Lakes Virtual Museum: Local History Engagement via Augmented Reality and Mobile Accessible Content

Authors: Diane C. Linnet, David L. Long Ph.D & Valerie Knoblauch

Presenters: Max Stromfeld & Jason Salazar Tobar

Abstract:
MAGIC Spell Studios is partnering with Finger Lakes Visitors Connection and STQRY to create the Finger Lakes Virtual Museum: an interactive curation showcasing the history and cultural heritage across Ontario County, NY. Augmented reality experiences, gamification using collectible badges, and various interactive content aim to promote engagement with local

history and attract a broad audience. The museum will span across 70+ locations throughout 16 towns and 2 cities, and complement local historic sites with written, visual and audio content accessible by the public via smartphones anytime, anywhere.

POSTER #6

Title: Computational Methods for Enhancing the Readability of Hidden Text in Historical Documents

Authors: Baharan Pourrahmadi, Mads Toudal Frandsen & René Lynge Eriksen, University of Southern Denmark, Odense, Denmark

Presenter: Baharan Pourahmadi, University of Southern Denmark, Odense, Denmark

Abstract:
The study of hidden texts on historical manuscripts presents unique challenges. These texts, frequently hidden from direct observation, contain valuable insights into past cultures. Imaging techniques such as Multispectral Imaging (MSI) have become widely used and crucial tools for revealing such hidden texts. However, the text images retrieved from the multispectral data are often degraded due to obstructions such as additional layers of paper or text overlying the hidden fragments. In many cases, conventional computational methods, such as Principal Component Analysis (PCA), are applied to extract visible text images, but they often fail to fully resolve the issues of degradation and obstruction. This research explores advanced computational approaches to address these limitations.

POSTER #7

Title: Identity, Heritage Practices and YouTube: The Vikings at the Swedish History Museum

Author: Sheenagh Pietrobruno, Full Professor, Faculty of Human Sciences, Saint Paul University/University of Ottawa (Ottawa, Canada) spietrobruno@ustpaul.ca

Presenter: Sheenagh Pietrobruno, Full Professor, Faculty of Human Sciences, Saint Paul University/University of Ottawa (Ottawa, Canada) spietrobruno@ustpaul.ca

Abstract:

Through the case of the Viking exhibition at the Swedish History Museum (SHM), this research addresses individualized gendered/ethnic practices versus institutional collective mobilizations in the context of the intertwining of national museum practices and the entertainification of historical cultures. Through archaeological evidence, the past and current SHM Viking exhibitions counter the stereotyped depiction of the Viking Age (793–1066 CE/750–1100 CE) centred on White, male, violent warriors. This portrayal, often highlighted in global entertainment spheres, is currently deployed by White supremacists to promote their ideologies. Archaeological evidence shows that the majority of Viking society lived a peaceful agrarian life. Furthermore, women could also attain a warrior status, and Viking DNA shows diverse ethnicity. The Swedish History Museum uploads entertaining videos on YouTube to promote the exhibition, countering Viking gendered/ethnic stereotypes. This research argues that the platform economies of YouTube nonetheless can challenge the efforts put forward by the Swedish History Museum to resist Viking Age stereotypes through the narratives of their promotional YouTube videos.

This is the case because the promotional SHM videos that circulate on YouTube search engine result pages (SERPs) under specific keywords interconnect with videos uploaded by individual users and other institutions that perpetuate Viking gendered/ethnic stereotypes. These videos range from fun historical videos uploaded by individual users to those produced by White supremacists. This circulation of contrasting gendered/ethnic content mobilized by individuals and the Swedish History Museum is examined through a digital method grounded in the platform economy of YouTube SERPs, which combines metadata, keywords, thumbnails, video content and their stories, personalization algorithms, ranking, scrolling and business models. The analysis of the narratives of SERP videos via the elements of YouTube's platform economy is informed by past and current fieldwork conducted at SHM Viking exhibitions as well as by scholarly research on gender/ethnicity in the Viking Age.

POSTER #8

Title: Use of images and lidar data in the documentation of monuments

Authors: Urszula Marmol & Natalia Borowiec, AGH University of Krakow, Poland

Presenters: Urszula Marmol & Natalia Borowiec, AGH University of Krakow, Poland

Abstract:
The presentation topic is the integration of multi-sensor data in heritage documentation.

Modern methods of documenting monuments require not only an accurate representation of an object's geometry, but also the preservation of its visual representation. Combining image data

with lidar data enables the creation of 3D models that are both geometrically and visually accurate. This approach is crucial in the context of heritage protection and conservation and restoration planning.

Image data provide detailed information about the colour and facture of surfaces. They enable high-quality textures that give the model a realistic appearance. They are relatively easy to access and low cost.

Lidar data, on the other hand, provide very precise data on the shape and structure of an object. They also make it possible to capture objects with complex architecture, even in locations that are difficult to access with traditional photography methods.

The integration of image and lidar data represents an innovative solution in the documentation of monuments. With this method, it is possible to create three-dimensional models that combine high geometric accuracy with realistic visual representation. Despite the numerous technical challenges, the integration of multisensor data opens new perspectives in monument preservation and documentation research, enabling the precise monitoring of their condition and the planning of future conservation activities.

POSTER #9

Title: The photogrammetry in archiving small cultural heritage sites.

Authors: Natalia Borowiec & Urszula Marmol, AGH University of Krakow, Poland

Presenters: Natalia Borowiec & Urszula Marmol, AGH University of Krakow, Poland

Abstract:
The photogrammetry is an effective and widely used method for digitally documenting and archiving small cultural heritage sites, such as monuments, mosaics, and architectural details. By capturing high-resolution images from multiple viewpoints and processing them through Structure from Motion (SfM) algorithms, it is possible to generate precise 3D models that accurately represent the shape, texture, and fine surface details of heritage objects. These models not only serve as a valuable digital record but also enable further analysis, restoration planning, and virtual exhibitions.

In this study, photogrammetric techniques were applied to create detailed reconstructions of selected heritage sites in Poland. The analyzed examples include a diverse set of structures, ranging from flat, intricate mosaics to complex three-dimensional monuments, each presenting unique challenges in data acquisition and processing. The results demonstrate that

photogrammetry is a highly effective tool for capturing both geometric and textural information, ensuring the long-term preservation of cultural assets in digital form.

The ability to generate high-fidelity 3D models offers significant advantages for heritage conservation, research, and public engagement. These digital representations allow for non-invasive condition assessment, comparative analysis over time, and the creation of interactive visualizations for educational and dissemination purposes. Furthermore, photogrammetric documentation facilitates integration with Geographic Information Systems (GIS) and Building Information Modeling (BIM), enhancing interdisciplinary collaboration in heritage management.

We have conducted numerous studies exploring the capabilities of photogrammetric methods, with selected findings presented in this paper. These examples underscore the value and potential of photogrammetry in cultural heritage preservation, emphasizing its role in documentation, analysis, and visualization. By leveraging these advanced digital techniques, we contribute to safeguarding heritage sites for future generations while expanding accessibility to researchers, conservators, and the general public.

POSTER #10

Title: Peering into the past: Infrared reflectography uncovers provenance information from Arabic laminated pages

Author: Kyle Ann Huskin

Presenter: Kyle Ann Huskin

Abstract:
The title pages of many Islamic manuscripts contain valuable information about the book’s owner, provenance, and dating in the form of notes, waqf and endowment statements, seal stamps, etc. When these books were sold, the new owners often pasted over or “laminated” the original title page in order to add their own information. This obfuscation limits our understanding of the book’s provenance. Prior researchers often revealed this information by destructively removing the top layer of paper — usually with limited success and always at the expense of the manuscript’s integrity. This poster will show the results of a pilot project on 32 Ottoman-era manuscripts at Leiden University Libraries to recover text from these pasted-over title page using infrared reflectography (IRR) at 1050nm. The method is non-destructive, non-invasive, and relatively quick and simple to apply. The project demonstrated the effectiveness of the method, having recovered text on most manuscripts. These results present a new use case for IRR and could significantly expand our knowledge of Arabic manuscript cultures and literary practices if applied to the thousands of still-intact laminated pages.