

ICOM MUSIC ANNUAL MEETING 2026

Musical Instrument Collections in Digital Transformation: Research, Access, and Museum Ethics

Thursday 3 – Saturday 5 September 2026

**St Cecilia's Hall, The University of Edinburgh, Edinburgh, UK
50 Niddry Street, Edinburgh EH1 1LG**



St Cecilia's Hall: External Entrance. Photo: The University of Edinburgh



St Cecilia's Hall
CONCERT ROOM & MUSIC MUSEUM

Call for Papers

Music museums and collections are located at the most critical point of an enormous digital transformation. This new scenario, characterised by the swift progression of technology and the global perspective of ICOM MUSIC on 'Digital Futures', requires new paradigms and practices of stewardship, engagement, and scholarship. The omnipresence of digital instruments – such as AI, Big Data, VR, and 3D modeling – brings about both tremendous opportunities and intricate challenges to the conservation, interpretation, and accessibility of both tangible and intangible musical heritage across the globe.

Music museums not only act as primary keepers of cultural memory, but also as repositories of digital tools and thus potentially have the power to influence the longevity of collections through digital infrastructures. By the acceptance of a socially responsible and digitally informed role, they can further develop how they gather, preserve and interpret the material and immaterial culture of music thus fostering collaboration and knowledge sharing globally. However, this digital change also brings about a need for the reassessment of the institutional identity and ethical responsibilities regarding digital ownership, data integrity, sustainability, and equitable access. In the light of this, a central question is how digital transformation is reshaping the way musical instrument collections are researched, preserved, and shared with global audiences.

Aligning with [ICOM Resolution #3 \(2025\): Positioning Museums for an Equitable, Ethical, and Sustainable Digital Future Through Technologies](#) and [ICOM's Strategic Plan 2022–2028](#), this conference will highlight both the positive and challenging circumstances, issues, and initiatives in relation to digital responsibilities and changing identities of contemporary music museums.

The Scientific Committee invites submissions of papers and other contribution formats, including panels, workshops, posters, and related formats, addressing topics that cover the core themes of **Research, Access, and Ethics in the digital world**, including but not limited to:

- **Digital Research and Documentation:** Utilising AI and machine learning in various aspects like provenance research, historical analysis, and instrument dating; applying Big Data analytics to tracking the patterns of global art collecting; making use of 3D and multispectral scanning in material science and conservation research, among others.
- **Access and Presentation:** Creating multi-layered digital ontologies and uniform metadata for the sake of global interoperability; novel techniques for the online display of musical instruments (e.g., Digital Twins, VR/AR dreams); the part played by digital media in the promotion of multiple cultural narratives and the tackling of decolonisation issues.
- **Digital Ethics:** Looking into copyright, intellectual property rights, AI, and open access policies for the digital assets of the cultural sector; the impact of digital inclusion and the digital divide in global knowledge sharing.
- **Sustainability:** the environmental and practical sustainability of the maintenance of big digital archives and platforms; changed policies on digital-first collecting and preservation.
- **Equity:** Examining how limited resources and the lack of digital technology may impact the museum experience and exploring what museums can do for solutions in a technology-driven world, e.g., in a context of low-cost digitisation approaches, open-source tools, and collaborative platforms.

- **Professional Training and Capacity Building:** Developing new skills and professional training opportunities for museum staff (conservation, curating, management) in a digital environment very much saturated with technology, especially in capacity building for staff in underrepresented areas.
- **Aural, Visual, and Material Modalities:** The use of digital instruments to make a connection between the tangible artifact and its auditory and cultural context, and thus to change the interaction between people and objects, as well as between people.

Proposals are welcomed that present the selected theme in its larger historical and current contexts, and future implications with innovative solutions to the global museum community through theoretical, critical, practical and strategic viewpoints, along with detailed case studies and high-level research projects.

The call is inclusive of all geographies, museological issues, viewpoints, and topics. We encourage a variety of consideration of underrepresented areas, e.g., the LAC countries and the MEASA region, as well as novel approaches, rethinking, and expanded knowledge of commonly covered topics to reflect the diversity of musical heritage and museum practices worldwide.



St Cecilia's Hall:
Wolfson Gallery.
Photo: The University
of Edinburgh

Visit the conference website at [2026 ICOM MUSIC Annual Meeting - St Cecilia's Hall](#) for information about the ICOM MUSIC Annual Meeting 2026, about St Cecilia's Hall, how to get around in Edinburgh – and more!

PROGRAMME DAY 1

Thursday, 3 September 2026

9:15 St Cecilia's Hall Opens

10:00–10:45 Registration / Coffee & Tea

Laigh Hall

10:45–11:00 Welcome:

Concert Room

Jeremy Upton, University of Edinburgh

Marie Martens, ICOM MUSIC

Session 1: 11:00–12:30 (Concert Room)		
Preservation – Cataloguing – Visitor Experience: Approaches to Digitisation in British Collections		
Chair: Marie Martens		
11:00–11:25	Sarah Deters	Bloomberg Connects at St Cecilia's Hall: Creating an Accessible Museum App with a Philanthropic Partner
11:25–11:50	Emanuela Vai	Marvellous Musical Instruments of the Renaissance: A Digital Humanities Approach
11:50–12:15	Rachael Durkin	After the Collector: Cataloguing as Consecration and the Formation of the Montagu Archive
12:15–12:30	Joint Q&A	

12:30–14:00 Lunch

On your own

SESSION 1: ABSTRACTS & BIOS

Bloomberg Connects at St Cecilia's Hall: Creating an Accessible Museum App with a Philanthropic Partner

Sarah Deters

In 2025 St Cecilia's Hall launched its new Bloomberg Connects digital guide. The app, developed in partnership with Bloomberg Philanthropies, enables visitors, both in the museum or at home, to explore our collection through tours, interactive maps, images, sound recordings, videos and descriptions. Translated into 30 different languages, the app has built-in accessibility features including voice over, captions and audio transcripts, image zoom, and font size adjustment. The best part, it is all completely free.

This paper will explore the how St Cecilia's Hall came to partner with Bloomberg Connects and what our experience has been working with this organisation. I will give an overview of the creation process, timelines for the work, the types of media used in the app, and the support we received from

Bloomberg. I hope to show that a museum doesn't need a huge budget in order to create a quality digital experience that is accessible to all.

Sarah Deters is the St Cecilia's Hall curator where she is responsible for museum interpretation, display, and visitor engagement at The University of Edinburgh's musical instrument museum. She holds a PhD in organology from The University of Edinburgh. She has a particular interest in examining the history of musical instrument collecting, the display of musical instruments and their interpretation, and the decolonisation movement in museums. Additionally, Sarah researches 20th-century musical instrument manufacturing and how socio-economic issues, such as war and labour movements, affect musical instrument making.

Marvellous Musical Instruments of the Renaissance: A Digital Humanities Approach

Emanuela Vai

Renaissance musical instruments are often elaborately decorated, featuring arabesque patterns, ivory inlays, and carvings of monstrous creatures. These ornamental aspects have largely eluded critical attention but provide valuable entry-points for exploring issues of gender, race, and colonialism in the Renaissance period. This paper introduces the interdisciplinary 'Marvellous Musical Instruments' project, which is using 3D scanning to digitally capture details of musical instruments in the Ashmolean Museum and the Bate Collection in Oxford, to explore how these instruments' visual and material features reflect the social, political, and cross-cultural dimensions of Renaissance music cultures.

This digitisation process forms a vital part of the preservation of these fragile objects, while also opening new possibilities for researching and engaging with Oxford's historic musical instrument collections. Drawing on these images of striking musical objects, this paper will consider the benefits (and the limitations) of digitisation, as well as reflect on the role that 3D scanning can play as a research methodology, as a tool for public education, heritage conservation and future scholarship. In doing so, it also reflects on how digital infrastructures are reshaping documentation and interpretation practices, while raising new questions about sustainability in an increasingly digitised museum environment.

Emanuela Vai is a cultural historian working at the intersection of music and material culture, the history of art, and the digital humanities. Dr Vai is Head of the Bate Collection of Musical Instruments and curator of its permanent exhibition 'Resonant Histories: Material Culture, Sound and Craft', as well as Head of Research in Humanities and Senior Fellow (Worcester College, University of Oxford). Previously, she held positions at the University of Cambridge, the University of York (CREMS), the Royal Academy of Music Museum, and the Harvard Centre for Italian Renaissance Studies. At Oxford, she is the academic lead of the 'Digital Humanities and Sensory Heritage' network at The Oxford Research Centre in the Humanities. She has published on musical instruments, soundscapes, space, and the senses in Renaissance social life. Her work has been funded by the British Academy, the Leverhulme Trust, the EU Commission, the S.H. Kress Foundation, the École Pratique des Hautes Études, and the Newton Trust at the University of Cambridge, among others.

After the Collector: Cataloguing as Consecration and the Formation of the Montagu Archive

Rachael Durkin

In December 2022, Northumbria University received the Jeremy Montagu Collection of Global Musical Instruments via the UK government's Acceptance in Lieu scheme, into an institution with little prior museum infrastructure. Accepting the collection as a unified whole appeared, on the surface, a

straightforwardly custodial act, but in practice it was the beginning of something more active and consequential.

This paper argues that the digitisation of the Montagu Collection is not the documentation of a pre-existing archive but its active formation. Drawing on Cook and Schwartz's foundational argument that archives are not passive storehouses but active sites where power over memory and identity is exercised – through appraisal, description, sequencing, and the choices that determine what is privileged and what is marginalised – the paper examines what the cataloguing process actually does in real time, and what it decides.

Those decisions are shaped by resource constraints felt acutely by collections in large and complex non-heritage organisations, but they are also, fundamentally, ethical ones. Cataloguing is presently being undertaken using low-cost digital infrastructure, with provenance research assisted by AI tools. Sequencing, metadata choices, and descriptive priorities determine not only what is documented first, but whose interests are served by that ordering – and whether the collector's original taxonomy is uncritically reproduced or actively interrogated in the process of digital formation.

Drawing on the Montagu case, this paper offers provisional observations about what digitisation under constraint reveals about the ethics of archive formation – about the power embedded in cataloguing decisions, the implications of AI-assisted provenance research in under-resourced contexts, and what it means to digitise a collector's archive whole. It suggests that the sector's conversations about digital ethics have much to gain from the experiences of collections built outside established frameworks, where the consequences of every descriptive decision are felt most immediately.

Rachael Durkin is associate professor in History and Music at Northumbria University, UKRI Future Leaders Fellow, and leader of the Global Music Technologies: Collaboration and Cultural Exchange research group. Her research focuses on musical instrument innovation, with particular emphasis on the impact of the first Industrial Revolution on design, manufacture, and commerce. She sits on the editorial board of the *Galpin Society Journal*, is a Fellow of the Royal Historical Society, and leads the Montagu Collection of Global Musical Instruments at Northumbria University. Her current work on the Montagu Collection encompasses provenance research, digital cataloguing, and the history and ethics of collecting, including questions of institutional responsibility, archival formation, and what it means to accept a collector's archive whole.

Session 2: 14:00–15:00 (Concert Room)		
Bridging Divides: Open Science, Mobile Technologies, and Equitable Access in Museums		
Chair: Arnold Myers		
14:00–14:25	Christian Breternitz	Open Science in Museum Practice: Strategies and Infrastructures at the Berlin Musikinstrumenten-Museum
14:25–14:50	Md. Arafat Ali [Online]	Bridging Access and Equity: Inclusive and Mobile Museum Practices in the Global South's Digital Transformation
14:50–15:00	Joint Q&A	

15:00–15:30 Coffee & Tea break

Laigh Hall

SESSION 2: ABSTRACTS & BIOS

Open Science in Museum Practice: Strategies and Infrastructures at the Berlin Musikinstrumenten-Museum

Christian Breternitz

As part of the State Institute for Music Research, the Berlin Musikinstrumenten-Museum is also part of the largest non-university research institute in Germany. As an institution within the Prussian Cultural heritage Foundation, the concept of open science has played an increasingly significant role in its research activities and museum documentation work since at least 2014.

The lecture will present the open science approach of the Musikinstrumenten-Museum and the institute, as well as its structure, using selected practical examples. In addition to long-established portals such as the digital collections and museum online catalogues, new portals such as [SPKtrum](#) and the collaboration with [musiconn](#) will also be presented. The possibilities offered by repositories for research and working data, such as [GitHub](#) and [zenodo](#), will also be explained. The presentation will highlight the advantages that digital research, documentation and publication offer in terms of accessibility, exhibition presentation and sustainability, whilst also addressing the limitations.

Christian Breternitz studied musicology, educational science and psychology in Weimar and Jena. In 2019, he obtained his PhD from the Berlin University of the Arts on the topic of 'Berlin brass instrument making in the 18th and 19th centuries'. Since 2020, he has been working as a research assistant and curator for wind and percussion instruments at the Berlin Musikinstrumenten-Museum, having previously worked in musical instrument collections in Munich, Stuttgart and Berlin. Since October 2022, he has been one of the spokespersons for the Organology Section of the Gesellschaft für Musikforschung. From 2022 to 2025, he was an Advisory Board Member, and since 2025 he has been Treasurer on the Executive Board of ICOM MUSIC.

Bridging Access and Equity: Inclusive and Mobile Museum Practices in the Global South's Digital Transformation

Md. Arafat Ali

Digital transformation is reshaping the notion of access, participation, and knowledge production by museums. Nevertheless, in the Global South, infrastructural and economic limitations have remained in the way of fair access to digital resources.

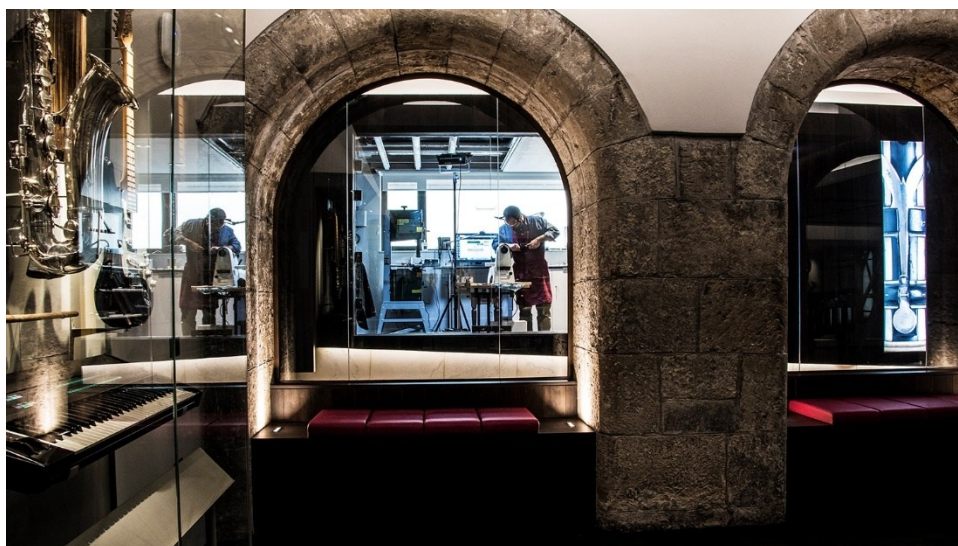
This paper presents a case study of the National Museum of Science and Technology in Bangladesh, its permanent exhibitions and Mobile Science Exhibition program. With a reach of over 120,000 visitors and over 250 exhibitions each year spread across schools, universities and remote communities, the program is a good example of how museums can do more than just make a physical presence to increase their level of scientific literacy and community involvement.

Basing on inclusive museology, the paper explores mobile outreach as an adaptable, inexpensive model of enhancing the physical and digital access in underprivileged settings, including head-mounted VR headset experiences, interactive displays and low-cost digital devices like tablets, mobile applications and projection-based simulations to draw a broad audience. It draws attention to participatory and community-based solutions that promote inclusive knowledge spaces, and it handles one of the most critical issues in the area representation, digital ethics, and sustainability. There is also the focus on capacity building by way of practical workshops on climate change and renewable energy and scientific literacy.

Placing this case in the context of ICOM Digital Futures agenda and Resolution #3 (2025), the paper argues that in the Global South, mobile, community-based museum practice can provide scalable and context specific approaches to equitable, ethical and sustainable digital transformation of under-resourced environments throughout the world.

Md. Arafat Ali is a gallery assistant at the National Museum of Science & Technology, Bangladesh and an emerging voice in global museology. He was listed on the Blooloo 50 Museum Influencers in 2024 for his leadership in inclusive and sustainable museum practices. His work emphasises community engagement, ethical museology and youth empowerment from the perspective of the Global South. Arafat has presented at international forums including ICOM UK (2025), ICOM ICFA Jaipur (2025), AVICOM (2024), ICOM MPR (2024) and ICOFOM-Doha (2024). His papers have been selected for the 27th ICOM General Conference (CIMUSET Day), the XXXIII ICOFOM LAC Meeting, the International Congress of Culture in Climate Action (2025) and CoCA 2026. His research explores regenerative development, transcultural curatorial approaches, digital inclusion and public advocacy. Committed to equitable representation, Arafat bridges local and global contexts to shape museums as inclusive spaces for social transformation and intergenerational dialogue.

15:30–17:00	John Kitchen: Keyboard demonstrations	Keyboard galleries
	Esteban Mariño Garza: Guitar demonstration	Wolfson Gallery
	Arnold Myers: The founding of the collection	Laigh Hall
17:00–19:00	Welcome Reception	Laigh Hall
19:00	Dinner	On your own



St Cecilia's Hall: Laigh Hall & Conservation Studio. Photo: The University of Edinburgh

PROGRAMME DAY 2

Friday, 4 September 2026

9:15 St Cecilia's Hall Opens

Session 3: 9:30–10:30 (Concert Room) Digital Research & Documentation Chair: Iris Verena Barth		
9:30–10:20	M. Guido, A. Gulli, D. Nykonenko, E. Smith-Guido, and J. Uberti	From Point Clouds to Playable Knowledge: Documenting the Dynamic Life of Historical Keyboards.
10:20–10:30	Joint Q&A	

10:30–11:00 Coffee & Tea Break

Laigh Hall

SESSION 3: ABSTRACT & BIOS

From Point Clouds to Playable Knowledge: Documenting the Dynamic Life of Historical Keyboards

M. Guido, A. Gulli, D. Nykonenko, E. Smith-Guido, and J. Uberti

Musical instrument museums are reaching a turning point: by the end of this century, many historical keyboards may survive only as datasets. Yet the prevailing documentation paradigm still privileges static geometry over the dynamic behavior that makes an instrument musically meaningful. This paper presents the ongoing work of the ERC-Synergy project REM@KE (Reconstructing Embodied Musical Knowledge at the Keyboard, 2025–2031) on a portable, non-invasive 3D capture protocol and its companion data ontology, developed within the framework of Cognitive and Digital Organology (CaDO).

The protocol couples high-resolution laser scanning, photogrammetry, and selective micro-CT with heritage-science diagnostics (XRF, FT-IR, multispectral imaging). Crucially, geometric capture is paired with the systematic recording of the *action in motion*: key dip, escapement, hammer trajectory, tangent contact, and plectrum release. The resulting datasets describe not only what the instrument *is*, but what it *affords* to the performing body.

To ensure that future scholars, performers, curators, and instrument makers can reuse and reinterpret these records, REM@KE is modeling a multi-layered ontology built on CIDOC-CRM (with the CRMdig and CRMsci extensions), aligned with MIMO vocabularies, MEI for related repertoire, and IIIF for image delivery. Materials, gestures, acoustical events, conservation histories, and provenance are represented as interconnected entities within a linked knowledge framework. The resulting documentation architecture is designed to support future digital twins and comparative studies of four iconic microecologies: Pasquini/Zenti, Bach/Zell, Mozart/Stein, and Chopin/Pleyel.

We argue that preserving historical keyboards requires documenting not only their physical structure, but also the action-perception relationships that shaped their historical use. The proposed framework provides a foundation for representing, preserving, and studying this embodied knowledge within museum collections.

Massimiliano Guido is associate professor of Musicology at the University of Pavia and corresponding principal investigator of the ERC-Synergy project REM@KE (2025–2031), conducted with the universities of York and Göteborg. His research bridges historical musicology, organology, conservation science, and digital humanities, with a focus on early keyboard instruments and the reconstruction of historically informed playing techniques. He has published widely on improvisation pedagogy, organ culture, and the digital documentation of musical instruments, and is active in international networks including EarlyMUSE and E-RIHS. An active harpsichordist and organist, he combines artistic research with empirical investigation to develop the framework of Cognitive and Digital Organology (CaDO).

Andrea Gulli is a postdoctoral researcher in the REM@KE project, where he develops computational architectures to model complex musicological knowledge using graph-based representations, probabilistic reasoning, and multi-agent orchestration. His work focuses on the formalisation of interdisciplinary methodologies for interaction design, particularly in domains where heterogeneous knowledge, uncertainty, and embodied practices must be integrated into coherent computational systems. Trained in mathematics, performing arts, and computer science, he completed his PhD at the University of Udine, conducting interdisciplinary research in collaboration with pediatric audiology units. His background combines rigorous formal modelling with experimental and clinical research, spanning Bayesian methods, machine learning, digital signal processing, and cognitive auditory assessment. As a postdoctoral researcher in the PRIN S-TWIN project at the University of Padova, he contributed to the investigation into an auditory digital twin for cochlear implant rehabilitation, including longitudinal phonological studies and immersive software prototypes. His broader research interests include probabilistic reasoning in complex knowledge-based systems, clinical decision support, topological data analysis, and auditory XR, with applications across healthcare and cultural heritage.

Dmytro Nykonenko is a researcher specialising in advanced digital documentation and non-invasive analytical methods applied to cultural heritage. His expertise includes 3D modelling, photogrammetry, scientific imaging, and archaeometry, with a focus on the study and documentation of complex historical artefacts. He holds a PhD in Museology and Investigation of Cultural Heritage and has worked in interdisciplinary research environments across museums, universities, and research institutes in Europe and beyond. From 2008 to 2024, he worked as a senior researcher, carrying out long-term research and digital documentation of heritage collections, with particular attention to imaging-based and photogrammetric workflows. More recently, he has collaborated with academic and research institutions such as the University of Turin, the German Archaeological Institute, and the Free University of Berlin, contributing to international projects focused on high-resolution 3D documentation, archaeometric analysis, and the publication of curated digital datasets in open-access research repositories. Since 2020, he has served as the Head of the [Research Laboratory Archaic](#), a research-oriented NGO specialising in the digital documentation and scientific study of cultural heritage.

Eleanor Smith-Guido is a musicologist, organologist, and occasional soprano specialising in the history, construction, and material culture of keyboard instruments. She completed her doctorate on the claviorgan in 2013, helping to establish the instrument's historical significance within European musical culture and bringing renewed scholarly attention to hybrid keyboard instruments and their repertoires. She has nearly

twenty years' experience working with musical instrument museums, collections, and historical keyboard instruments. Her research combines organology, archival study, and performance practice, with particular interests in keyboard culture, organ building, and the transmission of craft knowledge in early modern and eighteenth-century Europe. Recent work has focused on archives relating to historical Swedish organs and organ building. Eleanor is currently an Associate Researcher at the University of Gothenburg on the ERC-funded REM@KE project, where she contributes to and coordinates organological research on the wider Stein microecology, exploring networks of makers, materials, instruments, and technical knowledge surrounding the Stein family and their broader cultural environment. She teaches a master's-level course on the history of keyboard instrument construction to conservation students in Cremona, Italy, and has served as joint editor of *The Organ Yearbook* alongside Massimiliano Guido since 2025.

Jacopo Uberti is a conservator and restorer specialised in the preservation of musical, scientific, and technical instruments. With extensive experience in the functional restoration of historical plucked instruments from the 17th to the 20th centuries, and through collaborations with leading Italian luthiers, restorers, and collectors, he graduated with top marks in Conservation and Restoration of Musical, Scientific, and Technical Instruments from the University of Pavia. During his studies, he deepened his expertise in photogrammetric surveying and 3D modelling for conservation, developing an integrated approach that combines hands-on craftsmanship, theoretical knowledge, and digital methodologies. For his master's thesis, he carried out a conservation intervention on a rare Hamburger Cithrinchen housed at the Rijksmuseum in Amsterdam (inv. BK-NM-11430-14), focusing on the morphological reconstruction and original structural layout of the instrument, and producing a detailed three-dimensional model to support its scientific analysis and cultural enhancement. He is currently pursuing a PhD on the application of digital surveying and structural analysis to historical keyboard instruments, aiming to enhance the understanding of their mechanical behaviour and contribute to the development of scientific protocols for their conservation and assessment.

Session 4: 11:00–12:30 (Concert Room)

“Back to the Future”: 3D Technologies and Their Value for Research into Historical Musical Instruments

Chair: Emanuele Marconi

11:00–11:25	Jonathan Santa Maria Bouquet	New parts for old instruments: Employing 3D Technologies as Reversible, Non-invasive Conservation Methods
11:25–11:50	Milan Barbé	From Object to Digital Twin: Reconstructing Workshop Relationships Through 3D Lute Analysis
11:50–12:15	Jacopo Uberti	Digital Photogrammetry and Geometric Reconstruction of Historical Musical Instruments: The Hamburger Cithrinchen in the Rijksmuseum Collection
12:15–12:30	Joint Q&A	

12:30–14:00 Lunch

On your own

SESSION 4: ABSTRACTS & BIOS

New parts for old instruments: Employing 3D Technologies as Reversible, Non-invasive Conservation Methods

Jonathan Santa Maria Bouquet

This paper proposes an exploration of 3D technologies as innovative tools for reversible, non-invasive conservation treatments in the specific context of historical musical instruments. 3D technologies offer a promising alternative by supporting documentation, analysis, and intervention while minimising physical impact on the object. The first focus of the paper will be the use of 3D archaeometry for detailed recording and condition assessment. Techniques such as structured light scanning, photogrammetry, and micro-CT can capture precise physical dimensions, surface deformations, wear patterns, cracks, losses, and other blemishes.

These digital records provide an accurate basis for monitoring change over time, informing treatment decisions, and preserving a virtual model of the instrument in its current state. The second section will examine the use of 3D-printed components to restore limited functionality to non-playable instruments without permanent alteration. By combining traditional measuring techniques with 3D modelling, this project overcame challenges to create accurate technical drawings that allowed for the creation of functional replicas of the instrument. Furthermore, the 3D models were employed in a hybrid functional model, combining original sounding components of the instrument with 3D-printed parts, thus preserving the artifact's integrity while enabling functionality.

Finally, the paper will consider CNC-machined or otherwise digitally fabricated wooden infills for losses in structural areas, such as missing edges of a violin soundboard. These inserts can be produced with high precision based on 3D scans, ensuring minimal intervention and compatibility with the surviving material. Overall, the paper will argue that 3D technologies expand the conservator's toolkit by enabling accurate documentation, reversible compensation, and materially sensitive stabilisation strategies for musical instruments. This paper highlights the potential of integrating traditional methods with advanced technology in the conservation and study of historical musical instruments.

Jonathan Santa Maria Bouquet is the senior conservator for the Heritage Collections of the University of Edinburgh and direct responsible for the conservation of the Musical Instrument Collection at St Cecilia's Hall. Jonathan has a background in instrument making and restoration and holds a PhD in Music from the University of Edinburgh. Prior to moving to Scotland, Jonathan worked as conservation research assistant for the National Music Museum (Vermillion, USA) and was an Andrew W. Mellon Conservation Fellow at the Metropolitan Museum of Art.

From Object to Digital Twin: Reconstructing Workshop Relationships Through 3D Lute Analysis **Milan Barbé**

This paper examines two thirteen-course lutes both dated 1734 and attributed to Johannes Balthasar Jauck and Andreas Balthasar Jauch. While stylistic similarities between instruments associated with the Jauch family have long been recognised, the precise relationship between these two instruments remains unclear. In particular, the study investigates whether both lutes may have been constructed using the same mould, raising broader questions concerning workshop practice, authorship, and the transmission of artisanal knowledge within eighteenth-century lute making.

To explore these questions, the study employs high-resolution photogrammetry and 3D morphometric analysis within a controlled digital environment. Both instruments were digitised using a structured

workflow in Agisoft Metashape, producing detailed 3D reconstructions suitable for cross-sectional and spatial comparison. Through the digital alignment of the models and the evaluation of longitudinal and transverse cross-sections, the paper explores structural correspondences while also considering deformation caused by ageing, repairs, string tension, and later alterations.

Beyond questions of attribution, the paper reflects on how digital organological research can contribute to the reconstruction of historical biographies and workshop networks. In this case study, structural similarities between the instruments may provide material evidence for a closer professional connection between Johannes and Andreas Jauck than previously documented.

The paper furthermore considers the broader methodological implications of digital tools in musical instrument research. The use of 3D models enables instruments preserved in separate collections to be examined within a shared analytical framework, allowing for forms of comparison, difficult or impossible through conventional methods alone. In addition, the study highlights how such digital datasets may form the basis for future computational approaches, including Thin Plate Spline (TPS) analysis and other morphometric techniques aimed at studying instrument shape, deformation, and workshop traditions on a larger scale.

Milan Barbé is a researcher, instrument maker, and doctoral candidate specialising in historical plucked instruments. After completing his studies at the conservatory in Ghent, he established his own workshop in the historic centre of the city, where he builds, restores, and studies instruments ranging from lutes to early guitars. His instruments have previously been presented at the Lute Days in Basel and the Early Music Festival in Utrecht. In recognition of his work as a young craftsperson and researcher, he received a Vocatio grant in 2023. As an FWO (Research Foundation – Flanders) funded pre-doctoral researcher at Ghent University and KASK & Conservatorium, his research focuses on the development of the lute during the eighteenth century, combining perspectives from musicology, organology, craftsmanship, archival research, and digital humanities. His current work centers on the history, construction, and transmission of the triple-pegbox lute in eighteenth-century Europe.

Digital Photogrammetry and Geometric Reconstruction of Historical Musical Instruments: The Hamburger Cithrinchen in the Rijksmuseum Collection

Jacopo Uberti

Historical musical instruments often receive limited attention in documentation and conservation, especially when they lack significant economic value. This is also reflected in surveying practices, where the most advanced and non-invasive techniques for acquiring morphological data are often scarcely accessible and difficult to implement systematically. Digital photogrammetry offers a relatively accessible method for acquiring three-dimensional data while minimising direct contact with the artefact. Despite its inherent limitations, primarily related to the capturing of external morphology only, it enables the production of models that support preventive conservation, research, and heritage valorisation. Since even a conservation intervention may irreversibly alter the object, documenting its preservation state, including morphological details, prior to any treatment should be considered an integral part of the operational workflow.

This paper examines the interplay between photogrammetric surveying, documentation, and reconstruction through a case study of a Hamburger Cithrinchen from the Rijksmuseum collection, whose acquisition process was conducted in preparation for conservation intervention. By using 3D models derived from photogrammetric data and analyses aimed at morphological reconstruction through geometric methods, it is possible to further investigate the object's state of preservation, with particular

attention to morphological changes over time, to the formulation of hypotheses regarding the maker's design intent, and other constructional features not readily observable through direct inspection. Thus, photogrammetry and digital reconstruction serve not only a documentary role, but also that of a critical investigative tool. The resulting 3D models can be applied in both museographic and outreach contexts, offering different ways to interpret cultural heritage and reveal details otherwise difficult to perceive.

Jacopo Uberti is a restorer specialising in the preservation of musical instruments. He has extensive experience in the functional restoration of historical plucked instruments dating from the seventeenth to the twentieth centuries, gained through collaborations with leading Italian luthiers, restorers, and collectors. He graduated with top marks in Conservation and Restoration of Musical, Scientific, and Technical Instruments from the University of Pavia. During his studies, he developed expertise in photogrammetric surveying and 3D modelling for conservation, integrating craftsmanship, theoretical knowledge, and digital methodologies. He also completed a traineeship at the Rijksmuseum in Amsterdam, contributing to the study and conservation of historical musical instruments. He is currently pursuing a PhD within the ERC Synergy project REM@KE, focusing on digital surveying, integrated documentary recording, and structural analysis of historical keyboard instruments to improve understanding of their mechanical behaviour and support scientific protocols for conservation and assessment.



St Cecilia's Hall: Sybert Concert Room. Photo: The University of Edinburgh

Session 5: 14:00–15:30 (Concert Room) Whose Data, Whose Heritage? Ethics, Authority, and Preservation in Digital Museum Practice Chair: Sarah Deters		
14:00–14:25	Faizzatus Sa'diyah	Who Controls Museum Data? Navigating Ethics, Access, and Authority in Indonesia's National Collection Registry
14:25–14:50	Elizete Bernabé Loureiro [Online]	The Digitisation of the Sacred and Ethical Challenges
14:50–15:15	John Watson [Online]	What Shall We Do with Our Inheritance? A Digital Humanities Perspective
15:15–15:30	Joint Q&A	

15:30–16:00 Coffee & Tea Break

Laigh Hall

SESSION 5: ABSTRACTS & BIOS

Who Controls Museum Data? Navigating Ethics, Access, and Authority in Indonesia's National Collection Registry

Faizzatus Sa'diyah

Government Regulation of the Republic of Indonesia No. 66/2015 requires all museums established by national and regional governments, private entities, and Indigenous communities to be registered. As of April 2026, 378 of Indonesia's 521 museums have been registered through the National Museum Registration System (Sisregnasium), creating an unprecedented national infrastructure for documenting and managing museum collections. As museums increasingly digitise their collections, questions emerge regarding who has the authority to create, manage, share, and reuse museum data. While digital technologies expand opportunities for public access, research, and collaboration, they also raise ethical concerns related to intellectual property, cultural sensitivity, data ownership, and institutional authority. These challenges become particularly significant as museum data intersects with external initiatives such as Open GLAM projects, community-based documentation efforts, and international digital heritage platforms.

This presentation examines the evolving role of Sisregnasium as Indonesia's national collection registry and explores the tensions between openness, accountability, and control in museum data governance. Drawing on examples of collection digitisation, metadata publication, and emerging digital heritage practices, it considers how museums can balance wider access with their responsibilities as stewards of cultural heritage. By sharing lessons from the Indonesian context, this poster contributes to ongoing discussions on equitable access to cultural heritage and highlights the potential of Open GLAM approaches to strengthen connections among museums, researchers, and communities while fostering more open, responsible, and sustainable access to museum collections.

Faizzatus Sa'diyah is a cultural officer at the Directorate of History and Museums in the Ministry of Culture Republic of Indonesia. She is involved in the development and implementation of Indonesia's

ational Museum Registration System (Sisregasmus), supporting efforts to strengthen collection data management and museum governance at the national level. Her professional interests include museum digitisation, Open GLAM, cultural heritage data governance, and equitable access to museum collections. Over the past several years, she has contributed to initiatives related to collection registration, digital documentation, Wikimedia collaborations, and open cultural heritage practices. She is also engaged in research and advocacy exploring the intersection of museum data, ethics, and public access. Her current work focuses on developing sustainable approaches to managing and sharing museum collection data within Indonesia's evolving digital heritage ecosystem.

The Digitisation of the Sacred and Ethical Challenges

Elizete Bernabé Loureiro

The digitisation of musical instruments belonging to museum collections and originating from religious contexts raises complex ethical challenges. Objects that were part of ritual practices and are considered sacred by their communities of origin cannot be treated merely as items for documentation and online dissemination.

While digital access expands visibility and supports research, it also introduces important tensions: how can sacred musical heritage be communicated in virtual environments without violating cultural and religious boundaries? What can be made visible, and what should remain restricted? Who defines these limits? In the current context, contemporary digitisation practices such as online collections, metadata production, and digital cataloguing systems shape how these assets are presented and interpreted. These tensions are intensified by digital technologies, which expand access but may decontextualise or limit knowledge about sacred musical instruments. The ICOM Code of Ethics emphasises respect for source communities and their values. However, the practical implications of these principles remain open to interpretation, especially in digital environments.

This paper analyses these issues through the case of a maracatu drum belonging to the collection of the Edison Carneiro Museum of Folklore, part of the National Center for Folklore and Popular Culture/IPHAN, in Rio de Janeiro. Maracatu, a collective percussive tradition originating in Recife, is deeply connected to Afro-Brazilian religious practices, particularly Candomblé, involving the sacralisation of musical instruments and ritual objects. By examining how this musical instrument has been documented and digitised, the study discusses the ethical limits of digital access and the responsibilities of museums regarding sacred heritage. It advocates more dialogical approaches grounded in community participation, in which decisions about visibility, interpretation, and access are negotiated rather than imposed.

Elizete Bernabé Loureiro is a museologist who graduated from the Federal University of the State of Rio de Janeiro (UNIRIO) in 2025. She was an undergraduate research fellow under the supervision of Professor Bruno Brulon Soares from 2020 to December 2023, focusing on African and Afro-Brazilian collections in museums in the state of Rio de Janeiro. Since 2022, she has dedicated her studies to the Museu Memorial Iyá Davina, affiliated with the Candomblé house Ilê Omolu Oxum. In 2025, she joined the GENMA Collective, whose mission is to support museum institutions in vulnerable situations. In 1989, she earned a degree in Music from UNIRIO and later specialised in medieval music at the Centre de Musique Médiévale de Paris from 1996 to 1998. During the same period, she obtained her vocal diploma from the Conservatoire de Châtillon, where she studied under Anne-Marie Hellot.

What Shall We Do with Our Inheritance? A Digital Humanities Perspective

John Watson

An aspect of the Early Music movement when it surged a half-century ago was an unprecedented interest in music and instruments of the past. It spurred the creation of conferences, festivals, and still thriving organisations including this one, while launching the careers of specialist musicians, instrument makers, curators, collectors, and researchers. With great enthusiasm for historical research, they collected mountains of information to inform their work. While building a coherent picture of the musical past, they connected as many dots as they could in the time they had. But time now runs out as collected but unpublished research outlives that boom generation of organologists. Countless discoveries now languish in aging file cabinets, 35mm slides, and in precarious early digital formats full of clues already found but waiting to be mined by the next generation.

This is an inheritance waiting to be noticed and captured just as today's digital transformation offers technologies that could not have been imagined fifty years ago. This presentation describes approaches to these challenges by the Musical Instrument Research Catalog (MIRCat) charity, and raises a call to capture, preserve, and benefit from the unclaimed inheritance of unpublished scholarship.

John Watson is emeritus curator of musical instruments at the Colonial Williamsburg Foundation. His career as conservator, organologist, instrument maker, and archivist focuses on the use and preservation of musical instruments as historical documents. He is the author of several books and many articles on those subjects. In retirement, he continues the same focus by maintaining several research databases, especially the Boalch-Mould Online database of harpsichords and clavichords. He also works on collecting, digitising, and publishing digital archives of unpublished research through the MIRCat organisation; the subject of this 2026 presentation. He received the 2020 Curt Sachs Award from the AMIS and the 2024 Anthony Baines Memorial Prize from the Galpin Society for his contributions to organology and musical instrument preservation.



St Cecilia's Hall:
Wolfson Gallery.
Photo: The University
of Edinburgh

Session 6: 16:00–17:30 (Concert Room) Digital Methods – Digital Presentation Chair: Jonathan Santa Maria Bouquet		
16:00–16:25	Giovanni Paolo Di Stefano, Lior Arbel, and Itai Weissman	Sound Sampling and Digital Musical Reactivation of Historical Woodwind Instruments in Museum Collections
16:25–16:50	Jurn Buisman [Online]	From Silent to Audible: Digital Strategies for Keyboard Heritage in Historic Sites
16:50–17:15	Mauricio Silva Orendain [Online]	The Plasticity of the Pipe
17:15–17:30	Joint Q&A	

17:30–19:30 Dinner

On your own

19:30–21:00 Concert: Music of Georgian Edinburgh Concert Room

SESSION 6: ABSTRACTS & BIOS

Sound Sampling and Digital Musical Reactivation of Historical Woodwind Instruments in Museum Collections

Giovanni Paolo Di Stefano, Lior Arbel, and Itai Weissman

This paper presents Digital Revival, an ongoing research project exploring how the sound of historical woodwind instruments can be documented and digitally reactivated without compromising their material integrity. Rather than presenting final results, it outlines a methodological framework and reflects on the possibilities and limits of digitally mediated sonic access. The project is based on the controlled recording and sampling of selected instruments, in collaboration with museum professionals, scientists, instrument makers, and performers. The resulting samples can serve as acoustic documentation, support the creation of a digital sound library, and enable new forms of artistic experimentation, including performance through the EWI – Electronic Wind Instrument.

A central case study is the sampling and digital musical reactivation of a seventeenth-century flute from the Rijksmuseum collection. Other case studies, involving sixteenth-century flutes recovered from archaeological excavations, are currently underway. These examples show the potential of digital sampling and digital restoration but also expose a major limitation: current methods often depend on costly resources and highly specialised expertise, including CT scanning, specialist replica reconstruction, and bespoke acoustic analysis. As a result, they are difficult to scale and remain inaccessible to many collections.

The paper therefore asks how digital tools might support a more scalable approach to the sonic reactivation of historical instruments. It considers emerging possibilities such as photogrammetry-based geometry extraction from smartphone images, AI-assisted timbral prediction from geometric data, and open-source physical-modelling tools. Together, these methods may point towards a more accessible

model for studying, hearing, and reimagining fragile historical instruments across a wider range of museum contexts.

By combining conservation, digital humanities, and creative practice, Digital Revival contributes to broader debates on how historical musical instruments can be reactivated through ethically and technically sustainable forms of digital mediation.

Giovanni Paolo Di Stefano is curator of musical Instruments at the Rijksmuseum in Amsterdam. He earned a PhD in musicology from the University of Rome La Sapienza, followed by postdoctoral research at the University of Palermo. His work focuses on the history and technology of musical instruments, music and society, and iconography. He has taught organology at universities and conservatories for nearly twenty years. Since 2016, he has served on the Board of ICOM MUSIC and coordinates the International Directory of Musical Instrument Collections. He has published widely in international scholarly publications.

Lior Arbel is a music and audio technology researcher and electrical engineer, interested in all aspects of music technology, with an emphasis on musical acoustics, signal processing, and machine learning. He received his PhD from the Technion (Israel), where he researched the acoustics and design of electro-acoustic instruments based on wine glasses and strings. He is currently a research associate at the Department of Electrical & Computer Engineering at Ben-Gurion University, where he conducts spatial audio research in collaboration with Meta, alongside research in computational musicology. His work has appeared in *Acta Acustica* and the *Journal of New Music Research*, among others.

Itai Weissman is an Amsterdam-based saxophonist, EWI performer, composer, and researcher specialising in the digital reconstruction of historical musical instruments and their acoustics. He is a member of the research group at the Conservatory of Amsterdam. Through his long-term project Digital Revival, he explores how sampling, spectral analysis, and machine-learning techniques can recover and model the sonic behaviour of heritage instruments for both performance and academic enquiry. His work bridges artistic practice and research, creating new digital instruments rooted in historical identity.

From Silent to Audible: Digital Strategies for Keyboard Heritage in Historic Sites

Jurn Buisman

Historic keyboard instruments in museum collections are often presented as silent objects, detached from their original sonic function. Yet their significance lies precisely in the relationship between material form and sound, performance, and cultural context. This is particularly evident in site-related instruments – such as organs, fortepianos and harmoniums – originally embedded in religious buildings and historic houses, where sound formed an essential part of the visitor experience.

Today, many of these instruments can no longer be played regularly due to conservation constraints, institutional limitations, or the rapidly declining availability of specialised technicians with craft knowledge to maintain, tune and restore them. This raises a fundamental challenge: how to provide meaningful access to the sonic dimension while ensuring responsible stewardship.

This paper argues for a shift in museum practice from static preservation towards a hybrid digital model of stewardship. It explores two complementary strategies. First, digital technologies – such as

recordings, digital twins, and audio environments – can reconnect objects with their sound, enabling visitors to experience instruments as carriers of living heritage even in the absence of live performance.

Second, the paper proposes the strategic re-placement of instruments in publicly accessible historic sites where they originally functioned. Instead of storage, instruments can be recontextualised within their historical environments, significantly enhancing visibility, relevance, and visitor experience. While remaining under museum stewardship, such site-based arrangements can be monitored remotely through digital tools – environmental sensors and data platforms for site management – ensuring appropriate conservation conditions.

Such approaches raise questions concerning authenticity, the balance between conservation and playability, and equitable access. By integrating physical relocation, performative knowledge and digital mediation, this contribution outlines a paradigm shift in which museums move beyond the display of silent objects towards activating musical heritage as an audible site-based practice.

Jurn Buisman is director of Museum Geelvinck (Kolthoorn House & Gardens, Netherlands), lead partner of Geelvinck Music Museums, which encompasses also Pianola Museum, Harmonium Museum Netherlands and Midwoud House. Trained as an economist (Groningen University), he has worked for nearly four decades across a wide range of heritage fields and international contexts, including within the United Nations. His work focuses on the intersection of living heritage, music and pressing societal issues, with particular attention to historic house museums and early keyboard instruments. He initiated projects such as ‘Beethoven is Black’, Tune-In.eu and the European Keyboard Heritage Network. He serves as Secretary General of ICOMOS, Vice-President (Europe) of ISCCL, Treasurer of ICLCM and member of several other international committees within ICOM (Music, DemHist) and ICOMOS. He is also actively engaged with Europa Nostra and Interpret Europe, and participates in various other networks, including REMA and Centre Européen de Musique.

The Plasticity of the Pipe

Mauricio Silva Orendain

The Arciorgano is a 2013 reconstruction of a historical instrument described by Nicola Vicentino in his treatise *L’antica musica ridotta alla moderna prattica* (Rome, 1555). As a historical microtonal organ that can be performed via computer-based systems and supported by a newly developed virtual sound library, it serves as a case study for rethinking digital research, accessibility, and ethics in contemporary music museums.

Focusing on its recently developed sampler – based on high-resolution recordings of the instrument – alongside innovations such as the smARTvalve system (a digitally controlled dynamic wind valve designed by Tony Decap), this research explores how a unique and rare instrument can be extended into a digital ecosystem. It examines how such extensions allow the instrument to resonate across diverse disciplines while raising new challenges in documentation, performance, notation, and interface design.

The sampler functions simultaneously as documentation, analytical tool, and creative platform. It operates as a “virtual museum” of sound, offering broader access to an instrument of which only one playable model exists. This approach redefines the boundaries between collection, archive, and performance, positioning digital sound as both artifact and medium. The integration of such datasets also opens new possibilities for interaction with AI, enabling novel forms of analysis, composition, and interpretation.

The smARTvalve, in turn, enables precise manipulation of wind supply to individual pipes, unfolding a new dimension of musicking that demands new approaches to engagement, notation, and preservation. Within this context, the paper addresses issues of data integrity, sustainability, and the translation of embodied performance into digital formats, while advocating for an open-source model as a central ethical framework.

By situating the Arciorgano and the smARTvalve within current debates on digital transformation, this contribution proposes new paradigms for how music museums can document, share, and activate their collections in an increasingly hybrid physical-digital landscape.

Mauricio Silva Orendain is a Mexican composer, instrumentalist, and researcher. He is the recipient of the Kaija Saariaho Organ Composition Prize for his work *Ilmasta Puu* (“A Tree of Air”), written for the new organ of the Helsinki Music Centre. His artistic research focuses on contemporary pipe organs with dynamic wind systems, spanning organology, composition, and performance – a line of inquiry that began during his master’s studies at the Basel Music Academy. His specialisation has led to international recognition, with commissions and collaborations across Europe and the Americas, including the Orgelpark and Studio31. He was Artist-in-Residence at Harvard University (2022–2023). His thesis, *The Plasticity of the Pipe*, investigates the concept of “desculpture” in organ music, treating the instrument as a mutable sound sculpture shaped through dynamic wind systems. He recently received the Mizmorim Composition Prize and is currently preparing an opera for Theater Basel as the central case study for his PhD at Vrije Universiteit Amsterdam.

St Cecilia’s Hall: Binks
Gallery. Photo: The
University of Edinburgh



PROGRAMME DAY 3

Saturday, 5 September 2026

9:15 St Cecilia's Hall Opens

Session 7: 9:30–11:00 (Concert Room) Thesauri, Sounds, and Systems. Digital Challenges and Ethical Perspectives in Instrument Collections Chair: Arianna Rigamonti		
9:30–9:55	Bjørnar Bruket, Sveinung Søyland Moen, and Iris Verena Barth	Implementation of Thesauruses in Collection Management
9:55–10:20	Anaïs Verhulst	Digital Conflicts: Conceptual and Practical Challenges in Revising the Thesaurus of Musical Instrument Names
10:20–10:45	Kathrin Melanie Menzel	Sounding Database – Bridging Organological Records and Performance in the Digital Era
10:45–11:00	Joint Q&A	

11:00–11:30 Coffee & Tea Break

Laigh Hall

SESSION 7: ABSTRACTS & BIOS

Implementation of Thesauruses in Collection Management

Bjørnar Bruket, Sveinung Søyland Moen, and Iris Verena Barth

The Norwegian Museum of Music is currently working on a Norwegian translation of a thesaurus for the classification of musical instruments, developed by the Musical Instrument Museums Online (MIMO). In our presentation we will discuss different possibilities in using the cloud-based software service KulturNav to implement standard naming and terminology, such as the MIMO list, in our collections management.

Most Norwegian museums use the collection management system Primus, which can harvest terms from lists published in KulturNav. These in turn ensures consistent registration practises in all the Norwegian Museums. KulturNav can be used to create uniform metadata with potential global interoperability, which could increase the availability of thesauruses such as the MIMO list. Also, this program can help solve some difficulties in implementing the lists. For instance, it has the possibility of registering several official terms for the same instruments including dialectal terms, in addition to including the hierarchy in the classification of instruments.

These lists are also important tools in the process of decolonialisation of museum objects and the use of outdated terms. Outdated terms and translations can be part of these lists as they are relevant for registration and use in a museum database. But it is important that the program can classify these as such and not as the main term for the object. We hope the issues addressed in our presentation can be useful in international cooperation maintaining and using standard naming and terminology.

Bjørnar Bruket has worked as a music librarian at the Norwegian Museum of Music – Ringve and Rockheim since 2009, with special responsibility for collection management and the museums digital collections.

Sveinung Søyland Moen is a curator at the Norwegian Museum of Music – Ringve and Rockheim, where he works in collections management and research. He holds a master's degree in Traditional arts with a specialisation in folk music. His academic interests include among others the study of musical instruments.

Iris Verena Barth is a senior curator at the Norwegian Museum of Music – Ringve and Rockheim. Iris Verena holds a PhD from the University of Gothenburg (Sweden) and was a postdoctoral researcher at the Royal Conservatoire of Scotland in Glasgow. Her research focuses among others on the trumpet as well as gender representations of musical instruments. Iris Verena is currently serving as Board member of ICOM MUSIC.

Digital Conflicts: Conceptual and Practical Challenges in Revising the Thesaurus of Musical Instrument Names

Anaïs Verhulst

As part of the Be-MUSIC project (2023–2027), the Musical Instrument Museum in Brussels and the Royal Museum for Central Africa in Tervuren (Belgium) are revising their thesauri of musical instrument names. Including the museums' 20.000 instruments and incorporating the MIMO vocabulary, the new thesaurus currently counts over 6.200 terms. Beyond uniformising metadata across both museums and improving the collections' discoverability on digital platforms, the project offers an opportunity to revise outdated or biased terminology and to improve the instruments' representation in exhibitions and on digital platforms. This can be achieved by informed name giving in collection management systems that reflect the instruments' cultural, historical, geographic, and social origins.

However, the revision process revealed fundamental tensions between the necessarily controlled nature of a thesaurus and the complex reality that it is aiming to represent. Musical instrument names may be multilingual, historically variable, and geographically specific. For example, *adungu* and *adingili* are regional name variants for the same Ugandan musical bow, with neither term being inherently more correct than the other. Thesauri software, however, assume one correct, preferred term, dismissing alternatives as synonyms which cannot be used to name objects. Furthermore, to make it browsable for both experts and the broader public, the thesaurus requires multiple taxonomies, e.g., to browse via classification, ensemble type, population or genre. In both cases, thesaurus software proved too rigid to workably accommodate these complexities.

Drawing on the ongoing development of a musical instrument thesaurus, this paper examines how conceptual decisions about terminology are negotiated within the technical constraints of thesaurus software. It argues that the tensions between controlled vocabularies and the complexity of naming museum objects both present technical challenges and raise broader questions about authority, ethics, and representation in museum collections.

Anaïs Verhulst is a researcher at the Musical Instrument Museum (MIM) in Brussels, working together with the Royal Museum for Central Africa in Tervuren on the thesaurus of musical instrument names. Before her appointment at the MIM, she worked as an intangible cultural heritage expert at CEMPER, Centre for Music and Performing Arts Heritage, and was a guest lecturer in ethnomusicology at the University of Leuven. Supported by a Government of Ireland Postgraduate Scholarship, she obtained her PhD in Ethnomusicology in 2018 from the University College Dublin with a cross-cultural study of the violin in Karnatak music (South India), Norwegian folk music, and metal. As a musician, she plays the classical piano, Irish and Norwegian fiddle music, the Great Highland bagpipe, and Central-Javanese gamelan.

Sounding Database – Bridging Organological Records and Performance in the Digital Era

Kathrin Melanie Menzel

Organology has long established systematic approaches to documenting musical instruments, from early handwritten inventories and “Zettelkasten” to modern digital catalogues. Yet one of the core aspects of an instrument – its sound – has often remained insufficiently integrated into these records. This paper addresses this gap by examining how sonic documentation can be systematically integrated into instrument records within digital collection frameworks. As music museums and collections enter a phase of digital transformation, new tools and paradigms offer opportunities to embed sonic documentation into the broader heritage framework.

The Schola Cantorum Basiliensis maintains a played collection, where instruments are regularly heard and studied in daily academic and artistic work. However, while numerous performances by students and staff are recorded, a structured and durable connection between these recordings and the corresponding physical objects has not been fully realised. In a recent pilot project, we developed a “sounding database” that links audio documentation with material and metadata records of instruments through a shared metadata structure.

This initiative aligns with ICOM MUSIC’s vision of digitally informed stewardship by addressing both tangible and intangible heritage. It explores how digital infrastructures – metadata standards, ontology design, and linked audio resources – can enhance provenance research, facilitate global access, and support equitable knowledge sharing. The project also engages with ethical questions surrounding digital ownership, performer rights, sustainability of large archives, and open-access strategies.

By anchoring sound directly to an instrument’s documented history, this approach expands organological research and improves virtual presentation by enabling structured access to linked audio materials and fosters deeper engagement with audiences worldwide. The paper discusses the technical and curatorial implications of this approach. It offers a replicable model for integrating sound into collections that is technically robust, socially responsible, and adaptable to future digital challenges.

Kathrin Melanie Menzel pursued her academic studies in musicology, with a particular emphasis on organology and bibliography, at the universities of Erlangen and Madrid, under the mentorship of Cristina Bordas Ibáñez. She was employed at the Kunst- und Kulturpädagogisches Zentrum, specifically for the collection of musical instruments at the Germanisches Nationalmuseum in Nuremberg. Since 2007, Kathrin has been working as a musical instrument curator at the Schola Cantorum Basiliensis, Basel Academy of Music FHNW, and she also serves as a lecturer in organology at the Institut Klassik. Her research and teaching activities, as well as her involvement in performance and academic projects, have resulted in the publication of numerous articles on subjects including historical performance practice, organology, and music aesthetics. Since 2018, she has fulfilled the role of president of Gesellschaft der

Freunde alter Musikinstrumente (GEFAM) and has assumed the position of editor for *GLAREANA*, the organological journal.

Session 8: 11:30–13:00 (Concert Room) Aural, Visual, and Material: Cultural Heritage & Digital Access Chair: Christian Breternitz		
11:30–11:55	Elisabeth Magesacher	Beyond the Display Case: Extending a University Charango Exhibition into the Digital
11:55–12:20	Karolina Anna Tatar	Interactive Digital Mapping for a Global Music Museums Heritage Network
12:20–12:45	Leonor Losa [Online]	Aurality as Ontology: Rethinking Musical Instrument Museums in the Intangible Heritage Paradigm
12:45–13:00	Joint Q&A	

13:00–14:30 Lunch

On your own

SESSION 8: ABSTRACTS & BIOS

Beyond the Display Case: Extending a University Charango Exhibition into the Digital

Elisabeth Magesacher

In January 2026, the exhibition “Charango: One Instrument – Many Facets” opened at the Institute of Musicology at the University of Vienna. Developed collaboratively with students, the project draws on the institute’s recently expanded charango collection, which now comprises 94 instruments and ranks among the largest of its kind worldwide. The exhibition aims to present the charango in its full variety of forms, sizes, and traditions – countering the prevailing image in European museum collections, where the instrument is most often represented by a single armadillo-shell exhibit, although it is most commonly built from wood.

In this presentation, I will discuss the challenges and opportunities of extending the exhibition into the digital realm. A digital extension would allow us to reach a location-independent audience, integrate more sound and video material (e.g. the documentation of charango-making in Peru), and present further instruments from the collection that could not be shown physically. Tools under development include a dedicated website, a listening station, and 360-degree recordings of the exhibition space, forming the basis for an online version of the exhibition. The presentation contributes to current discussions on access, equity, and sustainability in digital museum practice, drawing on a case study from a university collection with limited resources.

The discussion will centre on three questions: How can tangible objects and online content be meaningfully linked, so that one strengthens rather than replaces the other? How can the sound, materiality, and cultural depth of the charango be conveyed digitally? And how can the exhibition serve as a sustainable training ground for students, contributing both to their professional development and to the long-term care of the collection? Underlying all three questions are the structural realities of university collections: fixed-term contracts, limited resources, and the precarious situation of small collections amid cuts to Austrian higher education.

Elisabeth Magesacher is an ethnomusicologist, PhD candidate and lecturer at the Department of Musicology, University of Vienna. Her doctoral research examines narratives and questions of cultural representation in exhibitions of musical instruments in European museums. She was a research associate in the DFG-funded project “Music on Display” at Folkwang University of the Arts in Essen (Germany), and co-conceived and co-led the workshop “How do Music Exhibitions Sound?” with the Museumsakademie Joanneum at the Vorarlberg Museum in Bregenz (Austria). She curated the exhibition “Charango: One Instrument – Many Facets” in collaboration with Prof. Julio Mendívil and students, which opened in 2026 at the Department of Musicology, University of Vienna.

Interactive Digital Mapping for a Global Music Museums Heritage Network

Karolina Anna Tatar

Musical instrument collections are increasingly engaging with digital transformation, yet no unified infrastructure currently supports global, comparative access to organological heritage across museums and research institutions. The paper proposes an interactive digital map designed to visualise the diachronic geography of musical instrument construction worldwide, contributing to current debates on digital access, cross-institutional collaboration, and the ethical representation of diverse musical traditions.

Drawing on frameworks from digital museology and heritage informatics and existing successful international databases such as MIMO, the proposed platform would aggregate digital representations of musical instruments – including VR/AR models, 3D scans, and digital twins – contributed by partner music museums globally. Beyond that, the network would incorporate digitised knowledge of instrument-making traditions, conservation documentation, historical scores, and performance practices, thereby addressing both the tangible and intangible dimensions of musical culture. The platform would function as a stand-alone online resource and as an embedded component of participating museum exhibitions, enhancing access for researchers, practitioners, and broader audiences alike.

The proposal engages with the ethical questions raised by digital transformation: who controls the representation of musical heritage, whose knowledge is made visible, and on what terms. By positioning participating museums as co-producers rather than mere data providers, the project aims to foster equitable, community-informed digital practices.

The proposal is grounded in fieldwork at the Musical Instrument Gallery of the Conservatory of Turin “Giuseppe Verdi” (Italy), the subject of the author’s ongoing doctoral research, providing a replicable methodological model for other collections.

Karolina Anna Tatar is a PhD student at the University of Turin, where she is developing a research project on a new interpretation of the Gallery of Musical Instruments at the “Giuseppe Verdi” Conservatory of Turin under the supervision of Prof. Silvia Pireddu. She holds degrees in conducting from the Fryderyk Chopin University of Music in Warsaw, as well as degrees in English Studies (University of Warsaw), Specialised Translation and Interpreting, and Teaching Italian as a Second Language (University of Turin). In 2023, she was awarded a research grant in “Translation, Multilingualism, and Intercomprehension”. In April 2025, she completed specialised studies in early keyboard instruments at the Conservatory of Turin.

Aurality as Ontology: Rethinking Musical Instrument Museums in the Intangible Heritage Paradigm

Leonor Losa

Influenced by New Museology (1974), community-oriented museology, and the intangible heritage paradigm (Unesco 2003), musical instrument museums face the challenge of contextualising their objects historically and culturally, competing with traditional organological classifications.

The recent relocation of Portugal's Museu Nacional da Música (National Museum of Music) to the Royal Building of Mafra provided a unique opportunity to redefine curatorial practices. The exhibition was reorganised into thematic clusters raising critical questions – music as social practice, contexts of appropriation, hands-on artifacts – thereby overturning centuries-old regimes of “truth” that privileged visual culture and textual authority over sensory experience and aurality as the primary matrix of knowledge.

This presentation explores the potential of digital resources to develop a new exhibition and collection management paradigm centered on sound as performative object, where culturally constructed listening (Ochoa, Rice) supplants vision and written word as the principal epistemological pathway.

Distinct from ethnomusicological approaches grounded in performance, this proposal emphasises listening as a relational knowledge-producing interface, repositioning musical instruments as conduits materialising localised aural meanings. Within ICOM CIDOC frameworks for intangible heritage in museological contexts, we ask: how to integrate sound – structurally absent – into the visual/material/immaterial triad?

Drawing from concrete examples currently being explored at MNM, this reflection offers practical tools for museums seeking to transition from logocentric museology toward an aural ontology.

Leonor Losa is collection manager at the National Museum of Music, Portugal and researcher in ethnomusicology and cultural studies of music. Her work focuses on forms of reception, representation and cultural signification of recorded music in the early 20th century in Portugal, and on the relationships between capitalism, politics and musical creativity. She is the author of *Machinas Fallantes...* (2014) and contributed to several edited volumes. Her work for the *Encyclopedia of Music in Portugal in the 20th Century* opened the way to successive funded projects at the Ethnomusicology Institute (Lisbon, NOVA-FCSH). Between 2022 and 2024, she was a full time invited assistant professor at the Department of Artistic Studies of the University of Coimbra. She maintains a strong commitment to the Portuguese scientific community as part of the Board of the Portuguese Society for Music Research (2015–2023) and, since 2023, has been co-editor in chief of the *Portuguese Journal of Musicology*.

Session 9: 14:30–15:00 (Concert Room) Announcements & Initiatives Chairs: Emanuele Marconi & Marie Martens		
14:00–14:15 Q&A included	Irina Biovir and Fabien Guilloux [Online]	LaDocumenta.eu: From Collections to Connected Knowledge
14:15–14:30 Q&A included	Jimena Palacios Uribe [Online]	Opening Borders Through Virtuality: ICOM MUSIC's Projects for Latin America and the Caribbean (2023–2026)

15:00–15:30 Coffee & Tea Break

Laigh Hall

SESSION 9: ABSTRACTS & BIOS

LaDocumenta.eu: From Collections to Connected Knowledge

Irina Biovir and Fabien Guilloux

LaDocumenta.eu is a digital infrastructure dedicated to the preservation and enhancement of cultural knowledge, particularly in the field of Historically Informed Performance (HIP). Primarily designed for HIP practitioners and researchers, it enables the structuring and analysis of rare and dispersed heritage resources through advanced technologies such as AI, OCR/OMR, and ontologies. By facilitating access to enriched and interconnected corpora, it transforms the transmission of knowledge into an interactive and collaborative experience, renewing and refining the interpretation of ancient musical repertoires.

This presentation will also explore how this infrastructure can open new perspectives for curators of musical instrument museums, inviting them to rethink the mediation of their collections in the digital age.

Irina Biovir is head of development at Insula orchestra, where she leads European cooperation, innovation, and digital projects. She coordinates LaDocumenta.eu and develops initiatives at the intersection of music, research, and technology, fostering collaboration between cultural institutions across Europe.

Fabien Guilloux is a musicologist and research engineer at the Institut de Recherche en Musicologie (Paris, CNRS). His work focuses on musical iconography, organology, and philology, with a specialisation in French lyric and instrumental repertoires of the 19th and early 20th centuries. He also serves as a scientific advisor for LaDocumenta.eu.

Opening Borders Through Virtuality: ICOM MUSIC's Projects for Latin America and the Caribbean (2023–2026)

Jimena Palacios Uribe

Since 2023, ICOM Music has prioritised strengthening and expanding its connections with museums and collections in Latin America and the Caribbean. Much of this work has taken place virtually, an effective medium for fostering collaboration across diverse geographic and temporal contexts.

This presentation outlines key initiatives aimed at increasing the visibility of professionals working in conservation, restoration, organology, and related disciplines focused on the preservation of musical instruments in the region. None of this would have been possible without the possibility of virtuality.

The first major initiative was the 2023 Virtual Colloquium on the Conservation of Musical Instrument Collections in Latin America and the Caribbean, co-organised with ASSINPAC. In 2024, during the CIMCIM annual meeting in Mexico City, virtual participation also enabled broader regional inclusion.

Building on these efforts, ICOM MUSIC led a tripartite initiative designed to enhance visibility, training, and collaboration in 2025. The program included three main activities: a course-workshop on musical instrument conservation, an introductory workshop to the Musical Instrument Museums Online (MIMO) platform, and a collaborative translation workshop of the book *The Care of Historic Musical Instruments* (1997), edited by Robert Barclay.

Supported by an ICOM SAREC Special Project Grant in 2025, these initiatives contributed to capacity building, knowledge exchange, and the consolidation of a regional network. Together, they represent a sustained effort to reduce disparities and promote the preservation of musical heritage in Latin America and the Caribbean.

Jimena Palacios Uribe is a conservator and historian. From 2006 to 2013, she coordinated the Laboratory for the Conservation of Musical Instruments at the National School of Conservation in Mexico City. She has completed professional internships at the National Music Museum (Vermillion, USA) and the Musée de la musique (Paris, France). From 2014 to 2021, she led the research project on musical instruments collection at the National Center for Research, Documentation, and Information on Music (CENIDIM–INBA). She has been a member of the American Musical Instrument Society since 2010, and since 2023 has served on the Board of ICOM MUSIC. She holds a PhD in Modern and Contemporary History and works as a conservator at the National Museum of History (Chapultepec Castle) in Mexico City. She also heads the “History of Musical Instruments” chair at the Faculty of Music of the National Autonomous University of Mexico (UNAM).

Session 10: 15:30–17:00 (Concert Room)		
Paper & Panel Discussion		
Chair: Emanuele Marconi		
15:30–17:00 Q&A included	Emanuele Marconi	Digital Offers and Young Audiences: Literature and Field Experiences

18:30–22:30 Banquet

South Hall

SESSION 10: ABSTRACT & BIO

Digital Offers and Young Audiences: Literature and Field Experiences

Emanuele Marconi

The paper examines the relationship between minors’ use of digital technologies and its implications for attention, learning, and social interaction, with a focus on museum environments as a distinctive

context of screen engagement. Drawing on recent interdisciplinary research, the paper situates museum-based digital experiences within the broader literature on children's screen use, which consistently identifies associations between high levels of exposure and challenges in attention regulation, executive functioning, and academic outcomes.

Museums offer a unique environment in which digital technologies – ranging from touchscreens to immersive and gamified installations – are intentionally designed to support learning and engagement, and to offer an “immersive experience”. The extant literature suggests that interactive and participatory digital exhibits can enhance attention span, motivation, and knowledge acquisition, particularly when integrated with physical exploration and social interaction, but do not compare the benefits of interacting with humans (museum staff and guides). However, research also points to potential trade-offs, including reduced peer interaction, difficulties disengaging from screens, and the risk of distraction from material artifacts. At the same time, these technologies impose significant institutional constraints, including high implementation and maintenance costs, hardware obsolescence, and the need for continuous software updates and technical assistance, not to mention environmental sustainability.

This paper explores the effects of screen use in structured, meaning-oriented environments by bringing together perspectives from cognitive psychology, museum studies, and digital education. It poses a series of inquiries into the necessity for museums to mitigate the adverse effects associated with domestic or recreational screen use, while offering an engaging experience. It further explores the conditions under which digital mediation can facilitate rather than impede learning processes.

In the panel, case studies from multiple institutions are proposed, extending the discussion into practice. These contributions will examine how different museums design and implement digital or non-digital experiences for younger audiences, highlighting challenges, strategies, and outcomes, to provide scientifically grounded evidence that can inform and support museum decision-making.

Emanuele Marconi is an organologist, conservator, curator and museum director working to connect musical instrument and social history. He currently serves as director of the Musikinstrumenten-Museum SIMPK in Berlin and as ICOM MUSIC Vice-Chair. After the diploma as a restorer, he earned an MA in Conservation-Restoration of Cultural Property and a PhD in Musicology from the Sorbonne University. He has previously worked for museums in Italy, France, Switzerland, and at the National Music Museum, Vermillion, USA.

CONFERENCE COMMITTEE

Christian Breternitz, Musikinstrumenten-Museum SIMPK, Berlin, Germany,

Sabari Christian Dao, Musée National du Burkina Faso,

Sarah Deters, Conference Chair, St Cecilia's Hall, The University of Edinburgh, Edinburgh, UK,

Emanuele Marconi, Musikinstrumenten-Museum SIMPK, Berlin, Germany,

Marie Martens, ICOM MUSIC Chair, Musikmuseet (MMCCS), National Museum of Denmark, Copenhagen, Denmark,

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Jonathan Santa Maria Bouquet, Senior Conservator

Arnold Myers, Curator Emeritus

Arianna Rigamonti, Assistant Musical Instruments Curator

Esteban Mariño Garza, Technician Musical Instruments Care



St Cecilia's Hall: Brass Display. Photo: The University of Edinburgh

PROGRAMME AT A GLANCE

Day 1: Thursday, 3 September 2026		
9:15	St Cecilia's Hall Opens	50 Niddry Street, Edinburgh EH1 1LG
10:00–10:45	Registration / Coffee & Tea	Laigh Hall
10:45–11:00	Welcome: Jeremy Upton, University of Edinburgh Marie Martens, ICOM MUSIC	Concert Room
11:00–12:30	Session 1: Papers (see pp. 4–6)	Concert Room
12:30–14:00	Lunch	On your own
14:00–15:00	Session 2: Papers (see pp. 6–8)	Concert Room
15:00–15:30	Coffee & Tea Break	Laigh Hall
15:30–17:00	John Kitchen: Keyboard demonstrations Esteban Mariño Garza: Guitar demonstration Arnold Myers: The founding of the collection	Keyboard galleries Wolfson Gallery Laigh Hall
17:00–19:00	Welcome Reception	Laigh Hall
19:00	Dinner	On your own

Day 2: Friday, 4 September 2026		
9:15	St Cecilia's Hall Opens	50 Niddry Street, Edinburgh EH1 1LG
9:30–10:30	Session 3: Papers (see pp. 9–11)	Concert Room
10:30–11:00	Coffee & Tea Break	Laigh Hall
11:00–12:30	Session 4: Papers (see pp. 11–14)	Concert Room
12:30–14:00	Lunch	On your own
14:00–15:30	Session 5: Papers (see pp. 15–17)	Concert Room
15:30–16:00	Coffee & Tea Break	Laigh Hall
16:00–17:30	Session 6: Papers (see pp. 18–21)	Concert Room
17:30–19:00	Dinner	On your own
19:00–21:00	Concert: Music of Georgian Edinburgh	Concert Room
Day 3: Saturday, 5 September 2026		
9:15	St Cecilia's Hall Opens	50 Niddry Street, Edinburgh EH1 1LG
9:30–11:00	Session 7: Papers (see pp. 22–25)	Concert Room
11:00–11:30	Coffee & Tea Break	Laigh Hall
11:30–13:00	Session 8: Papers (see pp. 25–27)	Concert Room
13:00–14:30	Lunch	On your own
14:30–15:00	Session 9: Announcements & Initiatives (see pp. 28–29)	Concert Room
15:00–15:30	Coffee & Tea Break	Laigh Hall
15:30–17:00	Session 10: Paper & Panel Discussion (see pp. 29–30)	Concert Room
18:30–22:30	Banquet	South Hall



ICOM
international committee
for museums and collections
of instruments and music



ICOM MUSIC is the **International Committee for Museums and Collections of Instruments and Music** (Comité International pour les Musées et Collections d'Instruments et de Musique; Comité internacional para museos y colecciones de instrumentos y de música).

ICOM MUSIC is one of the 35 international committees of ICOM, the International Council of Museums, and was established in 1960.

ICOM MUSIC aims to promote high professional standards in the use and conservation of musical instruments in museums and collections.

As an international committee, **ICOM MUSIC** works within the framework of ICOM in fostering connections amongst, advocating for and advising museums and collections of musical instruments and music of all kinds.

BECOME A MEMBER of ICOM MUSIC

Get involved – Network with colleagues – Stay informed!

