

ONLINE-KONFERENZ
DAS KUNSTMUSEUM IM
DIGITALEN ZEITALTER
2024

ONLINE CONFERENCE
THE ART MUSEUM IN
THE DIGITAL AGE
2024

15.–19.1.2024

PROGRAMM
PROGRAM

belvedere

ANMELDUNG UNTER
WWW.BELVEDERE.AT/DIGITALMUSEUM2024
KONFERENZSPRACHEN DEUTSCH UND ENGLISCH
#DIGITALMUSEUM #BELVEDEREMUSEUM

TEILNAHME KOSTENLOS

MO | MON, 15.1.2024

PANEL I: CHALLENGES

Moderation: Vince Dziekan (Monash University, Melbourne)

17:20

„Skulls, Wings, and a Sky“:

AI Gamification and Institutional Autonomy on Google Arts & Culture

T. Leo Cao (University of Texas, Austin; Leiden University)

The Google Arts & Culture (GA&C) platform has evolved from providing cultural institutions with digitization services and publishing tools to increasingly integrating AI-driven gamified content. Instead of promoting these games in a separate space, recent features such as Art Remix and Poem Postcard—both using Google's proprietary generative AI models—now juxtapose directly above individual artworks. Not only does this placement blur the boundaries between the museum's authoritative cultural content and the platform's promotional AI technologies; it also challenges the institutional autonomy of the participating museums. Drawing on concepts of networked memory institutions and digital enclosure, this study underscores the transformation of commons-based cultural resources into commodified data enabled by private digital cultural heritage platforms.

Moreover, GA&C's institutional partners currently lack the option to opt out of these AI features, hinting at power imbalances and the contested nature of platform governance. Through semistructured interviews with museum staff and critical discourse analysis of the platform's content guidelines, terms of service, and contractual agreements, this study highlights the tensions arising from the integration of AI content on GA&C and its perils on institutional autonomy. The findings underscore both the potential marginalization of cultural heritage professionals' voices and the overemphasis on AI-driven content, raising questions about platform dominance in the cultural heritage domain. This study contributes to the conference by critically examining the evolving dynamics between private digital platforms and cultural institutions, spotlighting the challenges and implications of AI integration in the digital heritage space.

T. Leo Cao is a doctoral candidate from the University of Texas at Austin, a visiting scholar at Leiden University, and an intern with Europeana. His research delves into the digitization and platformization of museum collections, drawing from interdisciplinary perspectives encompassing museum studies, media studies, and cultural policy. His doctoral dissertation examines Google Arts & Culture, exploring the platform's historical evolution, affordances, governance mechanisms, and the ways cultural institutions have embraced, negotiated, or resisted the platform in practice. In earlier work, he also studied the use of surveillance technologies in the smart city context, with a focus on privacy, governance, datafication, and public engagement.

MO | MON, 15.1.2024

17:45

Uncharted Territories: Redefining Art Museums' Reach through Multimodal AI

Darío Negueruela del Castillo, Pepe Ballesteros, Iacopo Neri, Ludovica Schaerf, Tristan Weddigen (Max Planck Society – University of Zurich)

Museological paradigms are under a radical reevaluation with respect to the digital. With the infusion of transformative AI technologies, museums' curatorial methodologies are shifting to a dynamically interactive and multimodal domain. This is not merely a shift from the physical to the digital, but a daring leap from digital collection management to an intricate AI-driven curatorial pipeline. It challenges rooted premises, urging us to venture into uncharted territories for curatorial practices. By employing multimodal deep learning models advancing with more recent and encompassing modalities, a symbiotic dialogue between visual, textual, audio, and spatial data can be fostered.

Not only does this crossmodal synergy potentially augment—or numb—aesthetic experiences mirroring today's evolving visual culture; it can and should propel a nuanced and enhanced understanding of both contemporary AI models and art museum collections and mission.

We articulate this reflection through an exemplary project presented at the Helsinki Art Biennial that leverages CLIP embeddings and generative AI to situate museum pieces within synthetic panoramas of imagined Helsinki landscapes, orchestrating a narrative that transcends geographical, temporal, and cultural confines. This conceptual audacity extends the curatorial sphere beyond mere physical or digital collections into a realm of computational creativity and inclusivity, facilitating a confluence of diverse, even nonhuman, perspectives. Engaging with AI not as a mere tool, but as a collaborative entity, this project helps us responsibly address the complexities and ethical dimensions that come with AI, boldly envisioning museums as fluid, expansive realms of knowledge exchange, ready to engage with the new avenues of AI and beyond.

Darío Negueruela del Castillo works on architecture and architectural and urban history, digital humanities, and urban studies. He has served as the scientific coordinator of the Center for Digital Visual Studies (Max Planck Society—University of Zurich) since January 2020. Before this, he was head of research at ALICE lab EPFL.

Digital Visual Studies is a five-year cooperation project funded by the Max Planck Society and hosted by the University of Zurich since January 2020. The project's aim is to establish digital visual studies as a way to expand art history toward the digital humanities, to modernize its methodologies, and to contribute to forming the first generation of digital visual humanists. The project, headed by an executive committee, includes six predoctoral fellows and several postdoctoral fellows and visiting fellows, who will work in the areas of visual, textual, and spatiotemporal research. Moreover, the project cofunds a six-year assistant professor for digital visual studies.

MO | MON, 15.1.2024

18:10

Digitalizing Ukraine's Museum Collections in Times of War

Nazar Kozak (Ethnology Institute of the National Academy of Sciences of Ukraine, Lviv)

Russia's full-scale invasion of Ukraine posed a severe threat to the nation's cultural heritage. Numerous sites and monuments were damaged and even destroyed by indiscriminate strikes, impacting regions across the country. In response to this crisis, a collective international effort emerged across public and governmental sectors to protect the endangered cultural treasures. Monuments left vulnerable in the open were shielded, and museum exhibits were secured in safe storage.

This paper investigates the role of digital technologies in the ongoing efforts to safeguard cultural heritage during wartime, specifically focusing on the digitalization of museum collections. The lack of prior investment in digitalization limited the visibility of Ukrainian museums in the global virtual space. Amid the current circumstances of war, the digitalization of museum collections has become crucial for cultural survival, standing as a form of resistance against aggression. What challenges do the actants involved encounter in this process? How can these challenges be mitigated? Furthermore, in what ways can the international community extend support for the digitalization of Ukraine's museums?

To answer these questions, I will discuss the outcomes of initiatives such as "Saving Ukrainian Cultural Heritage Online" (SUCHO), the involvement of entities such as the American company Digital Transitions, which provided crucial digitalization equipment and training for the National Preserve "Kyiv-Pechersk Lavra," and the collaboration of local Ukrainian collections on global digital platforms such as museum-digital.de.

Nazar Kozak is a Senior Researcher at the Department of Art History at the Ethnology Institute of the National Academy of Sciences, Ukraine. He received his PhD from Lviv Academy of Arts in 2000. Kozak has received several international scholarships and grants, including from the Fulbright Scholar Program, the Getty Scholar Program, the American Council of Learned Societies, the Austrian Agency for International Mobility (OeAD), and the Institute for Human Sciences (IWM). Kozak's research focuses on two subfields of art history: medieval and contemporary. His research on the medieval period centers on political iconography and art exchanges in Byzantine and post-Byzantine cultural spheres. In contemporary art studies, Kozak investigates art's agency in crises, such as revolutions, wars, and ecological disasters. His article on the art interventions during the Ukrainian Maidan Revolution received an honorable mention as a finalist for the CAA's 2018 Art Journal Award.

MO | MON, 15.1.2024

KEYNOTE LECTURE

Moderation: Christian Huemer (Belvedere, Wien | Vienna)

19:00

AI in the Museum

Lev Manovich (The Graduate Center, City University of New York)

Lev Manovich is an artist, writer, and one of the most influential theorists of digital culture worldwide. He is currently a Presidential Professor of Computer Science at the City University of New York's Graduate Center and the Director of the Cultural Analytics Lab. After studying painting, architecture, and filmmaking, Manovich began using computers to create digital art in 1984. He has played a key role in creating four new research fields: new media studies (1991-), software studies (2001-), cultural analytics (2007-) and AI aesthetics (2018-). Since 1991, he has published 190 articles that have been translated into 35 different languages and reprinted over 800 times. He authored and edited 15 books, including *Artificial Aesthetics*, *Cultural Analytics*, *Instagram and Contemporary Image*, *Software Takes Command*, and *The Language of New Media*, which has been called „the most provocative and comprehensive media history since Marshall McLuhan.“ His projects have been exhibited in 12 solo and 122 international group exhibitions at many prestigious institutions, such as the Institute of Contemporary Art (London), the Centre Pompidou, The Shanghai Biennale, and The ZKM | Center for Art and Media

DI | TUE, 16.1.2024

PANEL 2: META-SPACES

Moderation: Markus Wiesenhofer (Belvedere, Vienna)

17:00

Back to Square One: Why Blockchain Technology and Working with Creative Communities Are on the Agenda of the Finnish National Gallery

Johanna Eiramo (Finnish National Gallery, Helsinki)

The Finnish National Gallery's history dates to the founding of the Finnish Art Society in 1846. There was no formal arts education system or museums before the art society established a drawing school in 1848 to support the talent of Finnish artists. Artworks were acquired to serve as models for the students. Ateneum Art Museum was built in 1887 to house both the art collection and the drawing school, along with the school of crafts and design and their museum space.

The Digital National Gallery program honors its nineteenth-century roots by launching a web3 native platform Alusta.art. It is a digital platform that fosters creativity, encourages experimentation, and enables diverse forms of expression. The surrounding community is a global, inclusive community that actively promotes collaboration across various disciplines and encourages the exchange of knowledge. It empowers individuals with the essential tools and resources needed to collectively adapt and thrive in the swiftly evolving digital landscape. The Finnish National Gallery is returning to its roots in supporting the creative community around us, just like the drawing school and the school of crafts and design did at the end of the nineteenth century.

Johanna Eiramo and her team explore new ways to create digital content based on the Finnish National Gallery's art collection, for the benefit of art lovers. Prior to this position, Eiramo was head of communications at Ateneum Art Museum, which is a part of the Finnish National Gallery. She has a master's degree from New York University.

DI | TUE, 16.1.2024

17:25

Von Pixeln zu Emotionen. Atmosphäre in Metaverse-Kunstaustellungen

Isabelle Hamm (Universität zu Köln)

Virtuelle Ausstellungen werden zunehmend als Möglichkeit erkannt, digitale, abwechslungsreiche Kunstpräsentationen umzusetzen, die insbesondere jungen und diversen Zielgruppen gerecht werden können. Sie haben sich unter den digitalen Vermittlungsformaten zu einer eigenständigen Kategorie herausgebildet, die einzelne Aspekte von Webseiten und interaktiv gestalteten Infopages, Objektpräsentationen etwa über Sammlungen Online, 360°-Rundgängen und Extended Reality-Technologien (XR) in sich vereint. Durch die zunehmende Verbreitung virtueller Ausstellungen gewinnen Fragen nach den Gemeinsamkeiten und Unterschieden zu analogen Ausstellungen und der veränderten Kunstrezeption (erneut) an Relevanz, denn virtuelle Ausstellungen können weitaus mehr sein als digitale Kopien analoger Ausstellungen.

Die Gestaltung virtueller Ausstellungen stellt sich jedoch als Herausforderung dar, denn für das Gelingen sind nicht nur kuratorische Fragen oder die Schaffung von Interaktions- und Partizipationsmöglichkeiten von Bedeutung, sondern ebenso die Erzeugung digitaler Atmosphären. Letztere können dazu beitragen, die eigene virtuelle Ausstellung in der Flut digitaler Angebote Erinnerungswürdig zu machen, Besuchende emotional anzusprechen, Lerneffekte zu verbessern und den Wiederbesuchswert zu steigern.

Der Vortrag möchte am Beispiel von Ausstellungen auf den Metaverse-Plattformen FORTNITE, OCCUPY WHITE WALLS und WWWFORUM (NRW-Forum Düsseldorf) erläutern, wie sich digitale Atmosphären gestalten lassen. Diese Ausführungen werden durch philosophische Positionen im Diskurs um Atmosphären – insbesondere jene des deutschen Philosophen Gernot Böhme – sowie durch Ergebnisse aus der Besucher*innenforschung gestützt. Ziel ist, aufzuzeigen, wie Museen die dargelegten theoretischen und praktischen Ansätze zu Atmosphären auf ihre eigenen Projekte übertragen und erfolgreich einsetzen können.

Isabelle Hamm M.A. hat Medienkulturwissenschaft, Kunstgeschichte, Kunstvermittlung und Kulturmanagement in Köln und Düsseldorf studiert und ist Wissenschaftliche Mitarbeiterin am Institut für Medienkultur und Theater der Universität zu Köln. Ihre Forschungsinteressen umfassen Museologie, digitale Kunstgeschichte und digitale Kunst. Als Co-Projektleiterin war sie für die Konzeption und Umsetzung der Apps „Kunstfreunde im Wallraf“ für das Wallraf-Richartz-Museum in Köln und „Warhol & Friends“ für das Museum Ludwig in Köln verantwortlich. Derzeit forscht sie insbesondere zu virtuellen Ausstellungen, deren Schnittstellen zu Games und dem Metaverse und konzipiert ihr Promotionsprojekt mit dem Titel „Kunstpräsentationen im digitalen Raum: Zur medialen Transformation virtueller Ausstellungen“.

DI | TUE, 16.1.2024

17:50

Museum Objects and Immersive Gamification for Student Engagement

Jeffrey Pomerantz (Proximal Design Labs, Raleigh), Michelle Harrell
(North Carolina Museum of Art, Raleigh)

Museums hold unique and pedagogically valuable artifacts in their collections, but these artifacts are generally presented outside of the context in which they would have been created and used. Yet artifacts now in a museum may once have been functional objects, integrated into people's daily lives. How can emerging technologies help students connect with the lived experiences of humans across time and space?

We present NCMA Explore, a project to develop virtual field trips to the past, exploring historically accurate reconstructions of ancient sites as they existed in their prime, developed by the North Carolina Museum of Art, in Raleigh, North Carolina, USA, in collaboration with game designers at Proximal Design Labs and immersive media producers at LEVR Studios. These reconstructed spaces feature high-resolution 3D scans of objects from the NCMA's collection, placed in context in spaces reconstructed as accurately as possible from photogrammetry and archaeological research, for a variety of ancient cultures. Students take scavenger hunts in these immersive, historical environments to discover printable 3D museum objects in AR. Each historical environment also includes a culturally relevant minigame, further highlighting artifacts in context and providing gamified learning opportunities about the uses of those artifacts.

The presentation will reflect on the intersection of museums and game design for recontextualizing ancient artifacts and for providing an educational platform for learning about ancient cultures.

Michelle Harrell is director of education at the North Carolina Museum of Art. She leads an incredible team of educators recognized for innovative approaches to learning. Her work at the NCMA has built upon her master's thesis research "Interactive Technology: A Tool for Student-Centered Instruction in Middle School Art Education." She developed the "Flipped Museum" distance learning model with Emily Kotecki to create a more active student-centered learning experience. Current research centers around fostering human connections through object-based learning. In addition to her work in museums and education, Harrell is a practicing artist and advocate for mindfulness through visual journaling.

Jeffrey Pomerantz is a founder of Proximal Design Labs, an educational technology company building interactive online learning experiences. He is a researcher, educator, author, and tenured professor of information science. He was a senior researcher with the EDUCAUSE Center for Analysis and Research (ECAR), where he was the principal investigator for the Campus of the Future initiative, the broadest study to date on 3D and extended reality technologies in higher education. Pomerantz is the author of *Metadata* and coauthor of *Standards*, both part of the MIT Press Essential Knowledge Series.

DI | TUE, 16.1.2024

18:15

The Augmented Reality Art Experience:

A Case Study of the Exhibition Seeing the Invisible

Sophia Bakogianni (Byzantine and Christian Museum and Panteion University of Social and Political Sciences, Athens)

Augmented reality (AR) has started to be used by the art world, enabling contemporary art exhibitions to be seen through mobile phones and tablets. The medium enables artists to cross boundaries and expand their communication with visitors and art viewers, while also allowing viewers to immerse and engage with the digital artwork in an entirely different way. In this context, this presentation aims to answer how users experience an AR contemporary art exhibition. Taking as a case study the AR art exhibition *Seeing the Invisible* (<https://seeingtheinvisible.art/>), which was curated by Hadas Maor and Tal Michael Haring and presented in botanical gardens around the world for two seasons (from September 2022 to September 2023), an empirical mixed-method study was conducted with visitors at the National Gardens of Athens, Greece.

The specific AR exhibition was selected because it launches a new approach to exhibiting cutting-edge international contemporary art in outdoor spaces without disturbing the physical environment, keeping the carbon footprint to a minimum, and exploring the digital realm. The exhibition could only be viewed while visiting the participating botanical gardens and using the "Seeing the Invisible" mobile app developed for this project, combining the physical location with the digital experience. The study focused upon understanding how visitors participated in and experienced the AR exhibition by concentrating on what people did, what they thought, and how they felt when interacting with AR technology in an outdoor setting with digital artworks that had been brought to life.

This study has been conducted by Dr. Sophia Bakogianni, after permission granted to her by the Director of Outset Greece, Artemi Effimia Stamatiadi.

Sophia Bakogianni is an archaeologist and art historian at the Byzantine and Christian Museum in Athens. She has a PhD in social information systems from the Open University of Cyprus. Her PhD dissertation, entitled "Understanding Museum Social Media Experience," investigates user interactions with museums on social media. Her research interests lie at the intersection between cultural heritage and digital technologies, focusing on user-centered perspectives and sociocultural analytical frameworks. She is currently a postdoc researcher at the Department of Communication, Media and Culture at Panteion University of Social and Political Sciences, where she evaluates user XR experiences in virtual cultural environments. Bakogianni has worked as a research associate in many EU-funded research projects.

DI | TUE, 16.1.2024**18:40****Digitale Kunstaussstellungen im Internet: Was können wir gewinnen, was verlieren?**

Werner Schweibenz (Universität Konstanz)

Mit der Überbrückung der Grenzen zwischen virtuellem und physischem Raum ergeben sich neue Möglichkeiten für das Kunst- und Museumserleben seitens des Publikums. Diese manifestieren sich etwa in digitalen Kunstaussstellungen im Internet in verschiedenen Formaten: als geführte und selbst geführte Online-Touren durch digitale 360° Nachbildungen von Ausstellungen, als filmisch umgesetzte YouTube-Führungen, als Insta-Walks oder als Virtual-Reality-Reproduktionen. Während der COVID-19-Pandemie kam es zu einem Boom solcher digitalen Ausstellungen, weil in Folge der Museumsschließungen nur dieser Weg blieb, dem Publikum Ausstellungen näherzubringen. Trotz dieses Booms entwickelt sich nur langsam ein tiefergehendes Verständnis für dieses Genre, sowohl in der Theorie als auch in der Praxis (siehe z. B. Stärk 2023). Dies beginnt bereits mit der Diskussion um die Angemessenheit des Begriffs „Virtuelle Ausstellung“, Kritiker*innen sprechen hier von einem „nützlichen Etikettenschwindel“ (Holtwick 2021).

Gleichzeitig wird dieses Manko überlagert von einer unkritischen Technikbegeisterung, die von der Computer- und Games-Branche beeinflusst wird. Sie arbeitet mit Schlagworten wie Virtual Reality, Storytelling und Immersion, häufig ohne zu hinterfragen, ob diese einfach nur Buzzwords sind oder ob sie sich sinnvoll auf den Museums- und Ausstellungsbereich übertragen lassen. Beispielhaft sei hier der aus der Industrie stammende Begriff des „digital twin“ genannt, der häufig unreflektiert übernommen wird. Er stammt aus der verarbeitenden Industrie und beschreibt online überwachte Veränderung des Gegenstandes in einem Verarbeitungsprozess. Dabei bietet die museumsbezogene Literatur durchaus diskussionswürdige Ansätze (z. B. Liedel 2021). Der Beitrag setzt sich kritisch mit dem Thema der digitalen Kunstaussstellungen im Internet auseinander und fragt, was wir gewinnen und was wir verlieren können, wenn Ausstellungen virtuell werden.

Literaturhinweise:

Holtwick, Bernd (2021): Nützlicher Etikettenschwindel, oder: Können Ausstellungen virtuell sein? In: Virtuelle Ausstellungen - Blog vom 04.02.2021. Internet, URL <<https://ausstellungskritik.wordpress.com/2021/02/04/etikettenschwindel-von-bernd-holtwick/>>.

Liedel, Felix (2021): Virtuelle Ausstellungsräume für die kulturelle Bildung: Perspektiven aus Medienkultur und Medienpädagogik. Glückstadt: Verlag Werner Hülsbusch.

Schwan, Stephan (2020): Digitale Ausstellungen aus Besuchersicht. In: Fackler, Guido; Carius, Hendrikje (2020, Hrsg.): Exponat – Raum – Interaktion. Perspektiven für das Kuratieren digitaler Ausstellungen. Göttingen: Vandenhoeck & Ruprecht unipress. 193-200.

Schweibenz, Werner (2013): Museum Exhibitions – The Real and the Virtual Ones: An Account of a Complex Relationship. In: Uncommon Culture, 3 (5/6) 2013: 39-52.

Stärk, Theresa (2023): Zwischen Absenz des Objekts und Präsenz für Alle: Zur virtuellen Erfahrung von Kunst und ihrer Vermittlung. In: Lengyel, Dominik; Bienert, Andreas (2023, Hrsg.): EVA BERLIN 2023: Elektronische Medien & Kunst, Kultur und Historie, Berlin, 29.11.-01.12.2023. 26-30.

Wolf, Katrin; Reinhardt, Jens; Funk, Markus (2018): Virtual Exhibitions: What do we win and what do we lose? In: Proceedings of Electronic Visualisation and the Arts, London, UK, 9-13 July 2018. 79-86.

Nach dem Studium der Informationswissenschaft an der Universität des Saarlandes und der University of Missouri-Columbia war **Werner Schweibenz** u. a. als Wissenschaftlicher Mitarbeiter der Fachrichtung Informationswissenschaft an der Universität des Saarlandes tätig, wo er zum Thema „Vom traditionellen zum virtuellen Museum. Die Erweiterung des Museums in den digitalen Raum des Internets“ promoviert wurde. Seit 2007 arbeitet er bei MusIS, dem Dokumentationsverbund der Staatlichen Museen Baden-Württemberg, der am Bibliotheksservice-Zentrum Baden-Württemberg, angesiedelt ist. Zu seinen Aufgaben gehört die Betreuung von Museen in den Bereichen Dokumentation, Digitale Kataloge im Internet und Kultur-Portale.

MI | WED, 17.1.2024

PANEL 3: NETWORKS

Moderation: Anna Frasca-Rath (FAU Erlangen-Nuremberg)

17:00

Quantity, Quality, Trust:

Dilemmas and Strategies of Museum Documentation in the Age of AI

Lynn Rother, Fabio Mariani, Max Koss (Leuphana University Lüneburg)

As the digital transformation in the cultural heritage domain unfolds, the responsibility of museums to document and be transparent no longer applies only to human users but also to artificial users. For instance, to facilitate the return of objects to their rightful owners, museums should publish information about the ownership history of their collections (i.e., the provenance) not only as text but also as data that is machine-readable and compliant with FAIR principles (Findability, Accessibility, Interoperability, and Reusability).

Institutions face a dilemma in digitizing their collection information. Although museums have already recorded much of the information to be converted into data, it is in the form of free text and is insufficiently structured. While rerecording this information by hand in a standard, machine-readable format would require a significant investment of resources and time, fully automating the data-structuring process would call into question the quality of the data produced, with the risk of perpetuating historical biases and omissions.

Focusing on museum provenance information, this paper illustrates how the use of AI models for natural language processing tasks can help institutions automatically structure provenance texts as linked open data. Finally, considering not only quantitative but also qualitative needs, the paper describes how expert users can critically intervene in data production through a human-in-the-loop approach.

Lynn Rother is the Lichtenberg-Professor for Provenance Studies at Leuphana University. Prior to this appointment, she held research positions at the Museum of Modern Art in New York (2015–19) and the Berlin State Museums (2008–14) working on twentieth-century provenance and digital initiatives. A former fellow of the Getty Research Institute in Los Angeles (2014–15) and of the German Historical Institute in Moscow (2011), she has a master's degree in art history, economics, and law from the University of Leipzig (2008) and a PhD in art history from the Technical University of Berlin, advised by Bénédicte Savoy (2015). Rother currently serves on the Getty Provenance Index Advisory Committee, the editorial board of *linked.art*, the Expert Witness Selection Committee of CAfA (Court of Arbitration for Art), and the board of the ZADIK (Zentralarchiv für deutsche und internationale Kunstmarktforschung).

Fabio Mariani has been a research associate in digital humanities at Leuphana University Lüneburg since August 2020. He is a PhD candidate on "Vague, Incomplete, Subjective, and Uncertain Information in Digital Art History" at Leuphana University. After completing his bachelor's degree in history, he obtained a master's degree in digital humanities at the University of Bologna in 2020. During his studies, Mariani collaborated on several research projects involving semantic web technologies at the Digital Humanities Advanced Research Centre (DH.arc) and OpenCitations. He worked as a programmer and ontology designer at the Institute of Cognitive Science and Technology (ISTC, 2019–20).

Max Koss is a research associate at Leuphana University Lüneburg, joining in March 2021. They received their PhD from the University of Chicago in 2019. Prior to joining Leuphana University, Max was a doctoral fellow of the Kunsthistorisches Institut Florenz—Max-Planck-Institut in Florence and the Berlin State Museums / Prussian Cultural Heritage Foundation. Furthermore, Max holds an MA from the University of Chicago, an MA from the Courtauld Institute of Art, and a BSc in economic history from the London School of Economics and Political Science (LSE). Max also held fellowships from the German Academic Exchange Service, the German Schiller Foundation, the Mellon Foundation, the Samuel H. Kress Foundation, and the French Heritage Society.

MI | WED, 17.1.2024**17:25****An Unlikely Pairing: The Catalogue Raisonné as a Trusted Source for Conversational Inquiry Using Generative AI**

Liz Neely (Georgia O'Keeffe Museum, Santa Fe)

Artificial Intelligence, particularly generative AI, holds great potential for transforming the way scholars and researchers in various fields approach their work. However, there are significant challenges that hinder its widespread acceptance in academia and within museums. The proposed session aims to explore the challenges and opportunities of using an artist's catalogue raisonné as a trusted source to enhance the reliability of generative AI in the context of art-history scholarship. This session will delve into these issues and propose a novel solution through the integration of an artist's catalogue raisonné as a reliable source along with evaluation and feedback loops to improve the accuracy and trustworthiness of AI-generated content in the arts and humanities.

The Georgia O'Keeffe Museum is actively reenvisioning the catalogue raisonné in the digital age. In designing a user-centered, forward-thinking catalogue raisonné, the team has implemented linked open data including artwork, archive, and tangible property collections; published historic exhibitions with checklist artworks from other's collections; integrated publications with the linked data; and launched a data visualization feature.

Initial prototypes exploring conversational inquiry using generative AI prompts referencing catalogue raisonné data and visual description generation using machine learning have yielded promising results. With critical issues of ensuring reliability and building trust in generative AI remaining, this session addresses possible evaluation mechanisms and safeguards to deliver responses that are beneficial to contributing scholars and users of the resources.

Liz Neely leads efforts to publish art, historic home, and archives collections as linked data. She has produced the digital publications *Exhibiting O'Keeffe: The Making of an American Modernist* and *Josephine Halvorson* as well as the short film *Following Enchantment's Line* directed by Steven J. Yazzie (Diné/Laguna Pueblo/Anglo). Neely curated the museum's first immersive exhibition, *Seeing Beyond/Ver más allá*, in 2019 and went on to collaborate with the entertainment company Electric Playhouse to produce an interactive immersive exhibition in Albuquerque, New Mexico. She is performing audience research to reimagine the features of a digital catalogue raisonné. Neely has held previous positions at the Art Institute of Chicago and the American Alliance of Museums. She has served on the boards of the MCN, Paseo Taos, the Harwood Museum of Art, and NMC. She has an MBA from Northwestern's Kellogg School of Management.

MI | WED, 17.1.2024

17:50

Digital Transformations of Storytelling in Archives and Museums: A Linked Data and Visualization Perspective

Eva Mayr, Johannes Liem, Anja Grebe, Florian Windhager (University for Continuing Education Krems); Jakob Kusnick (University of Southern Denmark); Carina Doppler, Kasra Seirafi (Vienna)

Cultural heritage institutions are arguably among the oldest institutions using stories for knowledge communication. Digital transformation is necessitating the reconsideration of this ancient communication strategy: How do we tell stories based on digital media in galleries, archives, and museums? Which content from which data repositories can we make accessible? With which narrative tools and methods can we address which audiences? Which prior knowledge or digital skills from GLAM practitioners will be required?

As a transnational data-linking effort, the project InTaVia (<https://intavia.eu>) assembled a large art-historical knowledge graph, linking data on cultural objects and protagonists from Austria, Slovenia, the Netherlands, and Finland. From the beginning of this project, this data was also treated as content for cultural-historical storytelling, from which mediators in the fields of GLAM institutions, education, journalism, or cultural tourism could benefit (Kusnick et al., 2021; Mayr et al., 2022).

As such, the development of a "Storytelling Suite" was an essential objective of the InTaVia platform, which supports the whole workflow of cultural heritage experts from searching for relevant information and data curation to visualization-based analysis of data collections and communication of insights with digital stories (Liem et al., 2023). We depict and discuss this tool in terms of its main components (search and curation, visual analysis, storytelling) and several art-historical case studies, but also regarding evaluation results and strategies to actively engage visitors in hybrid exhibition spaces.

The European Union's Horizon 2020 research and innovation program supported this research and development under the project no. 101004825.

References

Liem, J., Kusnick, J., Beck, S., Windhager, F., & Mayr, E. (2023). A Workflow Approach to Storytelling with Cultural Heritage Data. *Proceedings of the 8th IEEE Workshop on Visualization for the Digital Humanities (VIS4DH)*, Melbourne, <https://vis4dh.dbvis.de/papers/2023/vis4dh2023-preprint.pdf>.

Kusnick, J., Jänicke, S., Doppler, C., Seirafi, K., Liem, J., Windhager, F. & Mayr, E. (2021). Report on Narrative Visualization Techniques for OPDB Data, <https://ec.europa.eu/research/participants/documents/downloadPublic?documentIds=080166e5e47d9524&appId=PPGMS>.

Mayr, E., Windhager, F., Liem, J., Beck, S., Koch, S., Kusnick, J. & Jänicke, S. (2022). The Multiple Faces of Cultural Heritage. *Proceedings of the 8th IEEE Workshop on Visualization for the Digital Humanities (VIS4DH)*, https://osf.io/h293m?view_only=7c80a742896e4eda9d538cafa8fcd819.

Eva Mayr is a senior researcher at the Department of Arts and Cultural Studies, University for Continuing Education Krems, Austria. Her main research interests include the cognitive processes during interaction with information visualizations, particularly in "casual," informal learning settings. She has a PhD in applied cognitive and media psychology from the University of Tübingen, Germany.

Johannes Liem is a postdoctoral researcher at the Department for Arts and Cultural Studies, University for Continuing Education Krems, Austria. His research focuses on the visual and narrative communication of spatiotemporal data. He has a PhD in computer science from City, University of London, UK.

Jakob Kusnick is a PhD student and research associate at the Department for Mathematics and Computer Science at the University of Southern Denmark. His work focuses on the development of information visualization techniques for the digital humanities, primarily the analysis and visualization of cultural heritage actors and objects.

Kasra Seirafi has a PhD from the Universities of Vienna, Austria, and Stanford, California; an MA from the University of Vienna; and a BSc from the University of Derby, UK. As a professional in leading positions, Seirafi contributed to the field of knowledge management systems, e-learning, mobile innovations, cultural heritage technologies, and other related topics. He is currently managing director at the technology SME Fluxguide, which he founded.

Carina Doppler dealt with theoretical and analytical questions related to theater, film, and media during her MA studies at the University of Vienna. As a project and communication manager, she has several years of experience in the conception, implementation, and communication of interdisciplinary projects in the cultural and media sector. She has managed augmented reality mediation projects for international institutions, clients, and partners.

Anja Grebe has been a university professor of cultural history and museal collection studies at the University of Continuing Education Krems since 2015, where she heads the Center for Cultures and Technologies of Collecting. She teaches, researches, and publishes on the theory and history of museums and collections, museums and digitization, issues of cultural transfer, the connection between art and the natural sciences, and international Renaissance art.

Florian Windhager is a senior researcher at the Department for Arts and Cultural Studies at the University for Continuing Education Krems, Austria. He received his PhD in digital humanities with a focus on the visualization of artwork and artist biography data from the University of Vienna. He coordinates research projects and teaches in the area of digital humanities, cultural heritage and visualization.

MI | WED, 17.1.2024**18:15****Iranian Cultural Heritage and Artificial Intelligence: Narration, Innovation, and Creation**

Niloofar Yazdkhasti (Museum Matters, Tehran)

The research paths of cultural heritage (CH) and artificial intelligence (AI) have increasingly found shared interests, leading to a successful merge of these two disciplines. The key role of the user derives from the importance of the interaction and use of cultural heritage—a notion that is changing the areas of action as regards relations between cultural assets and users. In this context, AI is the key discipline since it amplifies the development of innovative technologies, tools, and their effective application to the whole humanistic area. At present, museums rely on third-party algorithms or off-the-shelf tools to utilize these technologies from technology companies such as Microsoft and Google. These sophisticated computer vision tools have been trained using millions of images to create an algorithm that can identify visual trends.

In this paper, the significance of AI for the identification of CH in the context of Iran will be discussed, based on four impacts of machine vision including identifying subject matter, sentiment analysis, exacting color composition, and recognizing similarities and patterns of Iranian CH, as well as analytical tools to support visitors' interpretation. The paper's objective is to present an accurate depiction of Iran and its CH, challenging existing stereotypes. This will be achieved through data curated by experts familiar with the context and concept of Iran, which can be used to train AI systems. The data acquired from details of artworks to train AI can ease the recognition of cultural property's place, date, color, and even similarity among vast museum collections.

Niloofar Yazdkhasti is an independent museum professional, and the founder of "The Museum Matters," an initiative account that promotes cultural heritage through interactive content on social media. She studied museum studies and art studies in Iran and in 2017 moved to India, where she studied museology at the National Museum Institute, New Delhi. Yazdkhasti is a former curator at the Iranian Museum of Graphic Design and also at the Iranian National Science and Technology Museum. Her recent studies as a research fellow at the Université Polytechnique Hauts-de-France focus on creating digital twins of museums in the metaverse to explore potential social interaction. At present, she has been involved with museums and cultural projects in Iran and India. She has been an active member of ICOM since 2016.

MI | WED, 17.1.2024

18:40

Artwashing: Big Tech, New Tech, and the Ends of Art

Kaitlin Clifton Forcier (University of Illinois, Chicago)

This paper analyzes the intersections of major digital technology corporations and contemporary artists and institutions, with particular attention to new schemes of funding and support such as sponsorships and artists' residencies. Since the 1960s, artists experimenting with new digital technologies have played an essential role in their adoption and acceptance, at times helping to shape the field of aesthetic and conceptual possibility for new media. At the same time, these same artist-led investigations have often served the means of corporate interests invested in new technologies.

Through three major case studies—artificial intelligence, climate visualizations, and blockchain—I will analyze how big tech supports the artistic use of new technologies today through direct funding as well as more oblique systems of support. This project will explore the tension between notions of art as a space for aesthetic experimentation and critical expression versus art as a means to an end. While art has always been supported by those in power—the Renaissance church commissioning artists is not so different from a corporate art collection today—I argue that the key distinction in current models is that the patrons are often supplying the medium as well, in the form of digital technology and infrastructure. Even when providing critical reflection on technologies that might otherwise be met with resistance, such as energy-intensive computing, the machine learning used in mass surveillance, and highly predatory crypto speculation, the very existence of artistic endeavors may serve to assimilate or neutralize critique. By analyzing schemes ranging from the Facebook artist residency program to high-profile sponsorships of contemporary art museums, this research will map how art functions within the broader tech landscape, as well as where artists successfully work within these constraints to map ways forward.

Kaitlin Clifton Forcier is an assistant professor in the Department of English at the University of Illinois, Chicago. She received her PhD from the Department of Film and Media at UC Berkeley in 2022. Her research takes a comparative approach to contemporary digital culture, working at the intersection of media history and time-based art. Her research focuses on how the historical emergence of digital media are reflected in shifting aesthetic practices in moving image culture. This work encompasses a spectrum of para-cinematic moving images, from film and video to scientific imaging, social media, artificial intelligence, and mobile platforms. Her current book project, "The Infinite Image: Digital Media's Boundless Aesthetic" analyzes iteration and endlessness in digital media, from the 1960s to today, arguing that the emergence of endless image streams relates to the imperatives of new modes of capitalist expansion.

DO | THU, 18. 1. 2024

PANEL 4: CURATING

Moderation: Arnika Groenewald-Schmidt (Belvedere, Vienna)

17:00

Artmediamuseum:**Creating the First Digital Art Collection for Brasília's National Museum of the Republic**

Ana Avelar (University of Brasília)

Brasília's National Museum of the Republic gathers diverse and nationally relevant collections of contemporary Brazilian art constituting a referential institution in Brazil's Central-West Region. Today it is the most visited museum in a region lacking art museums. However, the COVID-19 pandemic and the subsequent digitalization of museums worldwide have brought attention to the need for contemporary digital artworks in the collections and, at the same time, for the opportunity to collect artworks that could be conserved digitally. The Curatorial Academy, a research group based at the University of Brasília, has developed a Brazilian digital arts collection for the Museum with the aim of contributing to the institutionalization of digital arts in the country. We designed the collection based on criteria such as relevance to the debate on digital arts, importance of the works to the local and global environment, and, particularly, the use of technology to discuss social inequalities. Suggested themes by artists of different generations include the possibility of new worlds, surveillance, and planned obsolescence. This collection of digital arts will expand with new acquisitions from annual exhibitions. In addition, the group is developing a series of virtual exhibitions and digital educational actions featuring webinars, lectures, and other activities. In this presentation, we will address the Artmediamuseum project, indicating theoretical references that guided the project and also demonstrating how collaborations between the museum and academia can benefit both institutions.

The Curatorial Academy is a research group affiliated with CNPq/UnB, comprising researchers from various cities in Brazil, pooling their diverse skills. Its aim is to serve as a laboratory for curatorial practices and art criticism, free from preestablished formulas or models. We conduct active academic research in contemporary art and provide support to cultural institutions, foundations, independent spaces, museums, galleries, and artists. These partnerships are established through various pedagogical and curatorial projects, both in physical and virtual formats. The group is under the overall coordination of Prof. Ana Avelar and comprises Amanda Sammour, Ana Roman, Isaac Guimarães, Marcella Imparato, Marina Romano, Rachel Vallego, Renata Reis, Tálisson Melo, Tamires da Mata, Tania Sulzbacher, and Thiara Grizilli.

DO | THU, 18. 1. 2024

17:25

New Perspectives for Participatory Media Art Documentation

Viola Rühse, Carl Philipp Hoffmann, Carla Milena Zamora Campos (University for Continuing Education Krems)

New media artworks pose a challenge to traditional approaches to art documentation and archiving because of their processual, methodological, and disciplinary diversity, particular technological dependencies, and thus rapid obsolescence. The Archive of Digital Art (ADA, www.digitalartarchive.at) has consciously taken up this challenge since its founding in 1999 by Prof. Dr. Oliver Grau. The archive is unique in its collaborative approach, with artists and scholars from around the world directly providing data and expanded documentation of artworks on a community-orientated platform. A special gate-keeping system and editorial team ensure the quality of the archival contributions of this large international community.

Over the past four years through a research project at three Austrian universities, the data-entry options for ADA community members have been improved and community-building activities carried out. The archive has been expanded with a focus on teaching, research, and analysis of new media art through the development of innovative data visualizations, search tools, and the extension of editorial activities such as through recorded video interviews with artists documented on ADA. In addition, VR and mixed-reality experiences allow virtual exploration of the AR[t]chive of the duo Sommerer/Mignonneau, the performance *Swarming Lounge* by Kondition Pluriel, and re-presentations of selected works by Ruth Schnell. The establishment of an international network of archives for New Media Art is also significantly supported by participation in an international working group. The paper will provide insights into digital participation strategies and innovative VR and mixed-reality applications in the field of archiving contemporary art.

Viola Rühse is the head of the Center for Image Science and course director at the University for Continuing Education Krems in Austria (Department for Arts and Cultural Studies). Since July 2022, she has been the project leader of the "Infrastructures for Digital Arts Teaching and Research in Higher Education" (Lehr- und Forschungsinfrastruktur für Digitale Künste an Hochschulen, LeFo) project. She studied art history and German language and literature at the universities of Hamburg and Vienna. She received her PhD with a dissertation on Siegfried Kracauer's film writings. Her current main themes of research in addition to film theory are photography, modern and contemporary art, and critical theory. She is also a photographer and curator.

Carl Philipp Hoffmann is an information architect specializing in the development and life cycle of digital collections, with global experience across a variety of industries and cultural domains. Currently pursuing his master of MediaArtHistories, he is project manager of the LeFo project at the University for Continuing Education Krems (Center for Image Science, Department for Arts and Cultural Studies).

Carla Milena Zamora Campos is chief editor and community manager at the Archive of Digital Art within the LeFo project at the University for Continuing Education Krems (Center for Image Science, Department for Arts and Cultural Studies). She has a master's degree in Time-based Media from the University of Art and Design Linz and a bachelor's degree in InterMedia from the Vorarlberg University of Applied Sciences. She has worked as a project manager at Ars Electronica and produces video documentations for museums such as Lentos Kunstmuseum, Nordico Stadtmuseum, and Ars Electronica.

DO | THU, 18. 1. 2024

17:50

Surreal Impressions: Deepfaking the Museum through Dalí and Van Gogh

Jasmin Pfefferkorn (University of Melbourne); Anna Calise (IULM University, Milan)

This paper addresses an emergent phenomenon at the museum-visitor interface: deepfakes of deceased artists within exhibition spaces. Deepfakes are a subset of generative artificial intelligence (GenAI), a form of synthetic media that uses machine learning to produce "original" outputs (Goodfellow, 2014; Paris, 2019). Deepfakes are criticized for contributing to misinformation (Yadlin- Segal, 2020), posing interesting questions around authenticity in the digital era.

For museums, perceptions of authenticity have long been idealized as a point of legitimation (Brenna et al. 2019). Museums have historically functioned as media producers (Pavement 2018), and their use of deepfakes may operate as an endorsement of this technology in the cultural zeitgeist. Further, deepfakes within museum settings extend existing tensions around the institutions' archival work. Issues of selection and organization continue to be contentious as museums digitize content (Manžuch 2017) and move into more autonomous computational processes of dataset analysis (Crawford and Paglen 2021).

This paper takes two case studies: the deepfake Dalí at the Dalí Museum in Florida, first shown in 2019, and the more recent (October 2023) digital manifestation of Van Gogh at the Musée d'Orsay in Paris. These examples provide fertile ground for an exploration of the ethical tensions around GenAI in museums. Issues of consent, as well as the curation and operationalization of digitized datasets, come to the fore. We argue for a nuanced understanding of deepfakes in art museums. While recognizing their novelty, we work to situate them within a narrative of continuity and position them in relation to existing objectives of visitor engagement and expanded offerings of didactic material.

References

Bode, L., Lees, D., and Golding, D. (2021). The Digital Face and Deepfakes on Screen. *Convergence, The International Journal of Research into New Media Technologies*, 27(4), pp. 849–854, <https://doi.org/10.1177/13548565211034044>.

Brenna, B., Christensen H. D., and Hamran, O. (eds.) (2019). Introduction, Museums as Cultures of Copies: *The Crafting of Artefacts and Authenticity*, London/New York: Routledge, pp. 1–8.

Crawford, K. & Paglen, T. (2021). Excavating AI: The Politics of Images in Machine Learning Training Sets, *AI & Society*, 36, pp. 1105–1116.

Goodfellow, I., Pouget-Abadie, J., et al. (2014), Generative Adversarial Nets, in arXiv: 1406.26, pp. 1–9, <https://doi.org/10.48550/arXiv.1406.266>.

Manžuch, Z. (2017). Ethical Issues in Digitization of Cultural Heritage, *Journal of Contemporary Archival Studies*: 4(4), pp. 1–17.

Pavement P. (2018). The Museum as Media Producer, in Drotner, K., Dziekan, V., Parry, R, et al. (eds), *The Routledge Handbook of Museums, Media and Communication*, London, Routledge, 2018, pp. 31–46.

Yadlin-Segal, A., Oppenheim, Y. (2020). Whose Dystopia is it Anyway? Deepfakes and Social Media Regulation, *Convergence: The International Journal of Research into New Media Technologies*, pp. 1–16, <https://doi.org/10.1177/1354856520923963>.

Jasmin Pfefferkorn is an ARC postdoctoral research fellow in the School of Culture and Communication at the University of Melbourne. She is currently researching the ARC Linkage project "Digital Photography: Mediation, Memory, and Visual Communication." She is an executive member of the Research Unit in Public Cultures, on the steering committee for the Centre for Artificial Intelligence and Digital Ethics' *Art, AI and Digital Ethics* collective, and the cofounder and codirector of the research group *CODED AESTHETICS*. She has a PhD from the University of Melbourne on emergent museum practice and is the author of *Museums as Assemblage* (Routledge, 2023). Pfefferkorn was recently awarded the Melbourne Postdoctoral Fellowship (2024–27) for her project "The Impact of Generative Technologies on Museums' Practices." Her research spans museum studies, critical AI, visual culture, and digital humanities.

Anna Calise is a PhD candidate in visual arts and media studies at IULM University, Milan, and a 2022 visiting PhD at the University of Amsterdam, School for Heritage, Memory and Material Culture. Her dissertation project, titled "Museum as Medium: Policies and Practices of the Cultural Experience in the Digital Era," works to define a new portrait of the museum in light of today's technological development. Calise has a degree in philosophy from King's College London and two master's degrees in arts management (from Federico II in Naples and SDA Bocconi). She has worked on the design of participatory cultural strategies and coordinated the Matera 2019 Community Projects Program in the year of the European Capital of Culture. Her research spans museum studies, visual culture studies, and media studies, exploring the ways in which the use of digital technologies can empower a more inclusive museum culture.

DO | THU, 18. 1. 2024

18:15

Making AI: More than Human and the More than Human Museum

Suzanne Livingston (London)

In May 2019, the Barbican Centre in London launched a major exhibition (including over 150 projects and artworks, and ninety thousand visitors in the first three months) about artificial intelligence entitled AI: More than Human. Taking an approach which was global, cultural and historical, it was born from a collaboration between myself, my Tokyo-based co-curator Maholo Uchida, and Barbican Immersive, a department dedicated to large-scale exhibitions exploring the future of technology and culture. The exhibition is now on tour and since 2019 has traveled from the UK to China and back with several touring stops in between. It is currently showing in Barcelona at CCCB.

This presentation will tell the story of the show, the challenges we faced, and the responsibility we undertook with respect to public education in AI. It will also focus on its distinctive approach, synthesizing a "Western" perspective drawn from the UK and the US with an "Eastern" perspective drawn from China and Japan. This global view, based on an intercultural understanding of this vast subject matter, is at the heart of my own research interests and feels increasingly vital as countries around the world individually race to own the AI agenda at a global level.

The presentation will reflect on what more we could have done to infuse the visitor experience of the exhibition with AI, beyond it being the subject of the show. What other layers and dimensions could we have included? How might AI itself have inspired its re-telling? This will extend to the wider frame of museums themselves, based on my own career as a strategic advisor. What can a museum be, born first in the era of AI, without historic baggage, aged ideas of philanthropy, legacy, and human-only perspective? How is history felt and manifest through AI? How does a museum, or whatever the equivalent institution be called, more radically open up our worlds?

Dr. Suzanne Livingston is a strategy consultant with twenty years of experience in helping organizations redefine their approach to brand, strategy, culture, innovation, and communication. She has worked at CEO level across sectors spanning technology, the arts, policy and education, and across markets including Europe, the United States, Australia, Russia, China, Japan, and the Middle East.

As Head of Strategy and later Global Principal at Wolff Olins, Suzanne built her experience working in technology with clients such as Sony Worldwide, Native Instruments, Reuters, PlayStation, and Ericsson and with cultural organizations including V&A, Whitney Museum of American Art, ICA Boston, Guggenheim, The Guardian, London Olympics 2012, Qatar

Museums, and Southbank Centre. She led strategy projects to guide the move of the Whitney to the Highline, ICA Boston to the waterfront, and the relaunch of Southbank Centre London in line with the major renovation of Festival Hall.

More recently she has also been working with Somerset House on its organizational definition and social purpose. As an extension of her interest in technology, creativity, and positive social change, she was asked to be co-curator of the Barbican Centre's *AI: More than Human exhibition*, which ran from May to August 2019, before beginning its international tour. It was the third-most popular exhibition in the Barbican's history and received a significant amount of international media attention. Suzanne received her PhD in Philosophy from Warwick University focusing on sensory perception and cybernetic systems. She now works independently, advising and coaching organizations alongside writing and presenting on the topic of culture, technology, and the future.

DO | THU, 18. 1. 2024

18:40

Ein LiDAR-basiertes Werkzeug zur räumlichen Analyse der Ausstellungsnutzung

Bernd Lintermann, Marc Schütze (ZKM | Zentrum für Kunst und Medien, Karlsruhe)

Das ZKM | Zentrum für Kunst und Medien mit seinem Fokus auf audiovisuelle und interaktive Werke hat beim Betrieb von Ausstellungen besondere Bedingungen zu erfüllen. Im Rahmen seiner Forschungstätigkeit wurde ein datenschutzkonformes, auf LiDAR-Sensoren basierendes System zur weiträumigen Lokalisierung und Bewegungsverfolgung von Besucher*innen entwickelt, das seit März 2023 auf 1.500 m² Ausstellungsfläche im Produktiveinsatz ist. Es ist ein Werkzeug zur Verbesserung der Erfahrung der Museumsbesucher*innen, zur wissenschaftlichen Analyse von kuratorischen Ansätzen und kann darüber hinaus von Künstler*innen für die Realisierung interaktiver Werke verwendet werden. Es besteht aus kostengünstigen Hardwarekomponenten, die im Ausstellungsraum angebracht werden, und einer selbst entwickelten Software.

Das System ist mit Rücksicht auf Kosten, Design, Einfachheit in der Einrichtung, Wartung und Vielseitigkeit der Datennutzung konzipiert worden. Es liefert Daten zum Nutzungsverhalten wie etwa Verweildauer vor Werken oder Objektbeschriftungen und zur Wegführung in der Ausstellung in Form von Visualisierungen (Heatmaps, Flowmaps) oder Statistiken. Damit können kuratorische Hypothesen wie die Wirkung von Leitsystemen etc. faktisch überprüft werden. Im Ausstellungsbetrieb selbst werden Videos und mechanische Werke je nach Anwesenheit von Besucher*innen gestartet und Licht- oder Audiopegel geregelt. Mechanische Werke werden dadurch geschont, Körperkontakt beim Starten von Werken oder beim Aufsetzen von Kopfhörern vermieden. Das Museum wird bezüglich Lautstärke und Atmosphäre als responsiver empfunden. Über die Nutzung verbreiteter technischer Schnittstellen wie Open Sound Control, die Anbindung an Datenbanken wie InfluxDB, an Datenbroker wie MQTT oder die Einbindungen von Skriptsprachen wie Lua können Daten ausgewertet und der Einsatz individualisiert werden. Ende 2023 wird die Software als Open Source veröffentlicht.

Bernd Lintermann arbeitet als Wissenschaftlicher Mitarbeiter am ZKM | Hertz-Labor in Karlsruhe. Als Medienkünstler und Forscher beschäftigt er sich mit interaktiven und generativen Systemen, immersiven Räumen, Augmented und Virtual Reality. Seine Entwicklungen werden im wissenschaftlichen, künstlerischen und kommerziellen Kontext eingesetzt, seine Werke international ausgestellt, etwa im Ars Electronica Center in Linz, im Guangdong Museum of Art in Guangzhou und in der National Gallery of Scotland in Edinburgh. Zahlreiche wissenschaftliche Veröffentlichungen, u. a. auf der SIGGRAPH. Lintermann ist Mitbegründer des Unternehmens Greenworks, das seine Software Xfrog vertreibt, die von der Academy of Motion Pictures 2015 für einen Scientific Achievement Award nominiert wurde.

Von 2005 bis 2011 war er Leiter des Instituts für Bildmedien am ZKM, von 2006 bis 2015 Professor an der Staatlichen Hochschule für Gestaltung in Karlsruhe und von 2012 bis 2023 Adjunct Professor an der School of Creative Media der City University, Hongkong.

Marc Schütze arbeitet und forscht als IT-Projektmanager und Software-Entwickler am ZKM | Zentrum für Kunst und Medien in der Museumstechnik. Seit 2015 beschäftigt er sich mit der Neu- und Weiterentwicklung von Möglichkeiten der Präsentation digitaler Medien im Ausstellungsbetrieb.

FR | FRI, 19.1.2024**14:00****DIGITAL CULTURE WORKSHOP (ROUNDTABLES)**

Organised and moderated by the Institute for Digital Culture, University of Leicester (Ross Parry, Vince Dziekan, and partners), the workshop offers an opportunity for participants to identify development needs and research opportunities in the following areas:

- › Creative and Culture Technologies
- › Digital Skills and Leadership
- › Inclusive Digital Design
- › Cultural Informatics

A principal fellow of the Higher Education Academy, former Tate research fellow, and former chair of the UK's national Museums Computer Group, **Ross Parry** is also one of the founding trustees of the Jodi Mattes Trust for accessible digital culture. In 2018 he was listed in the Education Foundation's EdTech50 as one of the fifty most influential people in the UK education and technology sectors.

Parry's recent books include *Museum Thresholds: The Design and Media of Arrival*, edited with Ruth Page and Alex Moseley (Routledge, 2018) and *The Routledge Handbook of Museums, Media, and Communication*, edited with Kirsten Drotner, Vince Dziekan, and Kim Christian Schröder (2019). He is the author of *Recoding the Museum: Digital Heritage and the Technologies of Change* (Routledge, 2007) and *Museums in a Digital Age* (Routledge, 2010). He also co-edits the book series *Critical Perspectives on Museums and Digital Technology* (also with Routledge). In 2022 Parry became the founding director of the new Institute for Digital Culture, allying with the culture sector as it adapts to a digital world.

Vince Dziekan is a senior academic and practitioner-researcher based in the Faculty of Art Design & Architecture (MADA), Monash University, Australia, where his research is affiliated with SensiLab—an interdisciplinary research lab established between media art, digital design, and computer science—and is a research associate of the Monash Data Futures Institute. Additionally, he is an honorary research fellow with the Institute for Digital Culture (University of Leicester, UK). Dziekan's work engages with the transformation of contemporary curatorial practices at the intersection of emerging design practices, creative technology, and museum culture. His research focuses on the impact of digital technologies on curatorial design and the implications of virtuality on exhibition-based practices. He has published widely in traditional, scholarly, and nontraditional modes through his independent curatorial practice. The interdisciplinary scope of his research practice is represented in his books: *The Routledge Handbook of Museums, Media and Communication*

(coedited with Kirsten Drotner, Ross Parry, and Kim Schroder; Routledge, 2019) and *Virtuality and the Art of Exhibition* (Intellect/University of Chicago Press, 2012). He is a general editor of *The Encyclopaedia of New Media Art* (commissioned by Bloomsbury) and series coeditor of the Critical Perspectives on Museums and Digital Technology book series (commissioned by Routledge).

FR | FRI, 19.1.2024

PODIUMSDISKUSSION | PANEL DISCUSSION

Moderation: Christian Huemer (Belvedere, Vienna)

17:00

Kimmo Levä (Finnish National Gallery, Helsinki)

Nina Röhrs (Roehrs & Boetsch, Zurich)

Gerfried Stocker (Ars Electronica, Linz)

Sophia Widmann (MUSEUM BOOSTER, Vienna)

Kimmo Levä is director general of the Finnish National Gallery. His previous positions have included managing director of the Finnish Museums Association and its companies, museum director at Mobilia (National Road Traffic Museum), and director of museum services in Turku City. Levä has served as a board member of many museums and associations, including the Finnish Design Museum, the Finnish Postal Museum, Aboa Vetus Ars Nova (Museum of Archeology and Contemporary Art), the Culture for All Association, Europa Nostra Finland, and the Finnish Museums Directors Association. He also has experience in international museum organizations, such as the ICOM's International Committee for Museum Management (INTERCOM) and the Network of European Museum Organizations (NEMO). Levä specializes in the commercialization of museum services as well as strategic and financial management of museums. He holds an MBA from the University of Wales and an MA in history and political science from Tampere University. He has published several books, articles, and numerous blog posts in connection with the museum field.

Dr. Nina Roehrs is an expert on art in the digital age who supports players in the cultural sector in their digital programming and projects. After studying business economics in St. Gallen and St. Andrews, she worked for UBS for 14 years before founding Roehrs & Boetsch in 2016. For five years as a gallery and today as a hybrid consultancy, Roehrs & Boetsch is dedicated to examining the influence of digitalisation on art and society. This includes developing new forms of exhibiting where conventional methods fail, often involving new technologies such as AR, VR, apps, websites, and blockchain technology.

Selected projects are: Gallery. Delivery (2018 & 2019), both a group exhibition and a performance that can be ordered online. It will be delivered by bike courier in a „White Cube“ courier bag to the address stipulated in the order, where it will be temporarily installed. CUBE (2019), a virtual reality platform that simulates a virtual gallery environment for native digital art exhibition. FitArt (2020), an in-app exhibition platform developed during the first lockdown that delivers art exhibitions in the form of a fitness plan on your cell phone. And Minting Advent & Burning Christmas (2020), a solo exhibition by Lorna Mills that unfolds on the blockchain in the form of a minted Advent calendar. Roehrs is the curator of the exhibition DYOR at Kunsthalle Zürich – one of the first institutional art exhibitions on blockchain and NFTs, which closed in January 2023. And she developed and

curated the new digital sector at Paris Photo 2023. Nina Roehrs lives and works in Zurich and in Zuoz (Engadin).

Sofia Widmann is the founder & CEO of MUSEUM BOOSTER. She oversees operations and company strategy and steers its development. With a background in economics, she gained experiences working in both nonprofit and for-profit cultural organizations in the fields of event organization, marketing, and PR. Widman's special focus is on new media technology and its impact on museum success. From 2014 to 2016, she studied this correlation as part of her MBA studies at Modul University Vienna. She is a regular speaker at international conferences on the topics of visitor experience, digital strategies, new revenue models, and innovation for the museum sector.

Gerfried Stocker (AT) is a media artist and an engineer for communication technology and has been artistic and managing director of Ars Electronica since 1995. In 1995/96 he developed the groundbreaking exhibition strategies of the Ars Electronica Center with a small team of artists and technicians and was responsible for the setup and establishment of Ars Electronica's own R & D facility, the Ars Electronica Futurelab. He has overseen the development of the program for international Ars Electronica exhibitions since 2004, the planning and the revamping of the contents for the Ars Electronica Center, which was enlarged in 2009, since 2005; the expansion of the Ars Electronica Festival since 2015; and the extensive overhaul of Ars Electronica Center's contents and interior design in 2019. Stocker is a consultant for numerous companies and institutions in the field of creativity and innovation management and is active as a guest lecturer at international conferences and universities. In 2019 he was awarded an honorary doctorate from Aalto University, Finland