DIGITAL PROGRAMME BOOKLET

International Conference on Cultural Heritage and New Technologies
10.-12. November 2022 | Vienne City Hall

CHNT
ICOMOS AUSTRIA

Stadt
Wien

CHNT MISSION STATEMENT

The first Cultural Heritage and New Technologies (CHNT) conference took place in Vienna in November 1996, at that time still under the name "Workshop Archaeology & Computers", with 60 participants from Austria, Germany and Switzerland.

The mission of the conference was and still is to bring together in Vienna scholars from all over the world covering a wide range of disciplines and using the latest technologies for prospection, research, documentation, conservation and presentation and management of the world's cultural heritage. A particular concern is to make the conference usable as a platform to exchange ideas on the agendas of cultural property protection. Discussion among colleagues from a wide range of disciplines is a major focus of the event. Sessions, round tables, advanced trainings, applications and poster presentations present the latest approaches to researching, managing and monitoring archaeological monuments, world heritage sites and cultural objects

These objectives, which CHNT has pursued for over 25 years, are now complemented by those of ICOMOS (International Council on Monuments and Sites). ICOMOS is an NGO for the protection and conservation of the world's monuments and sites of outstanding value. Conscientious, independent and solution-oriented monitoring of UNESCO World Heritage sites is the duty of everyone. ICOMOS understands that transfer of knowledge needs to be comprehensible and that discussion with experts from diverse disciplines is a mandate to support the concerns of all stakeholders.

CHNT-ICOMOS Austria

Conference on Cultural Heritage and New Technologies by International Council forMonuments and Sites Austria

After 25 years of successful management of the CHNT by Stadtarchäologie Vienna, the organization of the conference is under new management. From 2021 onwards, the conference on cultural heritage and new technologies will be organized by CHNT-ICOMOS Austria a sister association of the Austrian National Committee of ICOMOS.

ICOMOS Austria

ICOMOS stands for "International Council on Monuments and Sites" and is an NGO that works worldwide for the protection, care and preservation of historic cultural heritage. ICOMOS was founded in 1965 in Krakow, Poland, following the adoption of the Venice Charter in 1964 at the Second Congress of Architects and Specialists of Historic Buildings.

ICOMOS is involved as advisor and evaluator in the work of the World Heritage Committee and in the fulfilment of the UNESCO Convention on World Heritage. ICOMOS is organised into over 120 National Committees, which can be joined as individual members. In addition, ICOMOS has 28 International Scientific Committees that deal with specific topics of research, heritage conservation and heritage management. The national committee ICOMOS Austria currently has more than 80 individual members whose mandate is based on proven expertise in all disciplines related to heritage protection architecture, history of art, archaeology, jurisprudence, restoration, material sciences, etc.). ICOMOS Austria is committed to the conservation of monuments, ensembles and cultural landscapes at national and international level. In order to advise experts and the public and to promote public interest in monument protection and conservation, ICOMOS Austria is active in the following areas, among others:

- Monitoring and information on monuments on the World Heritage List
- Preparation and organisation of international colloquia and conferences on issues of monument protection and conservation
- Publication of conference results and important policy papers on heritage conservation
- Cooperation with other National Committees as well as with various national bodies (Association of State Monument Conservators, Austrian UNESCO Commission, BDA) and with international organisations (UNESCO, ICCROM, Council of Europe)

Committees

Local Organising Committee (LOC)

Ulrike HERBIG I Presdient CHNT-ICOMOS Austria

Irmengard MAYER I CHNT-ICOMOS Austria

Wolfgang BÖRNER I CHNT-ICOMOS Austria

Lina KARNER I CHNT-ICOMOS Austria

Scientific Committee (SC)

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Marco BLOCK-BERLITZ	Martina POLIG
Lorenzo CECCON	Hendrik ROHLAND
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Benjamin DUCKE	Apostolos SARRIS
Peter DORNINGER	Claudiu SILVESTRU
Jay CARVER	Gilbert SOETERS
Saadet GUNER	Stephen STEAD
Irmela HERZOG	Friedrich SCHIPPER
Piotr KUROCZYŃSKI	Johannes TINTNER
Cristina MOSCONI	Giorgio VERDIANI

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Noor ALSOUKHNI	Melda KÜÇÜKDEMİRCİ
Bert BROUWENSTIJN	Elisabeth MONAMY
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Peter FERSCHIN	Benno RIDDERHOF
Bernhard FRISCHER	Benjamin STANGL
Carmen LÖW	Hansjörg THALER
Axel POSLUSCHNY	

Visit our *website* to learn more about our committee members.

Conference Theme

Cultural Heritage – NextGen
Innovative Approaches in Documentation, Research, Management and Education

50 years after the adoption of the UNESCO World Heritage Convention, the protection of World Heritage seems to be at a crossroads. While awareness of the value of universal Cultural Heritage has raised considerably and the number of sites enlisted at UNESCO has been growing steadily, so has the pressure under which global Cultural Heritage has found itself. In 2008, UNESCO published a list with 14 categories and many subcategories of threats to Cultural Heritage. The threats range from war and crisis, weather and climate change impact, natural disasters, encroaching development, resource extraction, illegal activities as well as management issues, such as shortage of funding and/ or skilled labor. Given the challenges outlined above, there is an active process of rethinking the policies to protect Cultural Heritage in general, taking place within and between political institutions, scientific communities and civic society around the world.

We believe that technology can make a difference and help to protect, research and valorize Cultural Heritage in a sustainable way and to thereby preserve it for the next generation. Technological innovations enable the investigation of cultural heritage assets following minimally invasive approaches, they allow the wide dissemination of research outcomes and the promotion of Cultural Heritage to a broad audience, even during a global pandemic that seriously affected free movement. Digital technology and the scientific communities around it provide research tools, knowledge and educational opportunities to a practically unlimited audience, thereby making Cultural Heritage more inclusive and accessible. This increases the potential of Cultural Heritage to contribute to the shaping of identities and social cohesion of communities around the world. Finally, technology offers the means for the rapid documentation of the state of Cultural Heritage assets and the monitoring of potential alterations over time. It can, therefore, support management, decision-making, restoration and conservation actions for a sustainable Cultural Heritage around the world.

The Conference on Cultural Heritage and New Technologies (CHNT) provides a platform to showcase and discuss new research, exchange experiences and ideas and to build an ever-growing community around these topics. Since CHNT 26, 2021, the conference on Cultural Heritage and New Technologies is being organized by the CITY of Vienna (Department 7 – Cultural Affairs) together with CHNT-ICOMOS Austria, a sister association of the Austrian National Committee of ICOMOS. With the upcoming conference we want to contribute to the ongoing discussions by again bringing together cultural heritage professionals, decision makers, tech enthusiasts and other stakeholders with a strong interest in the application of new technologies in the field of cultural heritage.

Conference Days	3
Sessions	14
Round Tables	5
Panels / Working Groups	3
Trainings	2
Awards	3
Exhibitor Afternoon	1

Date & Location

Date

November , 10 - 12 2022

Thursday, November 10   08:40 - 19:00
Opening Event   *19:30 -22:00*

Friday, November 11   09:00 - 18:00
Conference Dinner   *19:30 - 22:30*

Saturday, November 12   09:00 - 18:30
Informal Closing   *19:30 - 23:00*

Location

The conference will take place in four different locations this year.
The main rooms (Wappensaal & TOP 319) are located in the Vienna City Hall.

The four conference locations are marked on this map: CHNT Google Map (Link)

1. Vienna City Hall

Wappensaal
Felderstraße 1, 1010 Vienna (Feststiege II, 1st floor)
The Registration Desk is also located here.

TOP 319
Felderstraße 1, 1010 Vienna (Feststiege II, 1st floor)

2. Wiener Planungswerkstatt
Friedrich-Schmidt-Platz 9, 1010 Vienna

3. Federal Monuments Authority Austria – Ahnensaal
Schweizer Tor, Hofburg 1010 Vienna (Zehrgaden Stiege, 2nd floor)

For the Round Tables on Thursday, a guide will accompany you from the Vienna City Hall to the Ahnensaal. Please come to the meeting point (registration desk) at 09:40 / 13:40!

4. Department of Numismatics and Monetary History
Franz-Klein-Gasse 1, 1190 Vienna

The training "Digital Collections and Presentation of Cultural Heritage" takes place here. A colleague of with will guide you from the Vienna City Hall to the location in the 19th district. Please come to the meeting point (registration desk) at 13:25!

Cooperations

Federal Monuments Authority Austria

„Digitization is a global topic - and yet there is a broad varity in the use of this term. We at the Federal Monuments Authority speak of digital transformation when it comes to developing existing knowledge resources and using them optimally, making our processes barrier-free and resource-saving for the citizens. Digitization is therefore not an end in itself; we have to be clear that the first thing that matters is the content and making it accessible to as many people as possible. In any case, the aim for the Federal Monuments Office is to establish a digitally supported, qualitatively improved administration, to accelerate processes and to document important information well and sustainably. The joint exchange on this comprehensive and (still) new topic sharpens our own perspective and is essential for us: The Federal Monuments Office is therefore happy to be an active partner at the CHNT again this year.

Christoph Bazil
President
Federal Monuments Authority Austria

The annual CHNT have become a fixture for the entire community. The Austrian Federal Monuments Authority has long been involved in organising these conferences. This year the focus is on digital memory, which is also to be preserved and disseminated in the direct area of responsibility of the Federal Monuments Authority. In this context, not only digitalised photos, plans and texts are playing an increasingly important role, but also all those documents on cultural heritage that are only produced digitally in the first place. This also applies to a large extent to contemporary archaeological heritage management, which replaces the loss of monument substance caused by every excavation with the production, preservation and provision of digital documentation at the best state of research and technology.
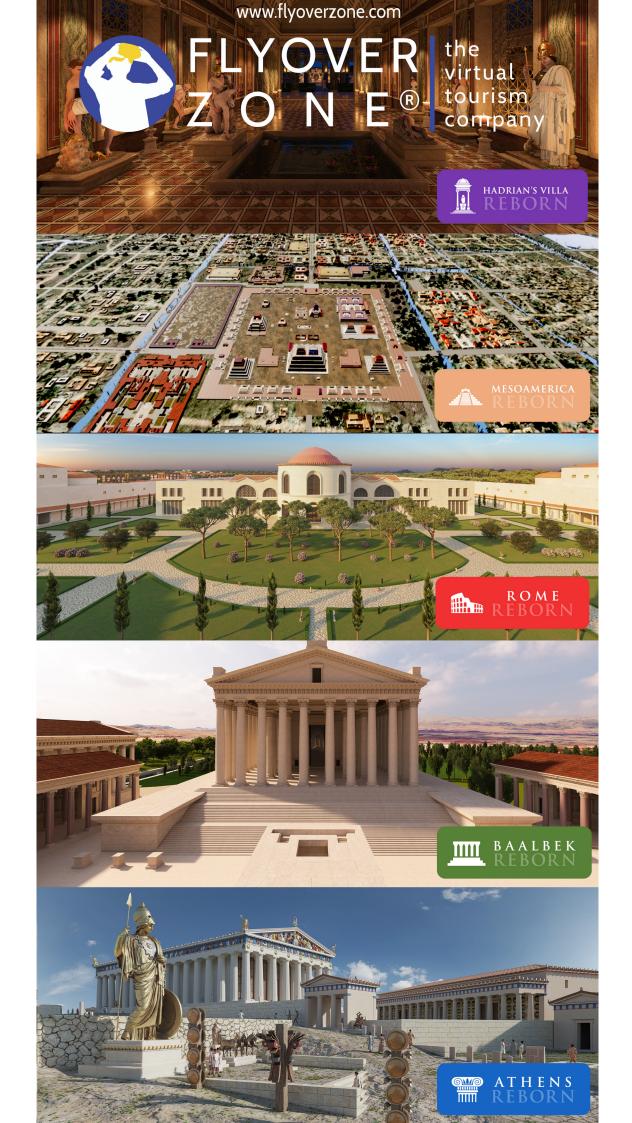
Bernhard Hebert
Head of Departement of Archaeology
Federal Monuments Authority Austria

Department District Planning and Land Use Central Southwest

In a spatial understanding urban planning is the intermediary between the past and the future. Only if we know where we come from, we can walk on secure paths into the future. For some years now, there has been a good cooperation between the Department of Urban Archaeology and the Department of District Planning and Land Use, which is reflected, among other things, in the fact that the conference Cultural Heritage and New Technologies takes place in the rooms of the Vienna Planungswerkstatt. This is a place of discourse on questions of spatial development of the city. I wish you a successful conference, enriching encounters and interesting insights and look forward to a productive exchange.

Dr. Bernhard Steger
Head of Department District Planning and Land Use Central Southwest

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THURSDAY NOVEMBER 10

THURSDAY, NOVEMBER 10

Wappensaal		Top 319		Wiener Planungswerkstatt		Federal Monumentum Board (Hofburg)	
08:40-09:10	**OPENING**	**X**		**X**		**X**	
09:10-09:40	**KEYNOTE 1: Johanna Leissner	Germany**						
Contents to Digital. Digital to Contents		**Digital evolutions of the City of Vienna**				**Next Generation of Changelles for the Implementation of the World Heritage Convention**	
09:40-10:00	1. Virtual Access and Digitization for Unreachable Sites (VADUS) Sara Marino, Luca Gugliermetti, Franco Gugliermetti	Italy	09:40-10:00	1. (Open) Data in the City of Vienna Franz Xaver Pfaffenbichler	Austria				
10:00-10:20	2. From massive lasergrammetry to accurate and rational digital models, the case of the "Dado Arnolfiano" in Palazzo Vecchio, Florence Francesca Meli, Giorgio Verdiani, Marco Tanganelli	Italy	10:00-10:20	2. WienBot - the digital assistant of the City of Vienna Sindre Wimberger	Austria	**Afghanistan - Scientists, Data Gathering, and Knowledge Transfer**			
10:20-10:40	3. Sense: Art without Barriers – How Technologies can enhance art fruition Manuela Serando, Matteo Ventrella	Italy	10:20-10:40	3. BRISE – Digital Construction Methods Jasmin Huber	Austria	10:00-10:20	1. Documentation of Cultural Heritage of Traditional and Modern Architecture in Kabul Tayebeh Nazarian, Asadullah Movahedi	Afghanistan		Soehardi Hartono	President ICOMOS Indonesia
10:40-11:00	4. Innovative archaeological learning using Mixed Reality Diana Miznazi, Fabian Stroth	Germany			10:20-10:40	2. Environmental Situation in Historical Areas. Environment and cultural Heritage, Bamyan, Afghanistan Jawad Nazori, Soghra Noori	Iran		Nisa Usiy	Vice President ICOMOS Indonesia
11:00-11:20	5. Machine Learning Approach on AI Painter: Chinese Traditional Painting Classification and Creation Kaiqi Qiu, Yingxi Tang, Feiru Wang	China	**11.00-11.20**	**COFFEE BREAK**	10:40-11:00	3. Investigating the Effect of Malicious Factors on Ancient Sites to Maintain and Protect Them Using new technology the Geographic Information System (GIS); Case Study: Budda-Bamyan Qurban Ali Amiri, Mahbaba Yousofi	Afghanistan		Wijayanto Punto	Vice President ICOMOS Indonesia
		Planning history and urban heritage. Historical towns atlases as a tool for research, heritage management and participation					Prima Dona Hapsari	Institut Seni Indonesia Yogyakarta
11:20-11:40	6. The Raphael's School of Athens immersive experience. A VR digital movie for Cultural Heritage Paolo Clini, Renato Angeloni, Mirco D'Alessio	Italy	11:20-11:40	1. Cartographic image of city planning Rafal Eysymontt	Poland	11.00-11.20	4. Measurement and investigation of surface displacements caused by earthquakes using Differential Interferometric Synthetic Aperture Radar on historical monuments area Mohammad Naseri	Iran		Danang Febriyantoko	Institut Seni Indonesia Yogyakarta
11.40-12:00	7. Engagement with classical archaeology through producing a digital edition of the 1844 General Description of Sir John Soane's Museum Claire Frampton	United Kingdom	11.40-12:00	2. Mapping the historical topography of the city of Sibiu/Hermannstadt (Transylvania) in the 18th and 19th centuries Andrei Nacu	Romania	11:20-11:40	5. Using the method of collecting behavioural patterns of citizens in the his-torical axis of Timur_Shahi in Kabul city to increase the synomorphy be-tween the physical space and the behaviour Masoud Hamraei	Afghanistan		Bambang Pramono	Institut Seni Indonesia Yogyakarta
12.00-12:20	8. The National Museum of Italian Emigration in Genoa Maria Emanuela Oddo, Valentina Trimani, Peter Twinn	Italy	12.00-12:20	3. How to define urban plot? Examples from developing the UrbanOnto ontology Katarzyna Slomska-Przech, Michal Slomski	Poland	11:40-12:00	6. The role of women in preserving cultural heritage A Review Article Tahira Rezaei	Afghanistan		Caroline Jäjer-Klein	Presdinet ICOMOS Austria
12:20-12:40	9. Old and new virtualization, innovative approaches to digital integrations for the sacred hill of St. Vivaldo, Montaione, Italy Rocco Di Mattia, Ylenia Ricci, Andrea Pasquali	Italy	12:20-12:40	4. Then as now: clean water and dry feet. A historical town atlas as time machine for use in modern climate adaptation data analysis Menne Kosian, Rowin van Lanen	The Netherlands				Doris Grandits	ICOMOS Austria
12:40-13:00	10. Storytelling in 3D: Designing Interactive Digital Narratives Susan Schreibman, Kelly Schoueri, Costas Papadopoulos	The Netherlands	13:00-13:20	5. Between Public History and Academic Research. Towards a digital Historical Town Atlas Niklas Alt	Germany				
13:00-13:20	11. MiRA – Mixed Reality as a shared experience in the museum space Viktor Malakuczi, Miriam Saviano, Teodora Ivkovi, Lorenzo Imbesi	Italy	13:00-13:20	6. Exploring Historical Cities with the 4D Community Browser. Requirements of a Spatio-Temporal Research Tool Heike Messemer, Jonas Bruschke, Sander Münster	Germany				
13:20-13:40	12. The Portal of Amateur Collaborators and Register of Individual Finds (AMCR-PAS) Olga Lečbychová, Petr Pajdla, David Novák	Czech Republic	13:20-14:00	**LUNCH BREAK**				
13:40-14:20	**LUNCH BREAK**	**Heritage Landscapes in the Age of Social Media**				**Digitales Gedächtnis Österreich**	
14:20-14:40	Sponsored Presentation: The detail of scanning and the preservation options - Indian culture heritage example Ladislav Hodinka I CEO piqI CEE, Ladislav Dedik	14:00-14:20	1. Cultural Tourism in the Age of Social Media – Cases of Roman Heritage in Spain Eirini Tsakiri, Afroditi Kamara	Greece			14:00-14:20	1. Big data of the past comes true – The Time Machine Initiative Thomas Aigner	Austria
3D-Technology in Archaeological and Cultural Heritage Documentation, Research and Management		14:20-14:40	2. Urban Forest Twitting: Social media as more-than-human communication in Tokyo's Rinshinomori Park Diego Martín Sánchez, Noemí Gómez Lobo	Spain			14:20-14:40	2. CLARIAH-AT: A national infrastructure consortium, research network and strategy program for Austrian Digital Humanities Walter Scholger	Austria
14:40-15:00	1. Staying 3D with HBIM? A three-dimensional processing of data from large historic building complexes Ilka Viehmann, Ulrich Weferling	Germany	14:40-15:00	3. Machine learning as a tool for analysis of cultural ecosystem services in historic urban environments: Case of Jaffa, Israel Komal Potdar, Kedar Dabhadkar	The Netherlands			14:40-15:00	3. The H2020 ReInHerit Project and its Digital Hub. Redefining the future of cultural heritage, through a disruptive model of sustainability Chiara Zuanni	Austria
15:00-15:20	2. A Dynamo workflow for the recognition of an HBIM model's architectural period Konstantina Siountri, Elias Sakellaris, Christos Nikolaos Anagnostopoulos	Greece	15:00-15:20	4. Using Maxent to predict landscape interest: A case study in Madrid Luis Santos-Cid	Spain			15:00-15:20	4. SUCHO (Saving Ukrainian Cultural Heritage Online) – Protecting Digital Cultural Heritage in Times of Crisis Sebastian Majstorovic	Austria
15:20-15:40	3. Visual-Archaeo3D: Towards semi-autonomous graph-based videogrammetric reconstruction pipeline as web service Marco Block-Berlitz, Dustin Heyer, Patrick Creutzburg, Lukas André Suthe, Paul Werner, Michael Bommhardt-Richter, Rohland Hendrik, Benjamin Ducke, Tim Kaiser, Christian Clemen	Germany	15:20-15:40	5. Assessing the impact of heritage-making: the SoPHIA Model Michela Marchiori, Mauro Baioni, Annalisa Cicerchia, Paola Demartini, Lucia Sinchigiani, Flavia Marucci	Italy			15:20-15:40	5. Designing Distant Views for Cultural Collections Florian Windhager	Austria
15:40-16:00	4. Erzbergwerk Rammelsberg (Goslar, Germany): Development of a 3-D model-based database as a tool for documentation, research, and conservation of a complex UNESCO World Heritage Site. Ulrich Knufinke, Sebastian Hoyer, Yahya Ghassoun	Germany	15:40-16:00	6. ISTER Atlas and Interactive Tool – The Geo-Tools in ISTER – Connecting hiSTorical Danube rEgIons Roman routes Clemens Beyer, Blaž Barboric, Manfred Schrenk, Georg Neugebauer	Austria			15:40-16:00	6. A journey through Salzburg's past. Developing a digital showroom for a regional museum association Eva Mayr	Austria
16:00-16:20	5. Georeferencing archaeological underwater documentation using a redesigned GPS radio buoy Michael Bommhardt-Richter, Thomas-David Griedel, Marco Block-Berlitz	Germany	16:00-16:20	7. How to build a story around cultural heritage (The ISTER – Approach) Torsten Beck, Susanne Dahm	Austria				
16:20-16:40	6. The roman basilicas – Digital documentation, analysis and communication Alfonso Ippolito, Martina Attenni, Carlo Bianchini, Marika Griffo, Carlo Inglese	Italy	16:20-16:40	8. Social media platforms and knowledge exchange. TRAHERE project as an instrument for the transmission of heritage culture Graziella Travato	Spain				
16:40-17:00	**COFFEE BREAK**	16:40-17:00	**COFFEE BREAK**				
17:00-17:20	7. 3D-printing for Cultural Heritage. Structural Recovery and Monitoring Applications of Architectural and Decorative Elements Valentina Tomei, Maura Imbimbo, Sonia Marfia	Italy						
17:20-17:40	8. 3D Technologies for Protection and Exposition of Authenticity of Historic Building Slawomir Rosolski, Aleksandra Kamyszek, Adam Siejkowski	Poland						
17:40-18:00	9. A virtuous example of digital reconstructive modelling Jacopo Bono	Italy						
18:00-18:20	10. Of Gaps and Continuity: Diachronic Digital Narrative of Dennys Lascelles Wool store, Geelong Md Mizanur Rashid, Chin Koi Khoo, Surabhi Pancholi	Australia						
18:20-18:40	11. The drawing of Old Ashkelon. A cross analysis of historical sources and architectural surveys. Laura Aiello, Novella Lecci	Italy						
18:40-19:00	12. Virtual connections between archaeology and stage design Fragments of ancient time in the 'Marble Odyssey' case study Francesca Porfiri, Luca J. Senatore	Italy						

19:30-22:00 | Opening Event
Wiener Planungswerkstatt

1st Keynote

Protecting cultural heritage in times of climate change – a European perspective

Johanna LEISSNER | Fraunhofer-Gesellschaft, Chair of EU OMC Expert Group of member States on Strengthening cultural heritage resilience for climate change – where the Green Deal meets Cultural Heritage

The results of the work of the EU Member States' Expert Group on Strengthening cultural heritage resilience for Climate Change will be presented. 25 EU Member States and three associated countries participated in the expert group, which compiled the current state of play in Europe from January 2021 to July 2022.

The objectives and scope of work for the OMC (open method of coordination) group are specified in the mandate given by the Cultural Affairs Committee of the Council of the European Union on 12 October 2020. The OMC group examined the current and emerging threats and effects of Climate change on cultural heritage, including of cultural landscapes. The focus was given to appropriate adaptation and mitigation measures, to identification of potential risks and to increase resilience of cultural goods in the face of a changing environment while at at the same time avoiding maladaptation. The group also examined the contribution of cultural heritage to combat against climate change in line with the objectives of the Green Deal.

Contents to Digital. Digital to Contents

Chairs: Giorgio VERDIANI | Italy

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09:40 - 13:40 | Wappensaal

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1. Virtual Access and Digitization for Unreachable Sites (VADUS)
Sara Marino, Luca Gugliermetti, Franco Gugliermetti I Italy

2. From massive lasergrammetry to accurate and rational digital models, the case of the "Dado Arnolfiano" in Palazzo Vecchio, Florence
Francesca Meli, Giorgio Verdiani, Marco Tanganelli I Italy

3. Sense: Art without Barriers – How Technologies can enhance art fruition
Manuela Serando, Matteo Ventrella I Italy

4. Innovative archaeological learning using Mixed Reality
Diana Miznazi, Fabian Stroth I Germany

5. Machine Learning Approach on AI Painter: Chinese Traditional Painting Classification and Creation
Kaiqi Qiu, Yingxi Tang, Feiru Wang I China

6. The Raphael's School of Athens immersive experience. A VR digital movie for Cultural Heritage
Paolo Clini, Renato Angeloni, Mirco D'Alessio I Italy

7. Engagement with classical archaeology through producing a digital edition of the 1844 General Description of Sir John Soane's Museum
Claire Frampton I United Kingdom

8. The National Museum of Italian Emigration in Genoa
Maria Emanuela Oddo, Valentina Trimani, Peter Twinn I Italy

9. Old and new virtualization, innovative approaches to digital integrations for the sacred hill of St. Vivaldo, Montaione, Italy
Rocco Di Mattia, Ylenia Ricci, Andrea Pasquali I Italy

10. Storytelling in 3D: Designing Interactive Digital Narratives
Susan Schreibman, Kelly Schoueri, Costas Papadopoulos I The Netherlands

11. MiRA – Mixed Reality as a shared experience in the museum space
Viktor Malakuczi, Miriam Saviano, Teodora Ivkovl, Lorenzo Imbesi I Italy

12. The Portal of Amateur Collaborators and Register of Individual Finds (AMCR-PAS)
Olga Lečbychová, Petr Pajdla, David Novák I Czech Republic

Sponsored Presentation | Wappensaal

14:20 - 14:40

The detail of scanning and the preservation options – Indian culture heritage example
Ladislav Hodinka I CEO Piql CEE, Ladislav Dedik

Session

3D-Technology in Archaeological and Cultural Heritage Documentation, Research and Management

Chairs: Marco BLOCK-BERLITZ, Hendrik ROHLAND | Germany

The usage of 3D technology in archaeology to improve the work-flows of documentation, research and presentation of archaeological sites, cultural heritages sites, and objects remains an ever growing field. In this session we want to talk about practical solutions and showcase current tools in the field of 3D-reconstruction of real-world-objects, be it image- or measurement-based. We are interested in experiences and developments regarding the use of platforms like UAVs (Unmanned Aerial Vehicles) and UUVs (Unmanned Underwater Vehicles) for the collection image- and other sensor-data. Especially in the field of underwater archaeology, practical solutions for reliable georeferencing are still sought after. A very important part of the topic are the software tools for the processing, storage, retrieval and analysis of 3D-data. The first major issue is the securing of data quality, transparency and reproducibility of research processes and results. While proprietary software packages have eased the process of 3D-model creation, they often constitute a black box. Furthermore, high license fees create an entrance barrier, reducing reproducibility of research. Therefore we are especially interested in developments and advancements of open-source software and work-flows for the creation, analysis and publishing of 3D-data.

Another question still under discussion is the development of appropriate tools and data structures to work with and store 3D-models and corresponding information. Nowadays, most of 3D-models generated of archaeological sites and cultural heritage assets have a certain showcase-character: They give a good visual impression of the object of interest, but for further analysis most studies rely on derived products such as plan drawings and ortho-photos, which are easier to annotate and analyse. We are interested in innovative ways, to leverage the potential of 3D-data for documentation, analysis and monitoring of archaeological and cultural heritage sites in the 3Denvironment.

Case studies might, for example, be concerned with the classification and annotation of 3D-models and linking it to data structures for the documentation of qualitative and quantitative information connected to them.

„The possibiliy to represent archaeological data digitally in 3D opens up a lot of opportunities in archaeological research and teaching. I think archaeology is just starting to explore this opportunities. 3D Technology will fundamentally change some aspects of archaeology, especially how we model the archaeological record. These models in turn shape the possibilities of analysis and representation. I'm interested in workflows and technologies that fit into the everyday routines of archaeology and allow us to create the data we need for a playful and creative approach to analyse, learn about, and discuss our common past.“

Statement by the chairs

14:40 - 19:00 | Wappensaal

3D-Technology in Archaeological and Cultural Heritage Documentation, Research and Management

Chairs: Marco BLOCK-BERLITZ, Hendrik ROHLAND | Germany

1. Staying 3D with HBIM? A three-dimensional processing of data from large historic building complexes
Ilka Viehmann, Ulrich Weferling I Germany

2. A Dynamo workflow for the recognition of an HBIM model's architectural period
Konstantina Siountri, Elias Sakellaris, Christos Nikolaos Anagnostopoulos I Greece

3. Visual-Archaeo3D: Towards semi-autonomous graph-based videogrammetric reconstruction pipeline as web service
Marco Block-Berlitz, Dustin Heyer, Patrick Creutzburg, Lukas André Suthe, Paul Werner, Michael Bommhardt-Richter, Rohland Hendrik, Benjamin Ducke, Tim Kaiser, Christian Clemen I Germany

4. Erzbergwerk Rammelsberg (Goslar, Germany): Development of a 3-D model-based database as a tool for documentation, research, and conservation of a complex UNESCO World Heritage Site
Ulrich Knufinke, Sebastian Hoyer, Yahya Ghassoun I Germany

5. Georeferencing archaeological underwater documentation using a redesigned GPS radio buoy
Michael Bommhardt-Richter, Thomas-David Griedel, Marco Block-Berlitz I Germany

6. The roman basilicas – Digital documentation, analysis and communication
Alfonso Ippolito, Martina Attenni, Carlo Bianchini, Marika Griffo, Carlo Inglese I Italy

7. 3D-printing for Cultural Heritage. Structural Recovery and Monitoring Applications of Architectural and Decorative Elements
Valentina Tomei, Maura Imbimbo, Sonia Marfia I Italy

8. 3D Technologies for Protection and Exposition of Authenticity of Historic Building
Sławomir Rosolski, Aleksandra Kamyszek, Adam Siejkowski I Poland

9. A virtuous example of digital reconstructive modelling
Jacopo Bono I Italy

10. Of Gaps and Continuity: Diachronic Digital Narrative of Dennys Lascelles Wool store, Geelong
Md Mizanur Rashid, Chin Koi Khoo, Surabhi Pancholi I Australia

11. The drawing of Old Ashkelon. A cross analysis of historical sources and architectural surveys.
Laura Aiello, Novella Lecci I Italy

12. Virtual connections between archaeology and stage design Fragments of ancient time in the 'Marble Odyssey' case study
Francesca Porfiri, Luca J. Senatore I Italy

Digital evolutions of the City of Vienna

Chairs: Xaver PFAFFENBICHLER | Austria

The City of Vienna and its departments use digital data, tools and artificial intelligence as part of a common digitization strategy for applications to conserve resources and maintain the high quality of life. Using cutting edge technologies and analytical methods, the data are processed to support governmental decisions and may form the basis of a future Digital Twin. Due to the setup and use of novel digital tools, Vienna is a pioneer in the field of Open Government and enables participation as well as transparent processes.

Vienna's strong Open Government Data (OGD) directive means, that the city makes figures and data available for public and free use. Hundreds of data records provide detailed information about one-way streets, real-time information of the public transport, historical aerial images, archaeological data, measurement data for air pollutants or WLAN locations, to name just a few areas.
One example beyond others is the program „Wien gibt Raum" and it's related concept for an innovative management of a major city's public space using a large scale mobile mapping campaign. This campaign is carried out by the Department of Surveying and Mapping, and deals with the acquisition of high quality geodata (georeferenced digital images and 3D data) within the entire city. These data are anonymized and made available to the departments of the City of Vienna in a webbased image data service (Kappazunder). Based on these data, existing objects within the public space can be inspected or surveyed, and may be analysed using artificial intelligence. In the future, these data may also be a sufficient input to feed the idea of a Digital Twin. The City of Vienna takes over in many areas of ICT the pioneer task for the future.

In this session we like to see some examples of high tech solutions and also like to inform you about examples generated by the City of Vienna and our new Digital City Map.

#eGovernment #Open Data #City Map

09:40 - 11:00 | TOP 319

Digital evolutions of the City of Vienna

Chairs: Xaver PFAFFENBICHLER | Austria

1. (Open) Data in the City of Vienna
Franz Xaver Pfaffenbichler I Austria

2. WienBot – the digital assistant of the City of Vienna
Sindre Wimberger I Austria

3. BRISE – Digital Construction Methods
Jasmin Huber | Austria

Session

Planning history and urban heritage. Historical towns atlases as a tool for research, heritage management and participation

Chairs: Jaap Evert ABRAHAMSE, Erik SCHMITZ, Daniel STRACKE | The Netherlands

Cities are concentrations of heritage. A profound understanding of urban heritage is not possible without understanding the dynamics that guided the creation that heritage, as well as its development over time and the problems of conservation and management that arise today. This was recognized as early as 1955, when the International Commission for the History of Towns began the European-Historic Towns Atlas program, aiming at highlighting Europe's shared history through its cities. This has given a major impulse to the production of historical atlases, both within and outside the program, for example the Parigramme series of thematic historical atlases of Paris or the Dutch commercial series. At the same time, GIS and (online) digital cartography have emerged. More and more archives, image repositories and archaeological data are digitally available and can be linked to cartographic backgrounds. Early cadastral maps, which have been crucial from the beginning, are available digitally, for instance in the Dutch HISGIS project.

This calls for rethinking the form of historic atlases. New, multidisciplinary approaches and models of atlases for comparative and synthesizing research are conceivable, both on paper and in digital formats. We cannot escape digitization if we want to compare and synthesize. On the other hand, books are needed to engage the public, as demonstrated by the success of several long-running series. In this session, we want to survey the current state of the art and reinvigorate the conversation about historic atlases, within and outside the EHTA. In this session, we welcome innovative case studies, proposals for new formats and approaches to the city as a historical phenomenon based on historical cartography, as well as contributions on the traditional atlas to appeal to a wider audience, new ideas for making maps and archival sources accessible, and ideas for comparative and synthesizing research.

#urban heritage #mapping #historic atlases

„The European Historic Towns Atlas aims at creating a common basis for comparative and synthetic research concerning the morphology of towns, urban development, and urban heritage. The project started after the second world war, when many European cities needed large-scale reconstruction. This makes the EHTA project one of the longest-running research co-operations in Europe. By now, almost 600 printed map collections have been published in twenty European countries. But the EHTA project was conceived before the digital age and GIS (Geographic Information Systems) which have redefined 'mapping' in the past years. In several countries, atlases and series were created outside the EHTA project, both for a professional and a more general readership. Our session presents papers that reflect current research practices in order to contribute to a rethinking of historic towns atlases in the digital age. The three of us are involved in the creation of historic towns atlases within and outside the framework of the EHTA, as writers, researchers, and editors."

Statement by the chairs

11:20 - 13:20 | TOP 319

Planning history and urban heritage. Historical towns atlases as a tool for research, heritage management and participation

Chairs: Jaap Evert ABRAHAMSE, Erik SCHMITZ, Daniel STRACKE | The Netherlands

1. Cartographic image of city planning
Rafał Eysymontt I Poland

2. Mapping the historical topography of the city of Sibiu/Hermannstadt (Transylvania) in the 18th and 19th centuries
Andrei Nacu I Romania

3. How to define urban plot? Examples from developing the UrbanOnto ontology
Katarzyna Słomska-Przech, Michał Słomski I Poland

4. Then as now: clean water and dry feet. A historical town atlas as time machine for use in modern climate adaptation data analysis
Menne Kosian, Rowin van Lanen I The Netherlands

5. Between Public History and Academic Research. Towards a digital Historical Town Atlas
Niklas Alt I Germany

6. Exploring Historical Cities with the 4D Community Browser. Requirements of a Spatio-Temporal Research Tool
Heike Messemer, Jonas Bruschke, Sander Münster I Germany

Heritage Landscapes in the Age of Social Media

Chairs: Nicolas MARINE, Cecilia ARNAIZ-SCHMITZ | Spain

At the end of the 20th century, documents like the UNESCO's World Heritage Guidelines or the European Landscape Convention proposed new and challenging ways of conceptualizing heritage landscapes, such as Las Medulas in Spain, Wachau in Austria, or the Rice Terraces of Honghe Hani in China. Consequently, in the last two decades, archaeologists, landscape architects and geographers have re-evaluated their tools of spatial assessment in order to better landscape conservation policies. During the same time, social media has grown into an extensive source of data with a certain influence on how we regard cultural heritage. Currently, numerous researchers are advocating the value of social media data to better comprehend our past and how people perceive and live cultural assets.

Therefore, we invite you to send specific projects or theoretical positions that deepen this relationship between heritage landscapes and social media. This session delves into several questions:
• Is social media useful for recognizing and adapting to changes in landscape character and meaning?

• Is it bringing a more democratic understanding of the landscape and its conservation?
• Does it serve local communities to express their feelings towards governance policies?
• How can we link the application of user generated content to heritage with the digitalization principles of the EU Next Generation plan?
• Is it possible to relate the use of user data with the decentralization concepts of Web 3.0?

#Culural landscape #Social Media

14:00 - 16:40 | TOP 319

Heritage Landscapes in the Age of Social Media

Chairs: Nicolas MARINE, Cecilia ARNAIZ-SCHMITZ | Spain

1. Cultural Tourism in the Age of Social Media – Cases of Roman Heritage in Spain
Eirini Tsakiri, Afroditi Kamara I Greece

2. Urban Forest Twitting: Social media as more-than-human communication in Tokyo's Rinshinomori Park
Diego Martín Sánchez, Noemí Gómez Lobo I Spain

3. Machine learning as a tool for analysis of cultural ecosystem services in historic urban environments: Case of Jaffa, Israel
Komal Potdar, Kedar Dabhadkar I The Netherlands

4. Using Maxent to predict landscape interest: A case study in Madrid
Luis Santos-Cid I Spain

5. Assessing the impact of heritage-making: the SoPHIA Model
Michela Marchiori, Mauro Baioni, Annalisa Cicerchia, Paola Demartini, Lucia Marchegiani, Flavia MARUCCI I Italy

6. ISTER Atlas and Interactive Tool – The Geo-Tools in ISTER – ConnectIng hiSTorical Danube rEgions Roman routes
Clemens Beyer, Blaž Barborić, Manfred Schrenk, Georg Neugebauer I Austria

7. How to build a story around cultural heritage (The ISTER – Approach)
Torsten Beck, Susanne Dahm I Austria

8. Social media platforms and knowledge exchange. TRAHERE project as an instrument for the transmission of heritage culture
Graziella Trovato I Spain

Afghanistan – Scientists, Data Gathering, and Knowledge Transfer

Chairs: Alireza IBRAHIMI | Canada, Zakaria AHMADI | Afghanistan, Jin-ho PARK | South Korea, Irmengard MAYER | Austria

Afghanistan is a country with an ancient history and the place of the rule of different empires throughout history.In this country can be seen the ancient relics of many civilizations, all of which show the cultural richness and historical background of this ancient country.After two decades of international aid, the country has not been able to resolve many of the problems and internal ethnic conflicts.

Given the current situation in Afghanistan, this year of Round Table is trying to address the situation of scientists, domestic experts, and local scholars and seek solutions to transfer knowledge and gather data (documents and records, oral histories, photos, etc…) so that it can utilize this information in the future to reconstruct and preserve cultural heritage:

We are expecting impulse papers (5-10 minutes) on following topics:

· The cultural heritage of war zone
· Methods and technologies to gather information and transfer knowledge in countries at war
· Methods and techniques to collect and transfer oral histories
· Situation of Afghanistan's Antiquities and cultural heritage
· Status of Scientists, local experts, and domestic scholars working in Cultural Heritage
· Shortcomings and needs in the field of cultural heritage
· The facilities that scientists need in the field of Cultural Heritage to protect antiquities
· Problems of scientists to protect antiquities (political; economic, technologically)
· The role of women in preserving cultural heritage
· Managing and preserving cultural heritage in the current situation
· Problems facing geography, architecture, and tourism
· Documenting unregistered cultural heritage

#Scientists' Cultural Heritage #transfer of knowledge #documenting #recording #data gathering #oral histories

Afghanistan – Scientists, Data Gathering, and Knowledge Transfer

Chairs: Alireza IBRAHIMI | Canada, Zakaria AHMADI | Afghanistan, Jin-ho PARK | South Korea, Irmengard MAYER | Austria

1. Documentation of Cultural Heritage of Traditional and Modern Architecture in Kabul
Tayebeh Nazarian, Asadullah Movahedi I Afghanistan

2. Environmental Situation in Historical Areas. Environment and cultural Heritage, Bamyan, Afghanistan
Jawad Nazari, Soghra Noori I Iran

3. Investigating the Effect of Malicious Factors on Ancient Sites to Maintain and Protect Them Using new technology the Geographic Information System (GIS); Case Study: Budda-Bamyan
Qurban Ali Amiri, Mahboba Yousofi I Afghanistan

4. Measurement and investigation of surface displacements caused by earthquakes using Differential Interferometric Synthetic Aperture Radar on historical monuments area
Mohammad Naseri I Iran

5. Using the method of collecting behavioural patterns of citizens in the his-torical axis of Timur_Shahi in Kabul city to increase the synomorphy be-tween the physical space and the behaviour
Masoud Hamraei I Afghanistan

6. The role of women in preserving cultural heritage A Review Article
Tahira Rezaei I Afghanistan

Panel

Next Generation of Challenges for the Implementation of the World Heritage Convention

Chairs: Ulrike HERBIG | Austria

During a panel, a format that focuses on the discussion of current topics in the field and on short presentations, we want to talk together about the challenges, potentials and conflicts in World Heritage management and exchange ideas. What needs to be taken into consideration when implementing the Convention? What needs to be done differently than in the last 50 years and what new tools and instruments are needed in managing a new site?

These and other questions will be discussed at the panel together with scientists on site and online. The location for this panel could not be better than the Ahnensaal of the Federal Monuments Authority Austria.

#preventive monitoring #capacity building #international collaboration

10:00 - 13:00 | Bundesdenkmalamt / Federal Monuments Authority Austria Ahnensaal

Next Generation of Challenges for the Implementation of the World Heritage Convention

Chairs: Ulrike HERBIG | Austria

Soehardi Hartono I President ICOMOS Indonesia (online)

Nisa Uajy I Vice Presdient ICOMOS Indonesia (online)

Wijayanto Punto I Vice Presdient ICOMOS Indonesia (online)

Maya Rosa | ICOMOS Indonesia

Laretna Trisnantari Adishakti | ICOMOS Indonesia

Prima Dona Hapsari I Institut Seni Indonesia Yogyakarta (on-site)

Danang Febriyantoko I Institut Seni Indonesia Yogyakarta (on-site)

Bambang Pramono I Institut Seni Indonesia Yogyakarta (on-site)

Caroline Jäger-Klein I ICOMOS Asutria (on-site)

Doris Grandits I ICOMOS Austria (on-site)

Round Table

Digitales Gedächtnis in Österreich

Chairs: Johannes TINTNER | Austria

The "Digitales Gedächtnis in Österreich" is a cross-institutional consortium with the goal of promoting the digital transformation of Austria's natural, cultural and artistic heritage through strategy development, advice and information processing for institutions, sponsors, politicians and the public. The platform consists of Austrian Museum Association, Sabine Fauland, Federal Chancellery, Manfred Gruber, ÖAW: Austrian Center for Digital Humanities and Cultural Heritage (ACDH-CH) / CLARIAH-AT, Karlheinz Mörth, Time Machine Organization Austria, Thomas Aigner, Vienna University of Technology: Institute for Visual Computing & Human-Centered Technology, Robert Sablatnig, University of Graz: Institute Center for Information Modeling – Austrian Center for DigitalnHumanities / CLARIAH-AT, Walter Scholger.

Twice a year, the #digiRoundtable event format connects initiators and employees of projects and initiatives dedicated to the digital transformation and communication of Austrian cultural heritage, thus creating networking and a platform for exchange and cooperation. After an overview of the initiative, we invite three best practice examples from Austria to present their project shortly.

OPEN ARCHAEOLOGY

JOURNAL

FRIDAY
NOVEMBER 11

FRIDAY, NOVEMBER 11

	Wappensaal	Top 319	Wiener Planungswerkstatt	Federal Monumentum Board (Hofburg)	University of Vienna: Inst. for Numismatic
08:30-09:00	KEYNOTE 2: Julian Richards	X	X	X	X

Wappensaal — Preservation of cultural heritage data: challenges and opportunities during the life cycle of archaeological data

Time	Session
09:00-09:20	1. ARIADNE infrastructure: Benefits and requirements of data providers. *Guntram Geser	Austria*
09:20-09:40	2. Toward standardised vocabularies for Norwegian archaeology. *Espen Uleberg, Mieko Matsumoto, Alexis Pantos, Letizia Bonelli	Norway*
09:40-10:00	3. The ARIADNE Mortuary Data Application Profile. *Edeltraud Aspöck, Achille Felicetti, Maria Theodoridou	Austria*
10:00-10:20	4. Integrating data on early medieval graves: Mapping the THANADOS database to the ARIADNE infrastructure with the ARIADNEplus Mortuary Data Application Profile. *Edeltraud Aspöck, Stefan Eichert, Nina Richards	Austria*
10:20-10:40	5. Following the Thread: Integrating SORAN's Dataset into ARIADNEplus. *Yuichi Takata, Peter Yanase	Japan*
10:40-11:00	COFFEE BREAK
11:00-11:20	6. The Aggregation of ROAD Data in the ARIADNE Pipeline: Pitfalls and Successes. *Andrew W. Kandel, Zara Kanaeva, Miriam N. Haidle	Germany*
11:20-11:40	7. Aggregating coin find data to the ARIADNE+ portal. Challenges of a specialist domain. *David Wigg-Wolf, Anna-Lisa Pfeiffer, Karsten Tolle	Germany*
11:40-12:00	8. Cypriot archaeology in the ARIADNE Portal: the aggregation of the Cypriot Medieval Coins and the Cypriot inscriptions' collections. *Valentina Vassallo	Cyprus*
12:00-12:20	9. Prehistoric Mining Data for ARIADNE. *Gerald Hiebel, Brigit Danthine, Manuel Scherer-Windisch	Austria*
12:20-12:40	10. Joining It All Up: New research questions combining site and artefact data in ARIADNE. *Julian Richards	United Kingdom*
12:20-12:40	11. Preserving Heritage through Publishing Archives. *Elizabeth Fentress, Stéphanie Satre, Agnès Tricoche	United Kingdom*
12:40-13:00	12. ARIADNEplus project: the Ottoman heritage in Dobruja, Romania. *Radu-Alexandru Dragoman, Tiberiu Vasilescu, Iulian Bîrzescu	Romania*
13:20-14:00	LUNCH BREAK

Wappensaal — Digital approaches towards analysing and presenting spatial data in archaeology

Time	Session
14:00-14:20	1. Over hill and dale. Reconstructing patterns of movement in alpine landscapes for Early Holocene hunter-gatherer-groups. *Caroline Posch, Brigit Danthine	Austria*
14:20-14:40	2. "A GIS-based spatial analysis approach to study the topography of Phocis (Central Greece) during the Early and Middle Byzantine period (4th-12th c. A.D.)". *Nektaria Chetzogiannaki, Apostolos Sarris	Greece*
14:40-15:00	3. Towards an integrated cultural resource management system: The Silk Road HGIS online platform. *Wenshan Chen	Italy*
15:00-15:20	4. Archaeology at the Danube – Using non-invasive ground and aerial prospection methods to document prehistoric settlement traces at the Bisamberg near Vienna, Austria. *Franziska Reiner, Jakob Gallist, Katharina Reby-Salisbury	Austria*
15:20-15:40	5. Discovering the Urbanity of Nomad Mongolia. Using Locational Modelling and Deep Learning for Space-Borne Large-Scale Survey. *Tom Carl Grenda, Hendrik Rohland, Marco Block-Berlitz	Germany*
15:40-16:00	6. Hillforts in Britain and Italy – Countrywide automated search for un-known sites using LiDAR and Deep Learning. *Jürgen Landauer, Giacomo Fontana, Simon Maddison	United Kingdom/Germany*
16:00-16:20	7. Zonal reconstruction of daylighting in historic built environments: A workflow to model and evaluate light in spaces and over periods. *Lars Oliver Grobe, Andreas Noback, Stephen Wasilewski	Switzerland*
16:20-16:40	Discussion
16:40-17:00	COFFEE BREAK
17:00-18:00	Poster Session*

Top 319 — Cultural Heritage and the Metaverse: linking the cyber and the physical to protect and share cultural heritage

Time	Session
09:00-09:20	1. The potential of reverse engineered physical models – Digital twins as an innovative method for technical and cultural heritages. *Benjamin Schmid, Boris Wenzel, Christiane Weber	Austria*
09:20-09:40	2. Multimodal Digitization Concepts for Acoustic Cultural Heritages. *Dominik Ukolov	Germany*
09:40-10:00	3. Digital Twins for the conservation of cultural heritage. *Alexander Kulik, Norman Hallermann, Constanze Roth	Germany*
10:00-10:20	4. AR and VR Enabled Live Recording of Archaeological Underwater Sites. *Thomas-David Griedel, Michael Bommhardt-Richter, Lukas André Suthe, Marco Block-Berlitz	Germany*
10:20-10:40	5. VRexhibition: A Virtual Reality experience in an exhibition at the mu-nicipal Art Gallery of Chania, Crete. *Dania Panagiota, Helena Theodoropoulou, Anna Karagianni	Greece*
10:40-11:00	COFFEE BREAK
11:00-11:20	6. Promoting Crafts and Cultural Heritage of the Himalayan State of Uttarakhand, India: Designing a Mobile Application to Visualise Applications of Crafts in Interior Spaces, leading to e-Commerce. *Smriti Saraswat, Sakshi Pandey, Harsha Verma, Utkarsha Kulkarni, Gaurav Raheja	India*
11:20-11:40	7. Experiencing Immersive Landscape Transformation at Stonehenge: The Application of Free-to-roam Virtual Reality to Communicating Scheme Impacts in Relation to the A303 Amesbury to Berwick Down (Stonehenge) Scheme. *Chris Moore, Toby Pettinger	United Kingdom*
11:40-12:00	8. At the intersection of performance, the archive and the digital: a review of a collaboration between Digital Curation and Performance postgraduate students. *Richard Higgs	South Africa*
12:00-12:20	9. Strategy for Cultural Resistance. *Sajjad Gheytasi	Iran*
12:20-12:40	10. Defining a Metaverse for the Cultural Heritage. *Erica Cantaluppi, Lorenzo Ceccon	Italy*
12:40-13:00	11. Summer overheating mitigation in urban areas of rich cultural heritage: The Smart and Urban Tree Approach. *Ulrich PONT*
13:20-14:00	LUNCH BREAK
14:00-15:00	Exhibitors afternoon

Top 319 — Computer-based Visualisation of Architectural Cultural Heritage in Education – Defining standards, methodology and implementation of courses in higher Education

Time	Session
15:00-15:20	1. From the Critical Digital Model to the Master Model. *Fabrizio Ivan Apollonio, Federico Fallavollita, Riccardo Foschi	Italy*
15:20-15:40	2. Scientific Reference Model – A methodological approach in hypothetical 3D reconstruction of architecture. *Piotr Kuroczyński, Igor Piotr Bajena, Irene Cazzaro	Germany/Italy*
15:40-16:00	3. The De Jonge Wiki for Building Research – A Semantic Database used in Academic Education. *Frieder Leipold	Belgium*
16:00-16:20	COFFEE BREAK
16:20-18:00	Arbeitstreffen AG	Digitale Rekonstruktion

Wiener Planungswerkstatt

Time	Session
10:40-13:00	Applying VMAST in transformative visitor managment
13:00-14:00	LUNCH BREAK
14:00-18:00	Arbeitstreffen AG	ICOMOS Kultur & Recht. 1. Die Umsetzung der Konvention im Planungsrecht der Länder. *Gilbert Pomaroli*. 2. Die Umsetzung der Konvention in den Gemeinden. *Johann Hornyik*. 3. Welterbekonvention und Energiesparinvestitionen, insbes. Photovoltaik-Anlagen. *Günter Dinhobl*

Federal Monumentum Board (Hofburg) — Cultural Property Protection: Currents in Law and Law Enforcement

Time	Session
09:40-10:00	1. The role of Police in the Protection of Cultural Property. *Anita Gach	Austria*
10:00-10:20	2. Protection of Cultural Goods in Austria. *Ulrike Emberger	Austria*
10:20-10:40	3. Protection of cultural goods in Austria – legal framework. *Hannah Leodolter	Austria*
10:40-11:00	4. The role of Customs in the Protection of Cultural Property. *Gerhard Marosi	Austria*

Federal Monumentum Board — A European Data Space for Cultural Heritage: Closing the gap

Time	Session
14:00-14:20	1. HERIS – The Heritage Information System of the Austrian Federal Monuments Authority. *Rene Ployer, Christoph Hütterer, Florian Leitner	Austria*
14:20-14:40	2. Merging GIS and BIM for Architectural Heritage. *Tobias Hoelke, Marius Weck, Robert Seuß	Germany*
14:40-15:00	3. Digital, and then what? An integrated data framework for sustainable heritage management in dynamic landscapes. *Rowin Van Lanen, Menne Kosian	The Netherlands*
15:00-15:20	4. Action Group ECHO – an introduction. *Jurn Buisman	The Netherlands*

University of Vienna: Inst. for Numismatic

Time	Session
14:00-18:00	Digital Collections and Presentation of Cultural Heritage

19:30-22:30 | Conference Dinner
Wiener Rathauskeller

*Poster Session

#	Poster	#	Poster
1	Constructions of collective knowledge as a pedagogical resource in childhood. A look at RWYC Latin America. *Fabiola Colmenero Fonseca	Spain*	8	Chances to preserve GDR buildings for the next generation	Serial manufactured MLK-steel buildings – Record and analyse. *Annkathrin Heinrich	Germany*
2	Digital dissemination to support the rebirth of a neglected built heritage, the case of the St. Augustine complex in Fabriano, Italy. *Margherita Soldaini	Italy*	9	A Comparison of Selected Photogrammetric Techniques for Creating 3D Models of Cultural Objects with Specular Surface. *Andrea Christova	Slovakia/Greece*
3	An innovative multi-analytical approach for the characterization of Iron-gall inks. *Salvatore Caterino	Italy*	10	Gudiashvili Square- A model of Urban Archaeology. *Tatia Butsuradze	Georgia*
4	Digital technologies for neglected spaces preservation. *Sofia Sapucci	Italy*	11	3D Visualisation Digitisation of Natural Monuments (ViDiNa) A combination of photogrammetry and georadar as an assessment basis in the evaluation of interventions in natural and archaeological monuments. *Franz Eschner	Austria*
5	Investigating an automatic segmentation and classification of archaeological magnetic features through Artificial Intelligence (AI) Techniques. *Ilias-Marios Sarris	Greece*	12	Using Modern Technology to Conserve Human Indigenous Knowledge. *Najmeh Hassas*
6	ArcheoTales. *Michael Anranter	Austria*	13	Erzbergwerk Rammelsberg (Goslar, Germany): Development of a 3-D model-based database as a tool for documentation, research, and conservation of a complex UNESCO World Heritage Site. *Ulrich Knufinke	Germany*
7	How does History taste like? A closer look on food archaeology. *Elisabeth Monamy	Austria*	14	Online platforms as tools for authentic collaboration in the ICH of displaced peoples. *Isabel Thomas	UK/Austria*

2nd Keynote

Joined Up Thinking: The challenges of large scale data integration

Prof Julian D. RICHARDS, Director, Archaeology Data Service, University of York

Research e-infrastructures, digital archives, and data services have become important pillars of scientific enterprise that in recent decades has become ever more collaborative, distributed, and data intensive. The archaeological research community has been an early adopter of digital tools for data acquisition, organization, analysis, and presentation of research results of individual projects. However, the provision of e-infrastructure and services for data sharing, discovery, access, and re-use has lagged behind. This situation has been addressed by ARIADNE. This EU-funded network has developed an e-infrastructure that enables data providers to register and provide access to their digital resources through the ARIADNE data portal, facilitating discovery, access, and research.

ARIADNE has aggregated resources from over 30 data providers, spanning over 40 countries and 4 continents. The ARIADNE portal provides online access to over 3.2 million research resources, with the number increasing daily. In the current phase of the project, ARIADNEplus, there has been an explicit effort to increase the temporal and geographical range of resources, and to extend the thematic coverage. However, it is equally important that we do not simply create another data silo, just larger than previous efforts. The ARIADNE Knowledge Base is therefore based upon Linked Open Data technologies and is underpinned by a flexible and extensible architecture.

We have also been keen not to "make a great heap" of all the data and, learning from previous data aggregation projects, we have defined a sub-set of the CIDOC-CRM as a strict ontology and paid close attention to data standards and controlled vocabularies to achieve a high level of interoperability. This paper will discuss some of the challenges of large-scale data integration and describe the approaches adopted to ensure that the ARIADNE Knowledge Base is an effective tool for resource discovery. It will seek to demonstrate how the portal can also be used to address major research questions, and how the Linked Open Data approach provides flexibility, with the portal architecture enabling multiple combinations and presentations of the same underpinning data.

Session

Preservation of cultural heritage data: challenges and opportunities during the life cycle of archaeological data

Chairs: Edeltraud ASPÖCK, Guntram GESER | Austria, Julian RICHARDS | United Kingdom

Heritage actors have long been committed to digital transformation as a privileged mean for the long-term dissemination, conservation and valorisation of cultural heritage. Digitisation is also a key medium in shaping a more inclusive and sustainable society, especially in times marked by profound changes and crisis. The exponential amount and much varied nature of data produced in the context of archaeological interventions require the implementation of digital tools suitable to international scientific standards and procedures.

ARIADNEplus (https://ariadne-infrastructure.eu) is a project funded by the European Commission to provide a digital infrastructure for archaeological datasets which enables sharing, discovery, and research across national and regional borders. The ARIADNEplus consortium comprises 41 partners from European and international national heritage authorities, archaeological research institutions and associations, data repository providers and technology partners. The project supports a more sustainable archaeological practice by promoting investment into long-term strategies for archaeological data preservation for the next generations with the help of technological solutions. The ARIADNEplus catalogue includes currently around 2 million records, comprising multiple archaeological data types and subdomains.

The session invites papers to reflect on the development and application of standards during the archaeological data life cycle, with a focus on questions of interoperability and sustainability. What are the challenges during the several processing steps in a project from data creation to usage, long-term data storage and re-use? How do data record standards and vocabularies enhance access to datasets and what was the experience of ARIADNEplus data-providing partners and associated partners when aggregating their data in the project? How is it possible to use aggregated archaeological data for research across multiple providers and subdomains, and hence valorise individual datasets? In what ways do initiatives such as ARIADNE contribute to protect, research and valorise Cultural Heritage? Does the infrastructure lead to an increased sustainability of archaeological research practices? Which changes would be necessary to move closer to achieve these aims?

#cultural heritage data #data life-cycle #digital infrastructure #sustainability #archaeology

09:00 - 13:00 | Wappensaal

Preservation of cultural heritage data: challenges and opportunities during the life cycle of archaeological data

Chairs: Edeltraud ASPÖCK, Guntram GESER | Austria, Julian RICHARDS | United Kingdom

1. ARIADNE infrastructure: Benefits and requirements of data providers
Guntram Geser I Austria

2. Toward standardised vocabularies for Norwegian archaeology
Espen Uleberg, Mieko Matsumoto, Alexis Pantos, Letizia Bonelli I Norway

3. The ARIADNE Mortuary Data Application Profile
Edeltraud Aspöck, Achille Felicetti, Maria Theodoridou I Austria

4. Integrating data on early medieval graves: Mapping the THANADOS database to the ARIADNE infrastructure with the ARIADNEplus Mortuary Data Application Profile
Edeltraud Aspöck, Stefan Eichert, Richards Nina I Austria

5. Following the Thread: Integrating SORAN's Dataset Into ARIADNEplus
Yuichi Takata, Peter Yanase I Japan

6. The Aggregation of ROAD Data in the ARIADNE Pipeline: Pitfalls and Successes
Andrew W. Kandel, Zara Kanaeva, Miriam N. Haidle I Germany

7. Aggregating coin find data to the ARIADNE+ portal. Challenges of a specialist domain
David Wigg-Wolf, Anna-Lisa Pfeiffer, Karsten Tolle I Germany

8. Cypriot archaeology in the ARIADNE Portal: the aggregation of the Cypriot Medieval Coins and the Cypriot inscriptions' collections
Valentina Vassallo I Cyprus

9. Prehistoric Mining Data for ARIADNE
Gerald Hiebel, Brigit Danthine, Manuel Scherer-Windisch I Austria

10. Joining It All Up: New research questions combining site and artefact data in ARIADNE
Julian Richards I United Kingdom

11. Preserving Heritage through Publishing Archives
Elizabeth Fentress, Stéphanie Satre, Agnès Tricoche I United Kingdom

12. ARIADNEplus project: the Ottoman heritage in Dobruja, Romania
Radu-Alexandru Dragoman, Tiberiu Vasilescu, Iulian Bîrzescu I Romania

14:00 - 16:40 | Wappensaal

Digital approaches towards analysing and presenting spatial data in archaeology

Chairs: Eleftheria PALIOU, Irmela HERZOG, Marco BLOCK-BERLITZ, Hendrik ROHLAND | Germany

1. Over hill and dale. Reconstructing patterns of movement in alpine landscapes for Early Holocene hunter-gatherer-groups
Caroline Posch, Brigit Danthine I Austria

2. A GIS-based spatial analysis approach to study the topography of Phocis (Central Greece) during the Early and Middle Byzantine period (4th-12th c. A.D.)
Nektaria Chetzogiannaki, Apostolos Sarris I Greece

3. Towards an integrated cultural resource management system: The Silk Road HGIS online platform
Wenshan Chen I Italy

4. Archaeology at the Danube – Using non-invasive ground and aerial prospection methods to document prehistoric settlement traces at the Bisamberg near Vienna, Austria
Franziska Reiner, Jakob Gallistl, Katharina Reby-Salisbury I Austria

5. Discovering the Urbanity of Nomad Mongolia. Using Locational Modelling and Deep Learning for Space-Borne Large-Scale Survey
Tom Carl Grenda, Hendrik Rohland, Marco Block-Berlitz I Germany

6. Hillforts in Britain and Italy – Countrywide automated search for un-known sites using LiDAR data and Deep Learning
Jürgen Landauer, Giacomo Fontana, Simon Maddison I Great Britain/Germany

7. Zonal reconstruction of daylighting in historic built environments: A workflow to model and evaluate light in spaces and over periods
Lars Oliver Grobe, Andreas Noback, Stephen Wasilewski I Switzerland

Poster Session

Chairs: Peter DORNINGER | Austria

1. Constructions of collective knowledge as a pedagogical resource in childhood. A look at RWYC Latin America
Fabiola Colmenero FONSECA, Kevin Alexander Echeverry BUCURÚ, Diana María Blanco RAMíREZ | Spain

2. Digital dissemination to support the rebirth of a neglected built heritage, the case of the St. Augustine complex in Fabriano, Italy
Margherita SOLDAINI Alexia CHARALAMBOUS, Giorgio VERDIANI | Italy

3. An innovative multi-analytical approach for the characterization of Iron-gall inks
Salvatore CATERINO, Federica CAPPA, Claudia CRESTINI| Italy

4. Digital technologies for neglected spaces preservation
Sofia SAPUCCI, Ylenia RICCI Andrea PAQUALI | Italy

5. Investigating an automatic segmentation and classification of archaeological magnetic features through Artificial Intelligence (AI) Techniques.
Ilias-Marios SARRIS, Dimitris CHALKIADAKIS, Apostolos SARRIS | Greece

6. ArcheoTales
Michael ANRANTER | Austria

7. How does History taste like? A closer look on food archaeology
Elisabeth MONAMY | Austria

8. Chances to preserve GDR buildings for the next generation | Serial manufactured MLK-steel buildings – Record and analyse
Annkathrin HEINRICH | Germany

9. A Comparison of Selected Photogrammetric Techniques for Creating 3D Models of Cultural Objects with Specular Surface
Andrea CHRISTOVA | Slovakia/Greece

10. Gudiashvili Square- A model of Urban Archaeology
Tatia BUTSURADZE | Georgia

11. 3D Visualisation Digitisation of Natural Monuments (ViDiNa) A combination of photogrammetry and georadar as an assessment basis in the evaluation of inter- ventions in natural and archaeological monuments
Franz Eschner | Austria

12. Using Modern Technology to Conserve Human Indigenous Knowledge
Najmeh Hassas | Poland

13. Erzbergwerk Rammelsberg (Goslar, Germany): Development of a 3-D model-based database as a tool for documentation, research, and conservation of a complex UNESCO World Heritage Site.
Ulrich Knufinke I Germany

14. Online platforms as tools for authentic collaboration in the ICH of displaced peoples
Isabel Thomas | UK/ Austria

Session

Cultural Heritage and the Metaverse: Linking the Cyber and the Physical to protect and share Cultural Heritage

Chairs: Lorenzo CECCON | Italy

This session will focus on the potential synergies and issues stemming from the "metaverse" in the field of Cultural Heritage, potentially fostering and helping research and dissemination endeavours, but also distorting its representation, fruition, and market dynamics. The session will be an investigation on innovative approaches vis-à-vis the challenges at stake in the field after 50 years from the UNESCO World Heritage Convention to take advantage of the new opportunities opened up by a series of converging technologies – including Digital Surveying, Digital Twins, Semantic Databases, NFTs and Virtual/Augmented/Mixed Reality – while minimizing their potential drawbacks, especially as to documentation, research, management and education.

Among others, we expect contributions on the following topics:

• how to model: Realism, lose realism, the uncanny valley, and the Stones of Venice: what is the "essence" of Cultural Heritage and its representation. Devising innovative best practices.
• why to model: NFTs, IP rights, digital cultural layering: aligning different goals, e.g. research, business, preservation, dissemination. New ways of patronage?
• what to model: Cultural Heritage, Digital Twins, and the Information Loop. Can we learn more than we model? Modelling between representation and simulation: the metaverse as a new sponsored research lab?
• case studies: experiences, proofs of concept and prospected approaches.

#Cultural Heritage #Digital Twin #NFTs #Metaverse #Modelling

„The buzzword Metaverse has become mainstream, yet it's still unclear what it exactly means and what it may imply for „serious" users. However, as with game engines – which have been shaping and characterizing many recent Cultural Heritage projects – the Metaverse seems a promising framework in helping protect and share Cultural Heritage. Hence this session, where the topic will be discussed based on research experiences which already explored areas we can ascribe to this field, as well as speculations about what a Metaverse for Cultural Heritage may look like, and what promising unique features it could bring to the field."

Statement by the chairs

09:00 - 13:00 | TOP 319

Cultural Heritage and the Metaverse: Linking the Cyber and the Physical to protect and share Cultural Heritage

Chairs: Lorenzo CECCON | Italy

1. The potential of reverse engineered physical models – Digital twins as an innovative method for technical and cultural heritages
Benjamin Schmid, Baris Wenzel, Christiane Weber I Austria

2. Multimodal Digitization Concepts for Acoustic Cultural Heritages
Dominik Ukolov I Germany

3. Digital Twins for the conservation of cultural heritage
Alexander Kulik, Norman Hallermann, Constanze Roth I Germany

4. AR and VR Enabled Live Recording of Archaeological Underwater Sites
Thomas-David Griedel, Michael Bommhardt-Richter, Lukas André Suthe, Marco Block-Berlitz I Germany

5. VRexhibition: A Virtual Reality experience in an exhibition at the municipal Art Gallery of Chania, Crete
Dania Panagiota, Helena Theodoropoulou, Anna Karagianni I Greece

6. Promoting Crafts and Cultural Heritage of the Himalayan State of Uttarakhand, India: Designing a Mobile Application to Visualise Applications of Crafts in Interior Spaces, leading to e-Commerce
Smriti Saraswat, Sakshi Pandey, Harsha Verma, Utkarsha Kulkarni, Gaurav Raheja I India

7. Experiencing Immersive Landscape Transformation at Stonehenge: The Application of Free-to-roam Virtual Reality to Communicating Scheme Impacts in Relation to the A303 Amesbury to Berwick Down (Stonehenge) Scheme
Chris Moore, Toby Pettinger I United Kingdom

8. At the intersection of performance, the archive and the digital: a review of a collaboration between Digital Curation and Performance postgraduate students
Richard Higgs I South Africa

9. Strategy for Cultural Resistance
Sajjad Gheytasi I Iran

10. Defining a Metaverse for the Cultural Heritage
Erica Cantaluppi, Lorenzo Ceccon I Italy

11. Summer overheating mitigation in urban areas of rich cultural heritage: The Smart and Urban Tree Approach
Ulrich PONT

Exhibitor Afternoon

1. piql CEE

2. ETT S.p.A.

3. MICROBOX - book2net

4. Bron Elektronik AG

5. Centre of Excellence DTC Lazio

6. TTI GmbH - TGU Smartmote

7. beyondarts GmbH

8. ARIADNEplus

9. 4D-IT GmbH

10. 7Reasons Media GmbH

Round Table

Computer-based Visualisation of Architectural Cultural Heritage in Education – Defining standards, methodology and implementation of courses in higher education sector

Chairs: Piotr KUROCZYⵏSKI | Germany, Fabrizio Ivan APOLLONIO, Federico FALLAVOLLITA | Italy, Krzysztof KOSZEWSKI | Poland

Today architects, art historians and archaeologists use so-called Virtual 3D Reconstructions to study and represent the past. The large production of these studies and models has encouraged an international debate about the scientific reliability of these (re-)constructions. Two important theoretical guidelines have been drawn up in this regard, the London Charter (2006, 2012) and the Seville Principles (2013). These documents have fixed general guidelines on the scientific nature of Computer-based Visualisation of Architectural Cultural Heritage models. However, despite several studies which were dedicated to similar subjects, so far there are no shared standards or applied methods on this specific topic, and furthermore there is no common approach of teaching this kind of research methodology and tools in the higher education sector.

The main objective of the ongoing EU project Computer-based Visualization of Architectural Cultural Heritage (CoVHer) is to define applicable guidelines and operational methodologies aimed at the study, as well as the visualization and evaluation of the 3D models, in accordance with the UNESCO Charter on the Preservation of Digital Heritage (2009) and the FAIR principles (2016).
For those reasons we would like to discuss in the round table further crucial issues, beside the abovementioned
definition of methodology and documentation. In particular we will address following questions:

• Can we agree on common groundwork in the reconstruction process, supporting the scientific value of the outcome?
• Can we define a kind of a master, exemplary, critical digital, scientific reference model to serve the standardisation?
• How should we teach CoVHer in a way, that the outcome can be used as an instrument for scientific dissemination as well as a three-dimensional reference document for scholars of Cultural Heritage?
• How can CoVHer be anchored in the curriculum of architecture, art history and archeology studies in the higher education sector?
• How should the courses and lesson plan look like to accomplish the objectives?
• How can we stimulate innovative learning and teaching practices?

#(hypothetical, sourced-based) digital 3D reconstruction #methodology #standardisation #education #(online)courses

15:00 - 16:00 | TOP 319

Computer-based Visualisation of Architectural Cultural Heritage in Education – Defining standards, methodology and implementation of courses in higher education sector

Chairs: Piotr KUROCZYNSKI | Germany, Fabrizio Ivan APOLLONIO, Federico FALLAVOLLITA | Italy, Krzysztof KOSZEWSKI | Poland

1. From the Critical Digital Model to the Master Model
Fabrizio Ivan Apollonio, Federico Fallavollita, Riccardo Foschi | Italy

2. Scientific Reference Model – A methodological approach in hypothetical 3D reconstruction of architecture
Piotr Kuroczyński, Igor Piotr Bajena, Irene Cazarro | Germany/Italy

3. The De Jonge Wiki for Building Research – A Semantic Database used in Academic Education
Frieder Leipold I Belgium

Working Group | 16:20 - 18:00 | TOP 319

Meeting of the Working Group "Digitale 3D-Rekonstruktion

Chairs: Piotr KUROCZYNSKI, Sander MÜNSTER, Jan LUTTEROTH | Germany

Discussion on the methodology and standardisation of digital source-based 3D reconstruction following the Round Table "Computer-based Visualisation of Architectural Cultural Heritage in Education"

https://digitale-rekonstruktion.info/

Training | 10:40 - 13:00 | Wiener Planungswerkstatt

Applying VMAST in transformative visitor management

Chairs: Cecilie SMITH-CHRISTENSEN | Norway

This training will introduce and provide training on the use of the World Heritage Visitor Management Assessment & Strategy Tool (VMAST) – the newest addition to the UNESCO World Heritage Sustainable Tourism Toolkit. VMAST is developed as a voluntary self-assessment and strategy development tool assisting World Heritage site management authorities improve visitor management for the protection of heritage values while localising the UN Sustainable Development Goals.

The training will follow the methodology set out through World Heritage Catalysis and draw upon practical experiences across World Heritage sites already making use of VMAST. You will also learn about supporting resources and get access to the emerging community of practice applying VMAST in transformative tourism.

To get the most out of this workshop we recommend registering in advance. By registering for the training before 6.11.2022 you will receive onboarding support in advance so you can actively engage with the tool on a temporary access account during the training. Participants not registering in advance can still attend the session but will not have access to VMAST unless already signed up with an account. VMAST is freely available to all World Heritage sites through the UNESCO World Heritage Sustainable Tourism Programme and to everyone else against a small hosting fee.

#VMAST #World Heritage #visitor management

Working Group | 14:00 - 18:00 | Wiener Planungswerkstatt

Arbeitstreffen der ICOMOS AG Kultur & Recht

Chair: Manfred MATZKA | Austria

The working group takes place in German!

Aktuelle Rechtsfragen zur UNESCO-Welterbekonvention

Das Fünfzigjahrjubiläum der UNESCO-Welterbekonvention ist nicht nur Anlass für allgemeine Betrachtungen zum Zustand des Welterbeschutzes in Österreich, sondern lädt ein, konkrete aktuelle Fragen zu stellen. Die rechtliche Umsetzung der Konvention auf Bundesebene, insbesondere das Potential, das eine Denkmalschutzgesetz-Novelle hier bietet, wurden bereits eingehend beleuchtet. Dabei wurde klar, dass im Rahmen der Zuständigkeit der Länder und Kommunen, insbesondere im Planungsrecht, juristischer Handlungsbedarf besteht. Und die EU-Initiativen zum Klimaschutz, vor allem die jetzt anrollende große Welle an (baulichen) Investitionen für alternative Energieproduktion und die Ertüchtigung von Altbauten, werfen eine Reihe von Rechtsfragen auf.

Auf der Grundlage kurzer Impulsreferate wird über diese aktuellen und für die kommenden Jahre höchst praxisrelevanten Rechtsfragen diskutiert.

Inputs:

1. Die Umsetzung der Konvention im Planungsrecht der Länder
DI Gilbert Pomaroli

2. Die Umsetzung der Konvention in den Gemeinden
Prof. Johann Hornyik

3. Welterbekonvention und Energiesparinvestitionen, insbes. Photovoltaik-Anlagen
Dr. Günter Dinhobl

Round Table

Cultural Property Protection: Currents in Law and Law Enforcement

Chairs: Friedrich SCHIPPER | Austria

Combating the illicit trafficking in cultural property is one of the major issues in cultural property protection. It is based on the development of legal norms as well as law enforcement policies and measures.

The Regulation 2019/880 of the European Parliament and of the Council of 17 April 2019 is the latest legal framework in this regard and must be understood against the backdrop of the EU's fight against the financing of terrorism. While EU member states are currently dealing with the formal necessities and concrete preparations and practical steps of implementing this Regulation into national legislation, 27CHNT will set out to prospect the Regulation's future effects on the cultural heritage sector at large: from the various national (or international) as well as professional perspectives.

We invite all experts dealing with Cultural Property Protection law and legislation and law enforcement, police as well as customs and international organizations, as well as Cultural Property Protection experts from all academic and professional sectors dealing with the issue of illicit trafficking of cultural property to join our Round Table and to deliver short statements on their current work and challenges.

09:40 - 10:40 | Bundesdenkmalamt / Federal Monuments Authority Austria Ahnensaal

Cultural Property Protection: Currents in Law and Law Enforcement

Chairs: Friedrich SCHIPPER | Austria

1. The role of Police in the Protection of Cultural Property
Anita Gach I Austria

2. Protection of Cultural Goods in Austria
Ulrike Emberger I Austria

3. Protection of cultural goods in Austria – legal framework
Hannah Leodolter | Austria

4. The role of Customs in the Protection of Cultural Property
Gerhard Marosi | Austria

Round Table

A European Data Space for Cultural Heritage: Closing the gap.

Chair: Anna PUHR, Florian LEITNER | Austria

In 2021, the European Commission presented a vision for Europe's digital transformation by 2030 followed by the recommendation on a common European Data Space for Cultural Heritage to accelerate the digitisation of cultural heritage assets. Based on Europeana, the European digital cultural platform, the new Cultural Heritage Data Space will allow „the digitisation of all cultural heritage monuments and sites, objects and artefacts for future generations, to protect and preserve those at risk, and boost their reuse in domains such as education, sustainable tourism and cultural creative sectors."

In the past two years, the pandemic pushed digitalization to the top of the agenda of cultural heritage institutions and revealed their different paces of digitisation processes or implementing digital tools. However, great showcases do exist and are spread all over the field – the challenge now is to create joint links and build up one strong network including all relevant stakeholders such as institutions, organizations, professionals, experts and civil society.

In the round table cultural heritage and digital professionals are invited to present best practices and showcases of heritage digitisation in an open and less firmly atmosphere to identify existing synergies and examine opportunities of a common data space in order to reveal its potential for the heritage sector and close the gap between resources and needs. The setting allows the exchange between professionals with diverse backgrounds (museum workers, artists, scientists, technologists, decision-makers) and encourages to share experiences from any field and position. Thematic segments supporting the European Data Space for Cultural Heritage, e.g. Participation, Accessibility, Interoperability or Sustainability structure the session and open the dialogue amongst different stakeholders.

#Digital Transformation #Data Space #European Union #Heritage Digitisation

A European Data Space for Cultural Heritage: Closing the gap.

Chair: Anna PUHR, Florian LEITNER | Austria

1. HERIS – The Heritage Information System of the Austrian Federal Monuments Authority
Rene Ployer, Christoph Hütterer, Florian Leitner I Austria

2. Merging GIS and BIM for Architectural Heritage
Tobias Haelke, Marius Weck, Robert Seuß I Germany

3. Digital, and then what? An integrated data framework for sustainable heritage management in dynamic landscapes
Rowin Van Lanen, Menne Kosian I The Netherlands

4. Action Group ECHO – an introduction
Jurn Buisman I The Netherlands

Training | 14:00 - 18:00 | Department of Numismatics and Monetary History

Digital Collections and the Presentation of Cultural Heritage: The Dialectic Relation of Informative Knowledge and Storytelling in Digital Curation

Chairs: Talila YAHIEL, Shani ZIV, Mor HAIMOVITZ | Israel, Marc Philip WAHL, David WEIDGENANNT, Barbara Pavlek LÖBL | Austria

In the last couple of years great progress has been made in transferring cultural heritage collections to the semantic web by carefully designing large, interconnected digital databases. Despite their flexibility and availability, the potential to use these digital collections in education and exhibitions has not yet been fully explored.

Here are the main questions that we would like to discuss:

- How can we use the existing resources to create engaging interactive experiences that would still adequately represent cultural heritage and communicate current research insights?

- How could these new digital tools be successfully integrated in exhibitions and guided tours without losing focus on physical collections?

This workshop aims to stimulate a discussion on these topics by bringing together researchers and professionals who work with physical and digital collections of historical objects, are engaging in the development and implementation of digital tools for education, or create semantic databases for the cultural sector.

The focus of this workshop will be on numismatic collections. Numismatics already makes use of digital tools and standards for digitization of coin collections around the world. Although small and often overlooked, coins are extremely interesting objects with colourful biographies, spanning long distances and different uses and meanings on their way from the mint to their current place in a collection. Connecting past and present, coins tell stories about trade, value, trust, social conventions, prosperity and inequality, rise and fall of states and dynasties, power and political propaganda, but also about art, religion, and gender equality.

In this workshop we will address the concept of digital interactive challenges and propose some solutions by combining pedagogical approaches and experience-based learning concept developed by the Wandering Team.

Participants are invited to explore some activities prepared by the organisers on their mobile devices. Based on these examples, participants will have an opportunity to develop and present their own ideas for similar interactive challenges individually or in small groups. This practical part will be focused on the physical and digital collection of the Department of Numismatics and Monetary History at the University of Vienna, but participants are encouraged to discuss their own experiences and projects as well.

SATURDAY
NOVEMBER 12

SATURDAY, NOVEMBER 12

Wappensaal	
09:00-09:30	KEYNOTE 3: Febriyanti Suryaningsih
Intersections of Art History and Cultural Heritage from Digital Approaches	
09:40-10:00	1. The Architectural Drawings of Clermont-Ferrand Cathedral. A Digital Analysis of Thirteenth-Century Gothic Design *Stefaan Van Liefferinge, Michael Davis	USA*
10:00-1020	2. The Virtual Basilica of St. Paul in Rome as a Tool for Pedagogy and Cultural Heritage *Nicola Camerlenghi	USA*
10:20-10:40	3. With the Eye of an Art Historian: visualizing the Medieval Abbey of Fleury in Saint-Benoît-sur-Loire (7th-12th century) *Maddalena Vaccaro	Italy*
10:40-11:00	4. Bypassing metadata – A research platform for 3D models, images and textual information with a new approach to filtering *Cindy Kröber, Aaron Pattee, Sander Münster	Germany*
11:00-11:20	Discussion
11:20-11:40	**COFFEE BREAK**
11.40-12:40	**SPONSORED KEYNOTE: Bernard Frischer (Flyover Zone)**
12:40-13:40	**LUNCH BREAK**
Ndt-technologies in Cultural Heritage Restoration/Conservation and enhancements to present and future demands in Historical Building Technologies	
13:40-14:00	1. Energy efficiency within historic buildings: a Mumbai based study of occupant comfort and energy mapping *Kimaya Keluskar, Sanaeya Vandrewala	India*
14:00-14:20	2. Investigation of damage risk on cultural heritage items in the climate chamber with non-destructive testing methods *Kristina Holl, Paul Bellendorf, Leander Pallas	Germany*
14:20-14:40	3. Visualising complex dimensional changes of a wooden panel painting in Freising Cathedral *Leander Pallas, Kristina Holl, Paul Bellendorf	Germany*
14:40-15:00	4. Preventive conservation of historic structures and artefacts by intelli-gent wireless sensor networks *Markus Krueger, Helmut Pongratz, Thomas Mülleder, Patrick Lovric, Jan Willeke	Austria*
15:00-15:20	Discussion
PhD/Master Session	
15:20-15:40	1. New approaches to unveil biodeterioration processes applied to petroglyphs sites in Israel and Austria *Laura Rabbachin	Austria*
15:40-16:00	2. Cultural landscape of Northern Syria in the memories of locals in the displacement *Mahmoud Barakat	Austria*
16:00-16:20	3. Valuing Inner Lands: Participatory mapping of cultural landscapes for sustainable tourism development in inner Campania. *Kalinca Susin	Italy*
16:20-16:40	4. HBIM Process Standardization. Accurate data integration and classification guidelines for preservation of cultural heritage and architectural intervention *Karol Argasiński, Piotr Kuroczyński	Germany, Krzysztof Koszewski	Poland*
16:40-17:00	5. Chances to preserve GDR buildings for the next generation	Serial manufactured MLK-steel buildings – Record and analyse *Annkathrin Heinrich, Antonia Zöllner, Volker Mende	Germany*
17:00-17:20	6. Of Windows and Light *Lucas Cornelius, Timm Glätzer	Germany*
17:20-17:40	**APP Presentation***
17:40-18:00	
18:00-18:10	**Best Poster Award Ceremony**
18:10-18:20	**Best Student Paper Award**
18:20-18:30	**Best App Award Ceremony**
18:30-19:00	**CLOSING**

Top 319	
	X
Preserving cultural heritage through gamification	
09:40-10:00	1. ArcheoTales. Experiencing Archaeology in a Digital and Playful Way *Julia Gamper, Michael Anranter, Thomas Stollenwerk	Austria*
10:00-1020	2. CULTURGAME – The Italian research project on applied games for cultural heritage and scientific dissemination *Ludovico Solima, Antonio Novellino, Maria Emanuela Oddo	Italy*
10:20-10:40	3. Next-gen learning: historical accuracy and contributions to archaeology. The case of 'Monte Grappa' map in Battlefield 1 *Veronica Venco, Stefano Pedersoli, Giovanni Azzalin, Marcello Atzeni, Luigi Magnini	Italy*
10:40-11:00	4. Serious Games and Mixed Reality for Promoting and Preserving Cultural Heritage in Mountain Villages of Western Macedonia *Georgios Lappas, Amalia Triantaafillidou, Alexandros Kleftodimos*
11:00-11:20	5. The digital Age of Sail: Gamification of maritime heritage *Ab Hoving, Tomas Schuurbiers, Merel van den Hoek	The Netherlands*
11:20-11:40	6. Time Odyssey: An archaeological journey using digital storytelling *Mor Haimovitz, Shani Ziv	Israel*
11.40-12:00	7. Digitalization - for Games and for Cultral heritage *Ladislav Dedik, Peter Nemcovic I Slovakia*
12:00-12:20	8. The importance of visual digital representations for school teaching *Elisabeth Monamy, Sigrid Peter	Austria*
12:20-12:40	Discussion
12:40-13:40	**LUNCH BREAK**
FAIR 3D data in cultural heritage: quality, metadata, applications and repositories	
13:40-14:00	1. Results of a photogrammetric building survey as an example for FAIR 3D data *Claudia Mächler, Andreas Noback	Germany*
14:00-14:20	2. DFG 3D-Viewer. Development of an infrastructure for digital 3D reconstructions *Igor Piotr Bajena, Daniel Dworak, Piotr Kuroczyński, Clemens Beck, Sander Münster	Germany*
14:20-14:40	3. IDOVIR – Infrastructure for Documentation of Virtual Reconstructions *Markus Wacker, Wolfgang Stille, Marc Grellert	Germany*
14:40-15:00	4. Iterative development of a FOSS tool chain for collaborative annotation and semantic enrichment of 3D models *Ina Blümel, Paul Duchesne, Lukas Günther, Lozana Rossenova, Zoe Schubert, Lucia Sohmen, Richard Vock	Germany*
15:00-15:20	5. Using ICDD Containers for documentation data archives *Anne Göbels, Jakob Beetz	Germany*
15:20-15:40	6. Defining optimised frameworks for cultural heritage documentation in developing regions *Maniyarasan Rajendran, Sakthi Murugan Rajendran	India*
15:40-16:00	7. Towards an inclusive re-use of FAIR cultural heritage data *Petra Weschenfelder, Florian Wiencek	Austria*
16:00-16:20	8. The D-TECH project – Digital Twin Environment for Cultural Heritage *Marco Canciani, Giovanna Spadafora, Mauro Saccone, Carla Masetti, Arturo Gallia, Marialuisa Mongelli, Beatrice Calosso, Marco Puccin	Italy*

**19:30-22:30	Informal Farewell** **Restaurant Blunzenstricker**

	***APP Presentation**			
1	Visualising and Promoting Applications of Crafts of the Himalayan State of Uttarakhand (India) in Interior Architecture through a Mobile App *Smriti Saraswat, Sakshi Pandey and Rajeev Meena	India*		4	Beyondarts CMS-Content Management System for creating multimedia WebApps and native Apps *Gerhard Sindelar	Austria*
2	kARtka z Synagogą / postcARd with a Synagogue *Piotr Kuroczyński, Daniel Dworak	Germany*		5	MAINZ App – City Mainz in the Middle Ages *Piotr Kuroczyński, Philipp Meier	Germany*
3	ArcheoTales. Experiencing Archaeology in a Digital and Playful Way *Michael Anranter	Austria*			

3rd Keynote

Documenting cultural heritage for sustainable heritage management

Febriyanti Suryaningsih | Executive Director Pusat Dokumentasi Arsitektur Indonesia (Center for Architecture Documentation of Indonesia)

Intersections of Art History and Cultural Heritage from Digital Approaches

Chairs: Kristine TANTON, Meredith COHEN | Canada

Digital technologies and approaches have brought art history and cultural heritage, two distinct but related fields, closer together. This panel examines the intersections in these fields deriving from these new methods. Laser scans, photogrammetry, BIM modeling, and other digital tools have offered innovative approaches to the study of buildings and their environments both past and present. In the past two decades, for example, GIS mapping has been employed for resource management as well as in research on spatial and social networks. In addition, 3D modeling has enabled visualizations of vanished or modified monuments, their phases of construction, and the broader built environment.

These new methods have produced inspiring and tantalizing visualizations that extend the known corpus of monuments and shed new light on artistic production and exchange, but the intersections between these two fields have not been critically assessed in any significant ongoing discourse. We ask what new insights, questions, and methods arise from the mutual cross-referencing of these two fields.

This session aims to showcase research in art history and cultural heritage that explore new directions and reveal insights gained from the increased proximity of these fields. The session papers do not focus solely on digital processes, but instead critically reflect on the ways in which digital research informs or contributes to practices in both disciplines. How do digital approaches alter traditional methods and interpretations for art history and cultural heritage? In what ways do digital approaches transform the ways we represent and see art history and cultural heritage? The papers in this session include topics ranging from spatial and phenomenological analyses to data-driven and quantitative analyses through case studies.

#Art History #Cultural Heritage #DigitalHumanities

Intersections of Art History and Cultural Heritage from Digital Approaches

Chairs: Kristine TANTON, Meredith COHEN | Canada

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3. With the Eye of an Art Historian: visualizing the Medieval Abbey of Fleury in Saint-Benoît-sur-Loire (7th-12th century)
Maddalena Vaccaro I Italy

4. Bypassing metadata – A research platform for 3D models, images and textual information with a new approach to filtering
Cindy Kröber, Aaron Pattee, Sander Münster I Germany

Sponsored Keynote

Yorescape: What It Is and How You Can Use It.

Bernard FRISCHER | Flyover Zone, USA

Session

Ndt-technologies in Cultural Heritage Restoration/Conservation and enhancements to present and future demands in Historical Building Technologies

Chairs: Ruth TENSCHERT, Paul BELLENDORF | Germany, Claudiu SILVESTRU | Austria

New digital (ndt-) technologies can contribute significantly not only to a better understanding of objects but make a difference especially in Heritage Conservation and Restoration. They can also help to enhance the present and future demands regarding the potential of combining them with Historical Building Technologies. Both fields can benefit from new approaches leading to an innovative use of digital technologies in a sustainable way which makes following measures more suitable for the objects. Therefore, this session is asking for:

• project presentations and case studies using an innovative combination of digital, ndttechnologies and/or minimal invasive analysing techniques, facing the requirements in Restoration/Conservation of Cultural Heritage objects. This includes projects dealing with the climate change impact, natural disasters as well as regular restorations of buildings, sculptures, paintings and archaeological finds. However, the possibilities are not limited to monitoring approaches in museums or build heritage. Presentations can also illustrate the challenges and benefits of combining different technologies in interdisciplinary teams working in the field of Restoration/Conservation in research and in all phases of restoration projects, such as planning, implementation or evaluation
• presentations on reinterpretation / adaptation of historical building technologies digital technologies and present-day needs. We invite presentations which address– but are not limited to: • Steps that weren't possible before – What hidden potentials of historical building technologies can be unlocked through digital technologies?
• Alteration and authenticity – Are adapted historical building technologies still suited for employment in cultural heritage projects?
• Experimentation and implementation – What are the challenges to the adjustment
of historical building technologies in the context of codes, standards and accountability.

#historical building technologies #enhancement #ndt-Technologies #Conservation/Restoration

"Cultural heritage in all its manifestations is essential for our society as a witness of the past. Ndt-technologies can contribute to a better understanding of the cultural heritage objects and help to preserve it in a sustainable way without intervening too much. I am engaged in this session not only to learn more about innovative new combinations of ndt-technologies but also to see interesting examples of their benefits for the objects of interest."

Statement by the chairs

"Cultural heritage buildings are witnesses to history. Interventions in the existing building inventory must therefore be kept to a minimum. Ndt methods therefore play a key role in clarifying questions about the history of production and restoration, but also for future handling. The technical possibilities in the application of ndt methods in and on cultural heritage are far from exhausted today. Above all, the application of new methods and the combination of existing methods offer a hitherto unknown potential. I am engaged in this session to learn more about these important technologies and their potential uses."

SATURDAY

Statement by the chairs

13:40 - 15:20 | Wappensaal

Ndt-technologies in Cultural Heritage Restoration/Conservation and enhancements to present and future demands in Historical Building Technologies

Chairs: Ruth TENSCHERT, Paul BELLENDORF | Germany, Claudiu SILVESTRU | Austria

1. Energy efficiency within historic buildings: a Mumbai based study of occupant comfort and energy mapping
Kimaya Keluskar, Sanaeya Vandrewala I India

2. Investigation of damage risk on cultural heritage items in the climate chamber with non-destructive testing methods
Kristina Holl, Paul Bellendorf, Leander Pallas I Germany

3. Visualising complex dimensional changes of a wooden panel painting in Freising Cathedral
Leander Pallas, Kristina Holl, Paul Bellendorf I Germany

4. Preventive conservation of historic structures and artefacts by intelli-gent wireless sensor networks
Markus Krueger, Helmut Pongratz, Thomas Mülleder, Patrick Lovric, Jan Willeke I Austria

PhD/Master Session

Chairs: Martina POLIG | Cyprus, Nadine ALPINO | Luxembourg

A crucial aspect of CHNT is that it brings together researchers from different fields and backgrounds, creating a platform that enables and promotes the exchange of ideas. This discussion can only benefit from the input and perspectives of the young scientific generation. Their participation enriches the scientific dialogue with their fresh views and gives them the opportunity to confront themselves with their peers in the context of an international conference. Therefore, we invite students and recent graduates to present their ongoing or finished Master or PhD thesis at the conference. Novel ideas, new ways of thinking, clever solutions, workarounds, and critical thoughts are especially welcome.

The topic of the presentation should be within the scope of cultural heritage and new technologies. However, presentations that are within this year's main topic "Cultural Heritage – NextGen" will be given preference. The session wants to encourage young scientists to present for their first time at an international conference. Only presenters, who have not yet given a presentation in this session will be accepted.

To facilitate and encourage the participation, the conference organizers agreed that every presenter will get free admission to the conference. Furthermore, accepted speakers will be considered for the Best Student Paper award of CHNT and have the possibility to publish their paper in the journal "Open Archaeology".

#PhD/Master #youngscientists #beststudentaward

„This year again I've got the pleasure to be co-chair of the PhD/Master Session. I think it's the most important session of the conference and should be part of every conference. Young researchers have got the possibility to present their work in a relaxed, benevolent but nevertheless professional atmosphere. It's an enrichment for both sides. Speaker and audience can benefit from new ideas, perceptions plus constructive criticism.Last but not least, the Best Student Paper award of CHNT offers a brill incentive for young researchers to present their work."

Statement by the chairs

15:20 - 17:40 | Wappensaal

PhD/Master Session

Chairs: Martina POLIG | Cyprus, Nadine ALPINO | Luxembourg

1. New approaches to unveil biodeterioration processes applied to petroglyphs sites in Israel and Austria
Laura Rabbachin I Austria

2. Cultural landscape of Northern Syria in the memories of locals in the displacement
Mahmoud Barakat I Austria

3. Valuing Inner Lands: Participatory mapping of cultural landscapes for sustainable tourism development in inner Campania
Kalinca Susin I Italy

4. HBIM Process Standardization. Accurate data integration and classification guidelines for preservation of cultural heritage and architectural intervention
Karol Argasiński I Poland, Piotr Kuroczyński I Germany

5. Chances to preserve GDR buildings for the next generation | Serial manufactured MLK-steel buildings – Record and analyse
Annkathrin Heinrich, Antonia Zöllner, Volker Mende I Germany

6. Of Windows and Light
Lucas Cornelius, Timm Glätzer I Germany

APP Presentation

Chairs: Günther Weinlinger I 7Reasons, Austria

1. Visualising and Promoting Applications of Crafts of the Himalayan State of Uttarakhand (India) in Interior Architecture through a Mobile App
Smriti Saraswat, Sakshi Pandey and Rajeev Meena I India

2. kARtka z Synagogą / postcARd with a Synagogue
Piotr Kuroczyński, Daniel Dworak I Germany

3. ArcheoTales. Experiencing Archaeology in a Digital and Playful Way
Michael Anranter I Austria

4. Beyondarts CMS-Content Management System for creating multimedia WebApps and native Apps
Gerhard Sindelar I Austria

5. MAINZ App – City Mainz in the Middle Ages
Piotr Kuroczyński, Philipp Meier I Germany

Session

Preserving cultural heritage through gamification

**Chairs: Soultana ZORPIDOU I Greece, Bert BROUWENSTIJN, Rob VAN HAARLEM | The Netherlands,
Elisabeth MONAMY, Sigrid PETER | Austria**

In recent years, the topic of gamification, or the incorporation of mechanics, technologies and/or concepts from the gaming industry into a non-game environment, has become a popular means of preserving and presenting cultural heritage in a sustainable way. Simultaneously, cultural heritage has become a beloved topic in the gaming industry, with many large and small games containing a storyline or setting involving and/or incorporating cultural heritage. The 'merging' of the disciplines of cultural heritage and the game industry knows a wide variety of approaches, but also has many challenges depending on aspects such as the target audience, the type of heritage, the accessibility, on-site or off-site presentation, or the (scientific) accuracy.

This session invites researchers and speakers from the cultural heritage discipline to present the (preliminary) results of case studies where gamification has been applied to preserve, present, and/or research cultural heritage. We also gladly receive papers focussing on overarching themes of gamification, such as methodology. This session also welcomes those working in the gaming industry who are incorporating cultural heritage in their projects. By bringing together the experts from both disciplines we hope to stimulate discussion on the interplay between cultural heritage and games.

#gamification #cultural heritage #game industry

„*The world is changing rapidly. With all these changes, new threats to cultural heritage continue to arise. Geopolitical tensions and climate change are an increasing threat to our heritage and sometimes even more than that. These changes and threats require a new way of protecting our heritage. It is a crucial moment for creating opportunities and prepare the floor for future generations and support them creating new aesthetics in the perception of visual culture, we have to build the bridge between past and future and digital technology is the only key as an addition to current heritage communication. To achieve this new level of aesthetics the heritage specialist needs to develop not only its skill but also its connection. The gaming industry has a lot to offer considering optimization and preservation of digital assets.*

In this session, we want to jointly explore how gamification contributes direct and in directly in the protection of heritage by creating public awareness, creating new ways for research and presenting and sharing knowledge that would otherwise disappear over time.

Our session hopes to give an insight in the necessity and the importance of trying to integrate a scientifical basis into (historical) games and educational software."

Statement by the chairs

Preserving cultural heritage through gamification

Chairs: Soultana ZORPIDOU I Greece, Bert BROUWENSTIJN, Rob VAN HAARLEM | The Netherlands, Elisabeth MONAMY, Sigrid PETER | Austria

1. ArcheoTales. Experiencing Archaeology in a Digital and Playful Way
Julia Gamper, Michael Anranter, Thomas Stollenwerk I Austria

2. CULTURGAME – The Italian research project on applied games for cultural heritage and scientific dissemination
Ludovico Solima, Antonio Novellino, Maria Emanuela Oddo I Italy

3. Next-gen learning: historical accuracy and contributions to archaeology. The case of 'Monte Grappa' map in Battlefield 1
Veronica Venco, Stefano Pedersoli, Giovanni Azzalin, Marcello Atzeni, Luigi Magnini, I Italy

4. Serious Games and Mixed Reality for Promoting and Preserving Cultural Heritage in Mountain Villages of Western Macedonia
Georgios Lappas, Amalia Triantaafillidou, Alexandros Kleftodimos I Greece

5. The digital Age of Sail: Gamification of maritime heritage
Ab Hoving, Tomas Schuurbiers, Merel van den Hoek I The Netherlands

6. Time Odyssey: An archaeological journey using digital storytelling
Mor Haimovitz, Shani Ziv I Israel

7. Digitization – for Games and for Cultural heritage
Ladislav Dedik, Peter Nemcovic | Slovakia

8. The importance of visual digital representations for school teaching
Elisabeth Monamy, Sigrid Peter I Austria

FAIR 3D data in cultural heritage: quality, metadata, applications and repositories

Chairs: Andreas NOBACK, Claudia MÄCHLER, Clemens BRÜNENBERG I Germany

3D reconstruction, laser scanning, Photogrammetry and similar technologies are widely used in historic building research, art history and archaeology. 3D data- models have great value as a medium to inspect, discuss and show sites, buildings and objects and are a basis for further research applications such as simulation, reconstruction, machine learning, comparative analysis and interpretation. Within museal applications they provide immersion and access to distant sites and objects.

To broaden the impact of this important and often expensive research data it has to be FAIR: indable, accessible, interoperable and reusable. State funding organisations address this goal with increasing demands regarding research data management within projects. Existing and forthcoming research data repositories allow to exchange this kind of data, but standardisation, networking and a culture of sharing within the research communities is needed to prevent these valuable assets from rotting on old external hard drives. The session is meant to foster the publication and use of 3D data in cultural heritage and targets input on:

• Repository and catalogue solutions fit for 3D research data in terms of finding, describing, storing and presenting.
• Best practise to gain high quality and well documented models for publication and reuse.
• Necessary 3D data and metadata standards for search, inter-repository exchange and interoperability.
• Applications in research, teaching or museology that can profit from FAIR data.
• Collections in need of curation and publication.
• Research on reconstruction algorithms that can profit from available raw data.
• Annotation and open-linked data solutions for 3D models.
• FAIR data in context of preservation, endangerment and commemoration of cultural heritage.
• Problems and disadvantages of existing practices and hindrance of change.

#FAIR #3D-data #RDM #metadata #standard

13:40 - 16:20 | TOP 319

FAIR 3D data in cultural heritage: quality, metadata, applications and repositories

Chairs: Andreas NOBACK, Claudia MÄCHLER, Clemens BRÜNENBERG I Germany

1. Results of a photogrammetric building survey as an example for FAIR 3D data
Claudia Mächler, Andreas Noback I Germany

2. DFG 3D-Viewer. Development of an infrastructure for digital 3D reconstructions
Igor Piotr Bajena, Daniel Dworak, Piotr Kuroczyński, Clemens Beck, Sander Münster I Germany

3. IDOVIR – Infrastructure for Documentation of Virtual Reconstructions
Markus Wacker, Wolfgang Stille, Marc Grellert I Germany

4. Iterative development of a FOSS tool chain for collaborative annotation and semantic enrichment of 3D models
Ina Blümel, Paul Duchesne, Lukas Günther, Lozana Rossenova, Zoe Schubert, Lucia Sohmen, Richard Vock I Germany

5. Using ICDD Containers for documentation data archives
Anne Göbels, Jakob Beetz I Germany

6. Defining optimised frameworks for cultural heritage documentation in developing regions
Maniyarasan Rajendran, Sakthi Murugan Rajendran I India

7. Towards an inclusive re-use of FAIR cultural heritage data
Petra Weschenfelder, Florian Wiencek I Austria

8. The D-TECH project – Digital Twin Environment for Cultural Heritage
Marco Canciani, Giovanna Spadafora, Mauro Saccone, Carla Masetti, Arturo Gallia, Marialuisa Mongelli, Beatrice Calosso, Marco Puccin I Italy

Best App Award

Günther WEINLINGER & Michael KLEIN I 7reasons Medien GmbH, Austria

Best Poster Award

Peter Dorninger I 4D-IT, Austria

Best Student Paper Award

Nadine ALPINO, Luxembourg, Martina POLIG, Cypris & Giorgio VERDIANI, Italy

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