2AND3D PHOTOGRAPHY 2026

WORKSHOP AND SESSION OVERVIEW

FRIDAY 22 MAY 2026

REF	*SUBJECT*	*TIME*
S01	**Andrew Fortune & Bryan H. Buchanan**, The Corning Museum of Glass *Photographic Lighting for Glass*	10 AM & 1:30 PM
	Lighting glass objects for photography requires creating a carefully lit environment and capturing how the object interacts with it. This is because the way we perceive glass is the result of how the glass itself transmits, refracts, reflects, and distorts light. Unlike other materials, it is not possible to fully separate our perception of the glass itself from our perception of what the glass reveals about its surroundings. As museum photographers, we are trained to photograph objects on flat, neutral backgrounds, and yet that approach creates incredible challenges when photographing glass. In this course, we will present lighting setup examples and discuss approaches used at The Corning Museum of Glass, with the emphasis on in-camera solutions vs. post-capture imaging.	
S02A	**Philip Axmann**, Zetcom *Smart Workflows for Cultural Heritage: Connecting Collections and Digital Assets*	10 AM
	This presentation showcases a successful integration of a Digital Asset Management system (Fotoware) with a Collection Management System (MuseumPlus) at the Princely Collections of Liechtenstein. Facing challenges with fragmented workflows and disconnected media and object records, the institution sought to unify these systems to streamline processes and improve data consistency. Together with the Registrar, we will detail the practical steps taken to connect high-resolution media assets to corresponding object records using shared identifiers, automating metadata synchronization and reducing manual duplication. This integration has optimized internal workflows across departments - including photography, registration, and curatorial teams - allowing for more efficient media ingestion, approval, and quality control. Moreover, the system enables seamless publication of imagery through an API, facilitating timely and accurate web access to digital assets while maintaining control over rights and data integrity. This approach supports future enhancements such as advanced image delivery standards and AI integration. The session provides valuable lessons on the organizational and technical aspects of integration projects in cultural heritage institutions. Attendees will gain insights into overcoming common challenges, aligning workflows with technology, and leveraging system interoperability to enhance collection management and public engagement. This presentation serves as a model for museums and heritage organizations seeking to modernize their digital asset and collection management practices, offering a pathway to smarter, more connected workflows that support both internal operations and external visibility.	

S02B	**Albertine Dijkema & Nina Kleintjes**, Rijksmuseum *Looking for a camera!*	1:30 PM
	The digital camera is our workhorse. The Hasselblad H series, a camera widely used in the heritage sector, has been taken out of production. At the same time, our field of work is becoming increasingly broader. It is time for an inventory. What will be our new heavy-duty camera and for what purpose will we use it? This round table will not be able to answer all the questions, because we do not have a crystal ball to see into the future. But it is an invitation to share experiences and knowledge so that we can all learn and make well-informed decisions.	
S03	**Andrew Bruce & Carola van Wijk**, National Gallery & Rijksmuseum *The Image Quality Clinic with Andrew and Carola*	10 AM & 1:30 PM
	Creating high-quality cultural heritage images isn't just about the camera - it's the sum of the imaging device, the scene, the operator, and the additional supporting equipment. So, when image quality slips, finding the cause (and the fix) can be anything but straightforward... Are your deltaE values too low? You images unexpectedly soft? Your captures more no-star than FADGI 4-star? The Image Quality Clinic with Carola and Andrew is here to help. Bring your toughest imaging challenges - whether recurring problems, one-off puzzles, or goals you're struggling to meet - along with an example image(s) if possible. Together, we'll diagnose issues and share practical solutions, tips, and tricks. We'll also have imaging targets, tools, and software on hand to demonstrate techniques for evaluating and improving image quality.	
S04	**Costas Papadopoulos**, Maastricht University & PURE3D *Infrastructures for 3D Heritage: Presentation, Publication, Preservation*	10 AM & 1:30 PM
	Will follow	
W05	**Ottar A.B. Anderson**, in cooperation with Phase One *Revealing Lost Evidence of Ålesund's 1904 Fire with Rainbow Multispectral imaging*	10 AM & 1:30 PM
	Just days after the devastating 1904 fire that destroyed much of Ålesund, the municipal engineering office produced a detailed report documenting the event. Although the original report has long been inaccessible, a handwritten copy made immediately afterward survived—yet many of its pages had faded so severely that they were unreadable. As a result, historians relied for more than a century on a secondary account written nineteen years later, leaving key questions about the fire's origins unresolved. To recover the lost text, the Intermunicipal Archive of Møre og Romsdal (IKAMR) partnered with Phase One to apply the company's Rainbow Multispectral Imaging (MSI) technology. This advanced system captures ultra-high-resolution images across infrared, visible, and ultraviolet light, allowing faint or invisible writing to reappear without physically touching the fragile pages. The team carefully imaged each sheet and analyzed the resulting stacks using Rainbow MSI's built-in tools, followed by further processing with Hoku software from the Early Manuscript Electronic Library (EMEL).	

	For the first time, the complete contemporary fire report could be read. Notably, the Head of the Fire Department stated that he could not determine the cause of the blaze, as the factory was already engulfed when responders arrived—an insight missing from the later 1923 narrative. Researchers described the experience of watching the lost text re-emerge after 121 years as extraordinary, demonstrating how modern imaging can restore access to irreplaceable historical sources. The project underscores the importance of primary documentation in historical scholarship and highlights the transformative role of non-invasive MSI technology in cultural heritage preservation. The recovery of the Ålesund fire report not only deepens understanding of the disaster and the town's rapid Art Nouveau rebuilding, but also sets a precedent for uncovering other obscured historical records worldwide.	
W06	**Anna Arca**, National Gallery, London *Creating high-resolution composites of paintings with PTGui*	10 AM & 1:30 PM
	The technique of creating high resolution composites of 2D work and particularly paintings, by stitching a matrix of captures (mosaic) obtained through sideway camera or subject movements has become widely adopted for multiple purposes, including research, conservation, reproduction, and offering the public a new more intimate experience of artworks. The National Gallery has achieved significant experience in successfully producing high resolution composites up to 50GB that have supported our research, improved our visitor experience with multimedia and printed displays and enhanced our painting imagery presence in the public realm. In this workshop, the experience gained by the National Gallery team will be shared in evaluating and improving the quality of our composites, with a particular focus on visible-light photography and on making the workflow better standardized and documented.	
W07	**Henni van Beek**, Photographer *High-quality recording, accessible explained*	10 AM & 1:30 PM
	How to make captures of 2-D objects that meet international requirements, using open source software where possible. An introductory workshop for photographers who do not yet work with ISO, Metamorfoze, or FADGI standards, aimed at color management. In the morning the workshop will focus on using Lightroom In the afternoon the workshop will focus on Capture1	
W08	**Costanza Blaskovic**, Factum Foundation *New Advancements of the Selene Photometric Stereo System*	10 AM & 1:30 PM
	The aim of this workshop is to show the advancements of the Selene Photometric Stereo System (PSS), an innovative system based on the photometric stereo technique, oriented to the documentation and preservation of cultural heritage. Selene PSS is Factum Foundation and Factum Arte latest contact-free recording system, capable of digitise both colour and micro-relief of objects with exceptional detail. The Selene PSS has transformed how cultural objects are documented and analysed. Traditionally seen as flat, objects like printing plates, prints and manuscripts have revealed hidden depths thanks to this system. Its ability to capture fine surface relief at an astonishing 25 microns (0.025 mm) has uncovered faint	

	markings, hidden annotations, and subtle drawings—offering fresh and fascinating insights into cultural heritage. The live demonstration will include an introduction to the photometric stereo technique, the presentation of the system, the recording of a facsimile and the processing of the files, the showcase of the latest advances applied to the system.	
W09	**Daniele Bursich**, Università di Verona *Photographic Pathways to Roman Imperial Portraits in 3D*	10 AM
	The visual identity of Roman emperors was a powerful political tool. From coins to monumental sculptures, their images circulated widely and conveyed authority through carefully selected physiognomic traits. Some elements, such as hairstyle, were rendered with remarkable precision and consistency, allowing immediate recognition across the Empire. Others, especially facial morphology, were more fluid, often shaped by local traditions and artistic practices, producing a spectrum of provincial variations alongside the metropolitan canon. For a long time, the study of these portraits has relied on direct observation or qualitative stylistic analysis. While effective, such approaches often struggle to resolve uncertainties, particularly when dealing with fragmentary pieces or ambiguous stylistic influences. Recent advances in 3D technologies now make it possible to move beyond description and towards measurement. Within the IRIMES and RESP projects, we developed a workflow based on 3D scanning and digital modeling of imperial portraits. This method enables the extraction of quantitative data, including percentage overlaps and geometric deviations, to compare portraits with unprecedented accuracy. By applying this approach, we can test long-standing hypotheses on typologies, clarify uncertain attributions, and reveal subtle provincial adaptations that might otherwise go unnoticed. The results suggest new ways to understand both the construction of imperial identity and its local reception. Beyond case studies on Trajan and other emperors, this methodology offers a replicable framework for the broader field of portrait studies, bridging art-historical interpretation and computational analysis. In doing so, it contributes to a more nuanced view of how Roman power was represented, negotiated, and transformed across the Empire.	
W10	**Scott Geffert**, Metropolitan Museum *Reference Assets-Bridging the Gap Between 2D and 3D Imaging*	10 AM & 1:30 PM
	This Intermediate level workshop is aimed at 2D and 3D practitioners interested in improving the quality of 3D renders and online representations by leveraging traditional photographic standards and lighting techniques. Using the traditional photography of an object as a reference, attendees will learn how to translate physical lighting sets to create virtual 3D lighting sets and render TIFF images that closely match the reference photography. The workshop will also illustrate methods to translate virtual lighting sets via custom HDRI environments to improve 3D web renditions. The techniques outlined in this course will focus on Adobe Stager and Blender but can transfer to other DCCs. The program will also include the application of ISO 19264-1 for color and tone validation for 3D renders of 2D scenes, basic HTML to illustrate 3D for the web, and practical information about Universal Scene Description.	

W11	**Luk van Goor**, Restaura SpectroFusion: 3D scanning beyond the visible Spectrum	10 AM & 1:30 PM
	This workshop introduces SpectroFusion: 3D Scanning Beyond the Visible Spectrum, a new way of looking at archaeological objects. The workflow combines photogrammetry and photometric stereo with ultraviolet (UV) and infrared (IR) 3D scanning. By bringing these techniques together, we can study objects in layers that the human eye cannot see.	
W12A	**Alice Plutino & Luca Armellin,** Imageese Comparative Review of Negative Film Digitization and Inversion Workflows	10 AM
	This workshop introduces participants to a material-informed approach to photographic negative inversion, combining practical digitization with a tool that simulates the behaviour of photographic paper during the printing process. The session builds on recent comparative research on negative digitization workflows and focuses on how acquisition and inversion strategies interact to shape the final positive image. The workshop will begin with a short overview of negative digitization approaches, highlighting how capture conditions influence inversion outcomes. Participants will then observe a demonstration of a negative scanning setup used for high-quality digitization. Particular attention will be given to how the acquisition setup affects the data available for inversion. The core of the workshop will be the testing and discussion around inversion tools. Particular attention will be given to strategies and workflows that simulate the response of photographic paper, allowing negatives to be inverted through a process inspired by traditional darkroom printing. Participants will explore and discuss how modern approaches compare with common inversion workflows, including commercial software, open-source pipelines, and manual DIY techniques. Through side-by-side comparisons, the workshop will highlight differences in color reproduction, tonal mapping, and reproducibility. The session is designed to be interactive: participants will be able to examine sample negatives, observe the full capture-to-inversion pipeline, and discuss practical considerations for implementing similar workflows in institutional or research contexts. The format combines lecture, live demonstration, and discussion.	
W12B	**Nora Ibrahim**, Osher Map Library and Smith Center for Cartographic Education *Underlighting Bound volumes for a FADGI-efficient Workflow*	1:30 PM
	Underlighting bound volumes is a thrilling process where secrets of the past can be captured using a new lighting technique. Whether it's an errata, watermark, or unique pigment distribution, in this hands-on workshop, Nora will demonstrate a tested workflow for incorporating underlighting whilst digitizing bound volumes set-up for a FADGI workflow. Although FADGI has been the selected guideline to calibrate the capture session, the workflow can be applicable to any other guidelines. Nora will show how to handle the light sheets, and troubleshoot some challenges encountered while digitizing, essentially, a light source. The workshop will include an opportunity for an interactive Q&A of different scenarios and material types.	

W13	**Sjors Nab & Sanne Frequin**, University Utrecht *Relightable Heritage: Exploring Accessible RTI workflows for Lustrous and Translucent Surfaces*	10 AM & 1:30 PM
	RTI has become a well-established technique for recording low-relief surfaces, but its potential for representing visually complex objects remains underexplored. In particular lustrous, translucent, and shimmering materials – such as mother of pearl, enamel, glass – resist conventional documentation by photography or 3D scanning. Their aesthetic character is not static: it emerges dynamically through changing light. RTI provides a powerful solution to this challenge by allowing interactive relighting that makes both surface details and shifting optical qualities visible. This interactive engagement is essential to understanding light-dependent objects, since their visual and material character cannot be statically represented. RTI thus forms a powerful intermediary in the dissemination of these objects, both for a broader audience and academic researchers. This workshop is designed to demonstrate the interpretive value of RTI while also equipping participants with the skills to apply it themselves. Within this workshop, accessibility is deliberately foregrounded: participants will learn how to capture RTI using only widely available equipment (camera, tripod, flash, reflective sphere) and open-source software. In parallel, we will discuss a prototype "DIY" RTI dome that enables faster, more standardized results. These complementary approaches illustrate that RTI does not require significant infrastructure but can be integrated into both large and small heritage contexts. The workshop will showcase case studies from two recent imaging campaigns: at the Rijksmuseum Catharijneconvent (Utrecht, imaging by Sjors Nab and dr. Sanne Frequin), and at the Bode-Museum Skulpturensammlung and Museum für Byzantinische Kunst (Berlin, imaging by Sjors Nab, Izzy Stone, and Alicja Wieteska). These examples show how RTI can illuminate medieval and early modern micro-carvings, while also raising questions about interpretation, dissemination, and sustainability. The session fosters dialogue between heritage professionals, academics, and imaging specialists, encouraging participants to exchange perspectives and explores RTI's role as a bridge between technical, curatorial, and scholarly practices.	
W14	**Kai A. Neumann & Matevz Domajnko**, Fraunhofer & Verus Digital *Consistent Image Capture and Quality Metrics for Autonomous 2.5D and 3D Imaging*	10 AM & 1:30 PM
	This workshop examines the importance of consistent image capture and quantitative quality metrics for 2.5D and 3D image-based acquisition, with a particular focus on paintings. It will address how controlled capture strategies and standardized approaches to image archiving provide the basis for reliable, repeatable 3D digitization, especially when images are used as input for 3D reconstruction. In addition, the workshop will introduce techniques such as photometric stereo and multispectral imaging, showing how they can support and enhance surface capture and material interpretation in the digitization of paintings. The content draws on ongoing research at Fraunhofer IGD, supported by Verus Digital, and presents recent results that highlight current challenges and opportunities in standards-oriented, image-based 3D reconstruction.	

W15	**Rebecca Truszkowski**, J. Paul Getty Trust *The Fine Art of Documentation: Reflections and Revelations Workshop*	10 AM & 1:30 PM
	This hands-on workshop invites participants to explore cross-polarization techniques alongside us as we work with bronze and porcelain objects. We share a process developed at the Getty Villa Imaging Studios that has expanded our creative possibilities when photographing reflective three-dimensional museum collections. Through direct engagement with actual objects and lighting setups, participants will experience how cross-polarization provides greater control over light shapers and surface reflections. Working together, we will observe how bronze responds differently than porcelain, discovering the unique creative opportunities each material presents. This collaborative approach emphasizes experimentation over fixed formulas, allowing you to find what resonates with your own photographic vision. Participants will adjust polarizing filters, reposition light sources, and observe firsthand how subtle changes affect the final image. We will share insights from our daily practice while encouraging you to develop approaches based on your own needs and aesthetic goals. The workshop acknowledges that photography is a personal journey—what works beautifully for one subject or photographer may not serve another. Throughout our time together, we will navigate moments where cross-polarization reveals unexpected surface qualities, instances where it complicates rather than clarifies, and situations where alternative methods prove more effective. This honest exploration recognizes that each photographer must find their own path through the creative challenges reflective surfaces present. By the end of our time together, participants will have experienced this technique firsthand and gained practical insights into how it might expand their own toolkit for photographing challenging museum objects. Most importantly, you will leave with the confidence to continue experimenting and adapting this process to serve your unique documentation needs.	

W16	**Charles Walbridge & Dale Utt**, Minneapolis Inst. of Art & Cleveland Museum of Art *Preparing heritage 3D models for sharing and archiving with Blender*	10 AM & 1:30 PM
	As heritage photographers, we understand how to work with lights, cameras, and real-world objects to make good 2D renditions in the form of still images. But we're still learning about the 3D world and how we can bring our expertise there. This workshop will focus on our 3D models after we've built them in Metashape, but the principles will apply to models from software like Reality Capture too. We"ll use sample models from Mia's collection (sketchfab.com/artsmia) to: - Clean up high-poly models within Metashape and with simple software like Meshmixer and Instant Meshes - Export textures and lower-poly versions of the models from Metashape - How and why to make improved textures, including specularity textures, in Kintsugi 3D Builder - View, light, and render outputs from Blender - View, light, and render outputs from Adobe's Substance Stager - Talk about what data from photogrammetry projects to archive We'll present the ideas behind 3D model cleanup and sharing for cultural heritage, and we'll discuss the difference between accurate photogrammetry data and share-able 3D models. We'll spend most of our hands-on time in Blender to make it easier for participants, but we'll touch on Adobe's Substance Stager and the free softwares Meshmixer and Instant Meshes. If possible, participants should bring a laptop and have a recent version of Blender loaded. (Blender is free - downloads at blender.org)	