

ARCHiVe Online Academy

COURSE / ONLINE

24 MAY, 7 JUNE 2023



ARCHiOx. Exploring the potential of photometric stereo 3D capture

Curated by John Barrett

ARCHiOx. Exploring the potential of photometric stereo 3D capture through recordings made at the Bodleian Libraries, University of Oxford

AOA | ARCHiVe Online Academy

Course / Online; ENG

24 May, 7 June 2023

Curated by John Barrett (ARCHiOx Technical Lead)

To attend the course please, [register here](#)

Funded by the Helen Hamlyn Trust, ARCHiOx – Analysis and Recording of Cultural Heritage in Oxford – is a collaborative project which has united Oxford University's Bodleian Libraries and the Factum Foundation. Based in Madrid, the Factum Foundation specialise in high-resolution 3D imaging and have worked in cultural heritage institutions throughout the world, producing exceptional, three-dimensional facsimiles of artworks and artefacts. The very latest 3D recording technology conceived and developed by the Factum Foundation has, for the last year, been piloted at the Bodleian and has been used to reveal near-invisible text and artwork from originals in the Bodleian's collections. The ARCHiOx recordings serve two purposes: data can be used to create renders which show the 3D surface of an original in order to reveal what is difficult or impossible to record through conventional photography, or for the purposes of creating incredibly accurate 3D facsimiles. The collaboration between ARCHiOx and researchers who have used the recordings in their studies has been of equal importance. Their suggestions have resulted in numerous exciting discoveries being recorded.

Lecture 1, May 24, 3-5 p.m. CET

Recording and dissemination of 3D data, captured using the Selene Photometric Stereo Recording System

In this session, the Bodleian's Senior Photographer, John Barrett will present a collection of incredible new recordings made using the Factum Foundation's latest 3D recording system, the Selene. The recordings have been made from originals from broad range of the Bodleian Libraries' world-class collections.

Jorge Cano, Head of Technology at the Factum Foundation and designer of the Selene, will explain the philosophy behind the Selene and discuss the technology and specifications of the system.

Richard Allen, Software Engineer for Bodleian Digital Library Systems and Services will demonstrate online viewers for dissemination of 3D recordings, and newly developed tools which will allow users to interact with them.

Lecture 2, June 7, 3-5 p.m. CET

Analysis and interpretation: How 3D recordings and other technological innovations are supporting research

In this session John Barrett will introduce a panel of experts who will explain how 3D recording and other technological innovations have assisted with their research.

Professor of Early Medieval History, Jo Story and PhD candidate Jessica Hodgkinson from the University of Leicester, will discuss how photometric stereo recordings and other technologies have aided their research into Anglo-Saxon manuscripts and medieval book culture.

Manager of the Bodleian Japanese Library, and curator of the Bodleian collection of Japanese rare books and manuscripts, Alessandro Bianchi will explore how 3D recording may hold the key to understanding how Japanese prints were made, and how 3D renders can be used for assessing their condition.

The session will begin with a description of how ARCHiOx was established and structured, by the Bodleian Libraries Head of Imaging, Elaine Anstee.

Bio's of lecturers

John Barrett is a Senior Photographer for the Bodleian Libraries. Since 2005, John has provided photographs of Bodleian originals for numerous publications. His work involves the development of new methods of recording special collections material. He is the author of Imaging Guidelines for the Digitization of Rare and Special Materials, a document commissioned by the Bodleian Library.

Jorge Cano is currently Head of Technology at Factum Arte and Factum Foundation. He has developed a multidisciplinary career working in the intersections of art and technology. Cano is an expert in 3D recording, image filtering and Geographical Information Systems. For Factum he has developed several scanners and numerous tools for data processing. His latest design, the Selene Scanner, has been used by the Bodleian Library allowing imaging specialists and researchers to look at ancient objects with new eyes. He studied Cartography at the Polytechnical University of Madrid, where he nurtured his interest in maps, geography and the digitalisation and representation of the real world. Later he studied Virtual Design at the Istituto Europeo di Design, deepening his knowledge in 3D, real-time interaction and software development.

Richard Allen is a Software Engineer for BDLSS where he works primarily supporting Digital Bodleian and the Imaging Studio DAMS. He is also CEO of an Oxford University spinout company that specialises in photogrammetry.

Jessica Hodgkinson is a PhD candidate at the University of Leicester funded by the Midlands4Cities doctoral training partnership. Her research explores the participation of women in early medieval book culture in Western Europe through the analysis of surviving manuscripts commissioned, copied, owned and/or used by them.

Jo Story is professor of Early Medieval History at the University of Leicester. Interdisciplinary methodologies and approaches to evidence are central to her research and publications. Her current research centres on 'Insular Manuscripts' that were made in Ireland or the Anglo-Saxon Kingdoms or in monasteries founded by Irish or Anglo-Saxon missionaries on the Continent in the period between c. 600–900 CE.

Alessandro Bianchi is the manager of the Bodleian Japanese Library and curator of the Bodleian collection of Japanese rare books and manuscripts. After receiving his Ph.D. from the University of Cambridge, he worked at the British Library, the Smithsonian's National Museum of Asian Art, and taught at Haverford College. Alessandro is also a Visiting Researcher (2022/23) at the Art Research Centre of Ritsumeikan University.

Elaine Anstee has been Head of Imaging for the Bodleian Libraries since October 2021. With a background in Administration and Finance she focuses on the policies and procedures supporting the ARCHiOx project in addition to the business as usual work in the Imaging department.