Innovative Research Tools for the Study of Sculpture (Leuven, 26–27 Nov 26)

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Innovative Research Tools and Methodologies for the Study of Medieval and Renaissance Sculpture. 13th ARDS Annual Conference on Current Research in Medieval and Renaissance Sculpture.

Since the late nineteenth century, and particularly over the past three decades, a substantial body of scholarship has emerged on medieval and Renaissance sculpture. Yet these works remain remarkably difficult to study. The challenges extend beyond their historical dispersal across rural parish churches and other remote sites. Even when sculptures are housed in museums, obstacles persist: their physical immobility, the constraints of viewing them without full three-dimensional access, and the complex interplay of materials and techniques that define their multimedia character. Moreover, the collaborative nature of their creation often obscures individual authorship and complicates attribution, especially when it relies on stylistic criteria. All these aspects compound the complexity of conducting research on these pieces.

The study of medieval and Renaissance sculpture, however, is entering a transformative era. Digital technologies, advanced imaging techniques, and interdisciplinary approaches are reshaping how we document, analyse, and interpret these works of art. We invite scholars, conservators, technologists, and cultural heritage professionals to contribute papers that explore innovative research tools and methodologies for this field. We seek to examine the opportunities that lie ahead for overcoming traditional challenges and opening new avenues of inquiry. This call for papers offers a range of suggested topics, but we warmly welcome additional proposals, whether they involve new research projects, methodologies, tools, databases, or other resources that advance the field.

Early pioneers in the field primarily focused on iconographic and stylistic analyses of artworks. Over the past few decades, however, the stylistic approach - centered on attribution and aimed at connecting artworks with their creators - has evolved significantly. Unlike their predecessors, today’s researchers, and those of the future, will have access to advanced tools that allow for unprecedented precision: the ability to examine even the smallest details up close, take exact measurements, employ visual comparison technologies, and leverage comprehensive databases.

Institutions such as the RKD – Netherlands Institute for Art History have opened up new worlds for researchers through the development of specialized databases. Projects such as the Digital Corpus of Flemish Retables and Marks on Art have significantly advanced access to critical information. Most recently, the initiative Early Netherlandish Sculpture, a collaboration between the

RKD and several museum partners, aims to make the corpus of medieval and Renaissance sculptures accessible within the framework of RKD Research. These efforts not only facilitate scholarly study but also set new standards for digital art historical resources.

Material-technical research on sculpture has expanded rapidly with the rise of advanced imaging and analytical methods. Techniques such as X-radiography, CT scanning, infrared reflectography, ultraviolet fluorescence, and 3D scanning or photogrammetry allow for detailed examination of sculpted objects, revealing workshop practices, construction methods, tool use, and polychromy. In parallel, the scientific analysis of sculptural materials has become increasingly central. Isotope studies help determine the provenance of alabaster; XRF enables distinctions between materials such as marble and alabaster; and alloy analysis deepens our understanding of bronze production. For wooden sculpture, dendrochronology, wood anatomy, and radiocarbon (C-14) dating remain essential for determining species, origin, and chronology. Together, these evolving methods open new pathways for understanding the material, technical, and historical dimensions of sculpture.

Moreover, AI-driven image analysis is increasingly capable of detecting subtle patterns (such as brushstrokes, surface textures, carving sequences, and working habits) that are often imperceptible to the human eye. Yet such approaches raise fundamental questions: can an AI trained on photographs, without accounting for workshop structures, ageing, restoration layers, or tactile qualities of materials, provide meaningful conclusions about authorship and production? The emerging tension between technological potential and methodological limitations invites a critical debate on how (and whether) AI should be integrated into connoisseurship and the study of workshop practices.

The digitization of preserved documentation opens new doors for research, enabling scholars to approach these works from social, cultural, and economic historical perspectives. Gradual digital access not only offers the convenience of consulting materials from anywhere but also creates opportunities for enhanced search functionality, allowing researchers to locate terms, names, and artworks with ease. Emerging technologies such as automatic text recognition push these possibilities even further, unlocking resources and insights that early pioneers could scarcely have imagined.

The ability to reconstruct an artwork, or the context in which it originally functioned, opens exciting new possibilities for research. Visual reconstructions often confirm or challenge earlier theories about appearance and arrangement and open doors for reconstructing lost sculptures or virtually reuniting fragmented ensembles. Fields such as digital reconstruction, 3D modelling, and augmented reality offer powerful tools for this purpose, while physical 3D printing can also provide tangible answers to longstanding questions. For example, during the restoration of the altarpiece in Onze-Lieve-Vrouw-Lombeek, KIK-IRPA and Kreate 3D produced replicas of stolen fragments using a 3D scan of the gypsum copy preserved in the Art & History Museum. Similarly, digital reconstruction based on historical photographs now makes it possible to virtually restore lost or damaged elements.

This call for papers not only invites scholars in the field of medieval and renaissance sculpture to reflect on the exciting new possibilities for research but also to address the challenges that remain: those aspects that are still unsolved, the margins of error, and other limitations. Take 3D

printing as an example: while it offers many advantages, it also raises important questions. For instance, the most effective way to reproduce polychromy remains manual painting rather than 3D printing, and shiny surfaces remain notoriously difficult to scan. 3D-printed replicas can be a practical solution when climatic conditions are unfavourable or when original objects are at risk of damage or theft. Yet, for many believers, the sacred nature of these objects is inseparable from their authenticity, creating a tension between preservation and use. What is the right balance?

How to submit your proposal?
• Write an abstract in word or pdf; max. 500 words (excl. authors name(s) and contact details).
• Include a short bio of 150 words max.
• Include a short CV
E-mail abstract, short bio, and short CV to info@ards.be

Practical information
• The call for papers deadline is 16 May 2026.
• In the selection of papers, priority will be given to speakers presenting new and innovative research, research projects and contributions relevant to the specific conference theme.
• The lectures, illustrated by a PowerPoint slideshow, should be no longer than 20 minutes.
• Each conference session will be followed by a Q&A with the speakers.
• Conference papers will be published in the Ards acta colloquia post print series in collaboration with Brepols Publishers.
• Your proposal (abstract, short bio, short cv) and lecture should be in English. The conference communication and the post prints publication will also be in English.
• The organizers cannot contribute towards transport and/or accommodation costs of speakers or attendees.