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- Φεβρουάριος 2026 -

**All other things have a portion of everything, but
Mind is infinite and self-ruled, and is mixed with
nothing but is all alone by itself. (Anaxagoras)**

Newsletter of the Hellenic Society of Archaeometry

- February 2026 -

Nr. 299

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ΣΥΝΕΔΡΙΑ - CONFERENCES/WORKSHOPS

EAA 2026 SESSION ON NON-FERROUS METALLURGY, CALL FOR PAPERS

Dear colleagues,

We would like to share with you a Call for Papers for a session we are organising at the EAA 2026 Conference (Athens), entitled:

“Hiding in Plain Sight: Archaeological and archaeometallurgical perspectives on non-ferrous metallurgy across the Balkans, Eastern Mediterranean and Middle East.”

The session aims to explore non-ferrous metallurgical and metalworking practices through integrated archaeological and archaeometallurgical approaches, with a particular emphasis on the *chaîne opératoire*. We are especially interested in contributions addressing technological choices, organisation of production, knowledge transmission, and regional as well as interregional connectivity across the Balkans, Eastern Mediterranean, and Middle East.

Please find the session poster attached for further details.

If you feel that your current or completed research — whether individual or collaborative — fits within the scope of this session, we would be delighted to receive your submission.

The submission deadline is 5 February 2026.

For any questions or further information, please do not hesitate to contact us at:
bemme.eaa@gmail.com.

Best regards,
Athina, Magda and Demetrios

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XI RADIOCARBON AND ARCHAEOLOGY
INTERNATIONAL SYMPOSIUM - 2026, 30
JUNE - 3 JULY 2026 NITERÓI, RIO DE
JANEIRO, BRAZIL

Dear colleagues of the Radiocarbon community,

We would like to wish you all a very Happy New Year and a productive 2026!

It is with great pleasure that we invite you to participate in the **XI Radiocarbon and Archaeology International Symposium - 2026**, which will take place in **Niterói, Rio de Janeiro (Brazil)**, from **30 June to 3 July 2026**. The meeting aims to bring together researchers, students, and professionals working with radiocarbon and related approaches applied to archaeology, heritage, and related fields, fostering interdisciplinary dialogue and international collaboration.

Please take note of the following **important dates**:

01 March 2026 – Deadline for abstract submission

Beginning of May 2026 – Notification of abstract acceptance

20 May 2026 – Deadline for early bird registration

For inquiries, please contact the organizing committee at 14c.archaeology.2026@gmail.com

Stay tuned! A dedicated **conference website with more information will be available soon**.

We very much hope to welcome you to Brazil for what promises to be a stimulating event with fruitful collaborations and exciting scientific exchanges.

With best wishes,

The XI Radiocarbon and Archaeology International Symposium Organizing Committee

CONFERENCE MA-XRF 2026, THURSDAY SEPTEMBER 29TH AND FRIDAY OCTOBER 2ND 2026, FRENCH NATIONAL MUSEUM OF NATURAL HISTORY, PARIS

Abstract submission now open !

Abstracts are expected between January 5th to April 3rd 2026 [through the online form](#).

This workshop to be held in Paris, within the [French National Museum of Natural History](#), between Thursday September 29th and Friday October 2nd 2026 aims to bring together researchers interested in MA-XRF and complementary imaging techniques for the study of cultural and natural heritage, including Reflectance Imaging Spectroscopy (RIS), Luminescence Imaging Spectroscopy (LIS), X-Ray Diffraction Mapping (XRD), Confocal XRF (CXRF), and more.

Discussions will focus on the latest advancements in instrument development, data evaluation methods, and their applications in case studies. A particular emphasis will be placed on the integration of MA-XRF with other techniques in multi-modal analytical approaches.

Friday morning, October 2nd, will be devoted to the specific issues facing museum curators.

Local Organizing Committee :

Oulfa Belhadj, Centre de Recherche sur la Conservation (CRC), Paris, France

Lucile Brunel-Duverger, Centre de Recherche et de Restauration des Musées de France (C2RMF), Paris, France

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Marie Radepon, Centre de Recherche sur la Conservation (CRC), Paris, France

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Laurence de Viguerie, Laboratoire Archéologie Moléculaire et Structurale Paris (LAMS), Paris, France

Please visit the site: <https://maxrf2026.sciencesconf.org/>

**5TH INTERNATIONAL CONFERENCE ON
TRANSDISCIPLINARY MULTISPECTRAL
MODELLING AND COOPERATION FOR THE
PRESERVATION OF CULTURAL HERITAGE
- CULTURAL HERITAGE AT THE
FOREFRONT OF TRANSFORMATION, 14-16
DECEMBER, ATHENS, GREECE, CALL FOR
PAPERS**

Dear Colleague,

We are pleased to announce the 5th International TMM_CH Conference on “Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage, Cultural heritage at the forefront of transformation”, to be held in Athens, Greece, on 14–16 December 2026, following the successful TMM_CH Conferences in 2018, 2021, 2023 and 2025.

This 5th International Conference holds a landmark anniversary significance, as it coincides with **ten years since the historic opening of the Holy Tomb in the Church of the Holy Sepulchre in Jerusalem**, underscoring the lasting impact of emblematic heritage interventions and international cooperation in advancing research, innovation, and sustainable preservation.

You are invited to submit your research contributions for **oral presentations**.

For more information about the Conference: <https://www.tmm-ch.com/>

INTERNATIONAL STEERING COMMITTEE

https://www.tmm-ch.com/files/TMM_CH2026_Steering_Committee.pdf

INTERNATIONAL SCIENTIFIC COMMITTEE

https://www.tmm-ch.com/files/TMM_CH2026_Scientific_Committee.pdf

ABOUT THE CONFERENCE

Innovative scientific methodologies and challenging projects marking future trends in the protection of cultural heritage have initiated a universal conversation within a holistic approach, merging competence from the scientific fields of architecture, civil engineering, surveying engineering, materials science and engineering, information technology and archaeology, as well as heritage professionals on restoration and conservation, stakeholders, industry representatives and policy makers. The combined utilization of digital documentation technologies with innovative analytical and non-

destructive techniques, numerical, computational and 3D techniques, and advanced interpretative methods supports the creation of a transdisciplinary multispectral modelling towards the sustainable preservation of cultural heritage. Innovation is enhancing and revealing a critical dimension of the preservation of cultural heritage along with social participation, communication, and capacity building.

The National Technical University of Athens interdisciplinary team “Protection of monuments” [Prof. A. Moropoulou, Prof. M. Korres, Prof. A. Georgopoulos, Prof. C. Spyarakos, Ass. Prof. C. Mouzakis], scientific responsible for the Holy Aedicule’s rehabilitation of the Holy Sepulchre in Jerusalem, and the Technical Chamber of Greece, in collaboration with the Hellenic network transferring the advanced and interdisciplinary knowhow for sustainable preservation of Cultural Heritage responding to great technical and societal challenges, established at the Technical Chamber of Greece, in collaboration with international and Greek Organisations and Universities, organize the **5th TMM_CH International Conference on “Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage, Cultural heritage at the forefront of transformation”**, on **14-16 December 2026** in Athens, Greece, opening future opportunities in the original agora of our technological and democratic roots.

The Conference is organized by the National Technical University of Athens in cooperation with the Technical Chamber of Greece, counting the auspices of H.E. the President of the Hellenic Republic, Mr. Konstantinos Tasoulas, and the benedictions bestowed by His All-Holiness Ecumenical Patriarch Bartholomew I of Constantinople, His Beatitude Archbishop Ieronymos II of Athens and All Greece, and the three Christian leaders of the Status Quo of the Holy Sepulchre in Jerusalem and the Holy Land: His Beatitude Patriarch Theophilos III of Jerusalem, His Beatitude the Armenian Apostolic Patriarch of Jerusalem, Archbishop Nourhan Manougian, and the Custos of the Holy Land, Very Rev. Fr. Francesco Patton, O.F.M.

Distinguished scientists and representatives of the International Council on Monuments and Sites (ICOMOS), the Organization of World Heritage Cities (OWHC), the Cultural Heritage Finance Alliance (CHFA), the World Monuments Fund (WMF), the International Federation of Surveyors (FIG), the International Committee for Heritage Documentation (CIPA), Europa Nostra, Global Media Organizations, the European Construction Technology Platform (ECTP), the European Society for Engineering Education (SEFI), AHEPA Hellas 10 and other major International and European Organizations, Associations, networks Universities and Research Centers in the field of cultural heritage preservation, participate in the International Steering and Scientific Committees which had successfully organized the 1st, 2nd, 3rd and 4th TMM_CH Conferences in 2018, 2021, 2023 and 2025. The conference will be held at the Eugenides Foundation in hybrid format. On-site attendance and oral presentation is required.

The Conference will showcase research results, methodologies, and emblematic applications will be presented, demonstrating how the utilization and reuse of monuments, historic cities and sites form the framework of a sustainable preservation of cultural heritage, in accordance with the principles of circular economy; in terms of respect and protection of values, materials, structures, architecture and landscape; and with an informed society able to participate effectively in the policies that will design and implement the new strategies required.

By sharing knowledge, experiences, and recommendations on sustainable cultural heritage approaches and practices at a time of major global challenges, new dynamics are established towards future transformations through the adoption of novel interdisciplinary protocols and requirements within a holistic framework encompassing digital heritage, advanced documentation, and innovative conservation strategies, as well as the integration of Memory Twins, Artificial Intelligence, Extended Reality (XR), transverse data analysis as well as transdisciplinary dialogue.

Conference Topics

- Crosscutting topic: Emblematic works as source of innovation and transdisciplinarity
- Reinventing Resilience
 - Culture based climate actions
 - Heritage vulnerability during natural hazards, conflicts and manmade destructions, and pandemic risks - Biosafety
 - Earthquake and structural rehabilitation
- Memory Twin as a holistic framework for Cultural Heritage documentation, interpretation, and adaptive reuse
- The role of AI and generative AI in supporting Cultural Heritage documentation, restoration and Augmented Reality
- Multiperceptions and narrative modelling and collaboration for mutual understanding and peacemaking
- Effective science communication through interconnection of science, technology with Cultural Heritage values
- Public involvement (policy makers) and social awareness (media) for Cultural Heritage sustainable preservation, reuse and local development
- Bridging Heritage Stakeholders, Art, Science and Industry
- Standardization of processes and requirements to implement novel interdisciplinary methodologies
 - in diagnostic and rehabilitation studies
 - in quality control of works in progress
- Transdisciplinary dialogue - Networking for the implementation of a novel interdisciplinary digital methodology and capacity building
- Upskilling trainers through learning from existing emblematic works
- Promoting the need for a holistic interdisciplinary education for the Preservation of Cultural Heritage
- Belt and Road initiative in multimodel cultural heritage preservation
- Historic cities and centers: New reuse and preservation strategies applying Circular Economy
- Tourism, sustainable revival through Cultural Heritage and environmental assets
- Preserving Compatibility, the Materiality and Integrity of Structures and Architectural Authenticity
- Non-Destructive and Structural Techniques for Diagnosis, Redesign and Health Monitoring in the new digital era and AI interpretation
- History - Archaeology - Archaeometry - Archaeogene
- Dialogue between religious monuments, preservation works and values
- Green and blue deal for local and regional Sustainable Development
- Cultural heritage preservation addressing energy challenges

- Rebranding the World in conflict through transdisciplinary dialogue, culture, mutual understanding and Peace

CALL FOR PAPERS

The International Steering Committee and the International Scientific Committee welcome research contributions for oral presentations. Submitted papers will be **peer reviewed**. Accepted papers will be distributed into sessions. Plenary lectures [after invitation] will cover major accomplishments, innovations and challenges.

Full papers need to be a minimum of 12 pages and no more than 20 pages and written in English. You can submit papers via EasyChair, using the conference link: <https://easychair.org/conferences/?conf=tmm-ch2026>

Please check important dates for submission deadlines.

PUBLICATIONS

Accepted papers will be published following the precedent set by the previous TMM_CH conferences. These publications will be made available in 2027, following the conference, in esteemed international journals and proceedings such as: **Springer Proceedings in Materials SPM, SCIENTIFIC CULTURE, Communications in Computer and Information Science CCIS, Land an Open Access Journal by MDPI, Buildings, Technical Annals TA , Intrecci, JOCCH - ACM Journal of Computing and Cultural Heritage**, among others.

IMPORTANT DATES

First announcement and Call for Participation: November 3rd, 2025

Extended First announcement and Call for Participation: January 15th, 2026

Abstract Submission Deadline: March 3rd, 2026

Notification of Acceptance/Rejection: March 13th, 2026

Full paper submission deadline: June 13th, 2026

Notification of author's acceptance: September 13th, 2026

Announcement of preliminary program: September 23rd, 2026

Revised paper submission: October 23rd, 2026

Further revisions may be required to achieve full compliance with the publication's specific requirements

Early Bird Registration Closing: October 30th, 2026

Announcement of the final program: November 10th, 2026

Conference dates: December 14th–16th, 2026

Publications of papers: 2027 - 2028

The President of the International TMM_CH Conference

Emer. Prof. A. Moropoulou

ISA 2026 - TURIN - ITALY - NEW CALL FOR POSTERS

Dear All,

we would like to thank again those who participated in the call for abstracts for ISA2026.

According to the planned timeline, the authors who sent their works by December 15 will shortly receive a personal communication from the Organizing Committee, as a confirmation of acceptance or rejection of their abstracts.

If you could not submit any contribution by the previous deadline, we have very good news for you!

From **January 15 to February 15** an extraordinary call will be open.

The extraordinary call is **posters only** (up to a maximum of two posters per presenter) and **exclusively dedicated to those who have not participated in the first call.**

(Please note that the timeline for reviewing the abstracts of this special call may not be compatible with the deadlines set for applying to grants and awards reported on the ISA 2026 website).

We nonetheless encourage everyone, including those who may not be presenting a research contribution in person, to take part in this exceptional networking opportunity, either in person or online.

Registration opens on **January 15.**

Wishing you all the best and a great start for the new year.

The ISA 2026 Organising Committee

ARCHIVES AND RECORDS ASSOCIATION
UK & IRELAND ANNUAL CONFERENCE:
5TH-7TH AUGUST 2026, GLASGOW, UK, CALL
FOR PAPERS ON THE THEME:
'AUTHENTICITY'

The submission portal for our 2026 conference Call for Papers is now open.

[You can find the submission portal here.](#)

The deadline for submission of papers is 13th February 2026.

We are calling for papers on the theme of 'Authenticity'.

Annie Starkey, chair of the ARA Conference Committee says:

“As we return to a fully in-person conference for 2026, it feels appropriate to address the theme of authenticity - how do we approach the practices of Record Keeping in an age where ‘truth’ feels increasingly under fire?

We've seen Heads of State alter, deny, and destroy archival records. If history is determined by the victor, how do we work with integrity and preserve the full truth when those in power may seek to quash it? Conversely, as Record keepers we have been described as 'Custodians of the Truth', but who's truth? How do we ensure fair and balanced representation, especially when some views feel so alien to us?

How do we manage the legality of digitising records for Records Management purposes, when – for example - the digitised records supersede the 'original' items as the 'legal' copies? When original formats have a limited lifespan, either because of their inherent instability or technological obsolescence – how do we give people an authentic experience when accessing born-digital records? Is authenticity in fact the priority, or does access trump truth?

There are also discussions to be had around the ethics of AI and machine-learning and its use – can it simplify tasks like metadata capture or transcription, increasing efficiency; or will it impact on data quality, dilute understanding, and lead to de-skilling of record keepers?

The authenticity of the physical record can be viewed through conservation decision-making lens, but what are the implications of the treatments we undertake and the materials we use? Are we compromising authenticity, or broadening the narrative of what can be perceived as authentic?

In an era marked by disinformation, contested histories, and rapid technological change, the concept of authenticity in recordkeeping has never been more complex—or more critical. How do we navigate truth, ethics, and recordkeeping in a Post-Truth World?”

Suggested Ideas for exploration might be:

- What is the authentic experience within the archive? Is there a "hierarchy of authenticity" when prioritising or foregrounding the experience of different individuals or groups?
- Does authenticity matter? Are we in danger of trying to create a static and immobile template that ignores interpretation and varied opinion?
- How is authenticity changing in response to AI? In an ongoing age of disinformation, what does authenticity really mean?
- How does the choice of AI source material contribute to perpetuating stereotypes around subjects such as race, gender and religion?
- "Truth, trust, provenance and overcoming the 'age of stupidity'". As record-keepers, should this be our mission statement?
- Archives are socially constructed - how do changing social perspectives affect authenticity?
- Record keeping establishments are places of destruction as much as preservation. What narratives control retention choices? Where does the burden of authenticity rest?
- Contested histories - what is the place of an archive to challenge or uphold certain narratives?
- Archival and record-keeping theory – if apparently minor issues such as page order are compromised, is this conscious dissociation? What is the impact on perceived authenticity?
- When archives are used within other systems of governance and authority, what does this mean for authentic narratives of major events? Presidential elections, the UK newspaper hacking scandals and the UK Post Office enquiry, have all laid bare flaws in documentation and decision-making. The use and misuse of records that have a dramatic impact on 'real life'.
- The digital record vs. the original record - what is the reader seeking to experience? Is one 'more' authentic than the other?
- Who wields tools of authentication such as heritage science? What role does material analysis play in understanding collections? How can new technologies deepen this understanding?
- Does interventive conservation treatment compromise authenticity? Best practice dictates use of sympathetic materials, emphasising reversibility, but what does it mean for treatment integrity when manufacturing processes of materials are changed, or accessibility is affected by external factors such as climate change?
- What of inevitable changes to the item to preserve them and/or make them accessible? Is accessibility the enemy of authenticity? Do these treatments change the fundamental nature of collection material?

And of course, we are open to many more ideas than this!

All we need at this stage is a 500 word (max) abstract for your presentation, panel or workshop. **We expect that all presentations will be made in-person in Glasgow.**

As in previous conferences we offer the following formats:

Individual contributions – presentations of 20 minutes, and if successful your proposal will be combined into a session with other speakers.

Panel sessions – three to five speakers presenting related papers on a specific theme or topic.

60 minute workshop – a longer session aimed at including a practical element as well as presentation.

Use the links above to find out more about each type of format.

Registration for the conference will open shortly.

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SECOND CIRCULAR FOR THE 4TH RADIOCARBON AND DIET CONFERENCE & 3RD LATIN AMERICAN RADIOCARBON CONFERENCE (CLARA), UNIVERSITY OF CHILE, SANTIAGO 2026

Dear colleagues,

We are pleased to invite you once again to participate in the 4th Radiocarbon and Diet Conference & 3rd Latin American Radiocarbon Conference (CLARA) to be held at the Pontifical Catholic University of Chile, Santiago. Here, we share general information about the event, including abstract submissions and editorial guidelines.

Nos complace invitarle una vez más a participar en la 4ª Conferencia de Radiocarbono y Dieta y 3ª Conferencia Latinoamericana de Radiocarbono (CLARA), que se celebrará en la Pontificia Universidad Católica de Chile, en Santiago. Aquí compartimos información general sobre el evento, incluyendo el envío de resúmenes y las directrices editoriales.

Abstracts and Editorial Guidelines

The deadline for submitting abstracts, for both oral presentations and posters, is **15 March 2026**. Abstracts must be no longer than 250 words, without references. Submissions must be in English. Each abstract must include: title, author(s), institutional affiliation(s), and selected conference/session. Abstracts must be submitted through this [link](https://app.oxfordabstracts.com/stages/81289/submitter) (or copy-paste: <https://app.oxfordabstracts.com/stages/81289/submitter>).

*La fecha límite para el envío de resúmenes, tanto para presentaciones orales como para pósteres, es el **15 de marzo de 2026**. Los resúmenes no deben exceder las 250 palabras y no deben incluir referencias. Las propuestas deben presentarse en inglés. Cada resumen debe incluir: título, autor(es), afiliación(es) institucional(es) y la sesión seleccionada. Los resúmenes deben enviarse a través de este [enlace](https://app.oxfordabstracts.com/stages/81289/submitter) (o copiar y pegar: <https://app.oxfordabstracts.com/stages/81289/submitter>)*

4th Radiocarbon and Diet Conference, July 6-8, 2026

Sessions will include research on radiocarbon dating and human/animal diet through methodological applications & advancements in stable isotope, organic residue and compound-specific analyses, as well as themes of mobility and socioeconomic transitions. Investigations concerned with non-atmospheric reservoir offsets are also welcomed.

Las sesiones incluirán investigaciones sobre la datación por radiocarbono y la dieta humana/animal mediante aplicaciones metodológicas y avances en el análisis de isótopos estables, residuos orgánicos y análisis específicos de compuestos, así como temas de movilidad y transiciones socioeconómicas. También se aceptan investigaciones centradas en offsets de reservorios no atmosféricos.

<https://radiocarbon.org/events/radiocarbon-diet-conference>

Sessions:

1. Methodology: Advances, applications and challenges in radiocarbon dating and stable isotope analysis
2. Human–environment–diet dynamics
3. Dietary and economic-cultural transitions through time
4. Accurate dating: diet & non-atmospheric reservoir effects

1. Metodología: avances, aplicaciones y desafíos en la datación por radiocarbono y el análisis de isótopos estables
2. Dinámicas humano–medio ambiente–dieta
3. Transiciones dietarias y económico-culturales a través del tiempo
4. Datación precisa: dieta y efectos de reservorio no atmosféricos

3rd Latin American Radiocarbon Conference - CLARa, July 8-10, 2026

This event will cover various aspects related to radiocarbon dating applications in archaeology, paleoenvironment/climate and forensics with an emphasis on Latin America and/or research carried out by Latin American scholars. Themes include laboratory methodologies, Bayesian chronological modelling, migration and mobility, human–environment–climate interactions, non-atmospheric reservoir effects, and interdisciplinary approaches.

Este evento abordará diversos aspectos relacionados con las aplicaciones de la datación por radiocarbono en la arqueología, el paleoambiente/clima y la ciencia forense, con un énfasis en América Latina y/o en investigaciones realizadas por académicos latinoamericanos. Los temas incluyen metodologías de laboratorio, modelado cronológico bayesiano, migración y movilidad, interacciones entre humanos, medio ambiente y clima, efectos de reservorios no atmosféricos y enfoques interdisciplinarios.

<https://radiocarbon.org/events/clara3-conference-radiocarbon-latin-america>

Sessions:

1. Methodology: laboratory and computational developments/applications
2. Chronology building in the past: humans, fauna and/or the environment
3. Carbon pathways and reservoir effect correction

1. Metodología: desarrollos/aplicaciones de laboratorio y computacionales
2. Construcción de cronologías en el pasado: humanos, fauna y/o el medio ambiente
3. Vías del carbono y corrección de efectos reservorios

For any inquiries, please contact us at the following email address:

Para cualquier consulta, por favor contáctenos en la siguiente dirección de correo electrónico:

14cdiet.clara3@gmail.com

Organizing committee

Francisca Santana Sagredo - Pontificia Universidad Católica de Chile

César Méndez - Pontificia Universidad Católica de Chile

Claudio Latorre - Pontificia Universidad Católica de Chile
Ramiro Barberena - CONICET, Universidad de Cuyo, Argentina
Carla Carvalho - Universidade Federal Fluminense, Brazil
Pablo Méndez-Quirós - Universidad de Chile
Lorena Becerra-Valdivia - University of Bristol, United Kingdom

INTERNATIONAL WORKSHOP,
DIAGNOSTICS FOR CULTURAL HERITAGE:
RESEARCH, CONSERVATION,
ACCESSIBILITY, MAY 12–15, 2026, SCUOLA
NORMALE SUPERIORE OF PISA IN
COLLABORATION WITH THE OPIFICIO
DELLE PIETRE DURE, FLORENCE, ITALY

Organised by:

Gianfranco Adornato, Giulio Amara, Francesco Cardarelli, Alessia Di Santi

The international workshop "Diagnostics for Cultural Heritage: Research, Conservation, Accessibility" is designed to introduce BA, MA and PhD students, as well as recent graduates, to the theoretical foundations and practical applications of diagnostic methodologies in Cultural Heritage.

The programme will focus on advanced diagnostic techniques applied to the study, conservation, and interpretation of architectural, archaeological, and historic-artistic heritage, with particular attention to current strategies, key results, and future perspectives in the field.

The workshop includes:

Seminar sessions dedicated to methodologies and case studies (Florence, Palazzo Strozzi)

A hands-on laboratory session focused on the application of diagnostic tools (Florence, Opificio delle Pietre Dure)

Application & Practical Information

Detailed information on the programme and the application procedure is available at: www.sns.it/it/evento/...

Application deadline: February 15, 2026

Applicants are required to submit an online application including:

An up-to-date signed CV (including the list of exams),

A short biographical note outlining research or study interests (maximum 600 words).

Participation & Logistics

No registration or tuition fees are required.

Admission includes:

Participation in all lectures and laboratory activities,
Educational materials,

Lunch on workshop days.

The Scuola Normale Superiore will provide accommodation in shared double hotel rooms for the full duration of the workshop.

ΘΕΣΕΙΣ ΕΡΓΑΣΙΑΣ/ΥΠΟΤΡΟΦΙΕΣ –
JOB VACANCIES/FELLOWSHIPS

JOB OPPORTUNITY: RESEARCH
SCIENTIST, ROCHESTER INSTITUTE OF
TECHNOLOGY, IMAGE PERMANENCE
INSTITUTE

The Image Permanence Institute (IPI) at Rochester Institute of Technology (RIT) is seeking a highly skilled and motivated Research Scientist to advance knowledge and research in the chemical degradation and stability of cultural heritage collection materials. This position is ideal for individuals with expertise in materials testing, atmospheric pollutants, chemical interactions, organic chemistry, or chemical engineering. The appointed researcher will manage IPI ISO testing services, conduct independent research, collaborate on multi-scholar projects and lead specific components of larger research programs under the direction of a senior or principal researcher. This role involves publishing research results and findings in peer-reviewed journals, producing reports and contributing to workshops and conferences, and supporting educational programs related to preservation science.

We welcome applications from fields outside of cultural heritage but will look favorably on candidates demonstrating a strong interest in the preservation science of cultural heritage.

The pay range for this position is RIT's **119A wage band**, with a minimum salary level of \$52,300 and maximum of \$87,600. The application review process will start **January 16, 2026**, and the position will remain open until filled. Learn more about the position and apply at [RIT Career Zone 9984BR](#).

If you have specific questions about this position, please contact IPI's Director of Research and search committee Chair, Emma Richardson, at ejrp@rit.edu

About IPI

The Image Permanence Institute (IPI) is a preservation research center in the College of Art and Design at Rochester Institute of Technology, Rochester, NY. IPI achieves its mission to support and inform the preservation of cultural heritage collections through applied research, the development of practical preservation resources and tools, professional-level education and training programs, and consulting and materials testing services. As a non-profit research center, IPI depends on private and public philanthropy to fund its research program. Institutions that use IPI preservation products and consulting and testing services further support IPI's mission.

Learn more about IPI at: <https://www.rit.edu/ipi>

Emma Richardson
Director of Research
Image Permanence Institute
Rochester
United States

JOB POSTING: BEAL FAMILY POSTGRADUATE FELLOW IN CONSERVATION SCIENCE, HARVARD ART MUSEUMS

Job Description

At the intersection of public access and higher education, the Harvard Art Museums invite everyone to embrace inquiry, dialogue, and new perspectives on art and ideas. The museums' global collections encompass a broad range of time periods and geographies.

The Fellowship program at the Harvard Art Museums is designed to broaden the experience of those embarking on professional museum careers in art history and related fields, conservation and conservation science, and/or museum education. Fellows are integral members of the museums' staff, take part in departmental and museum-wide meetings, and collaborate with colleagues across the museums. Fellows are active members of the program cohort, participating in regular Fellows meetings, workshops, specialized training, and organized activities throughout the year, including presenting their work at an annual Fellows Symposium.

The Straus Center for Conservation and Technical Studies is seeking a postdoctoral scientist for a 3-year research fellowship in the field of conservation science.

Job-Specific Responsibilities:

Under the supervision of the Senior Conservation Scientist and Director, Straus Center for Conservation and Technical Studies, the Beal Fellow works with scientists, conservators, conservation fellows, curators, and academic art historians on research projects. This position utilizes a broad range of art and artists' materials collections in the Harvard Art Museums and other institutions. Emphasis will be shared between traditional and modern/contemporary artists' materials and techniques.

The Fellow provides analytical services to the Harvard Art Museums' conservators and curators in the study and preservation of the collection and documenting findings.

The laboratories are equipped with polarized light and reflectance/UV fluorescence microscopes, GC-MS, FT-IR, Raman and XRF spectrometers. The Fellow assists with instrument maintenance and repair as necessary, and in training others to use the instruments. Beyond the resources of the Center, Harvard University and other local universities and museums offer access to specialized analytical equipment and a large scientific community.

The Fellowship will involve the organization of workshops and symposia to engage others in examining issues related to conservation science research.

The Beal Fellow is an integral member of the conservation staff, carrying out a broad range of activities, including presentations of research and other projects; lab maintenance; and leading or participating in lab tours.

Foregrounding the museums' teaching and research mission, the Fellow also participates in interdisciplinary teaching and contributes to a rich offering of public and academic interpretive programs across various platforms.

The Fellow may supervise students and temporary employees.

The above covers the most significant responsibilities of the position. It does not, however, exclude other duties, the inclusion of which would be in conformity with the position.

Physical Requirements:

- Ability to work safely in lab and workshop environments, including the use of chemicals and tools, while wearing appropriate personal protective equipment (PPE)
- Excellent hand skills and manual dexterity for precise treatment and handling tasks
- Ability to perform fine but physically demanding work, standing or sitting for extended periods while using manual and power tools
- Ability to lift, move, and position objects weighing up to 25 pounds
- Ability to color match

We believe in the potential of candidates from all backgrounds and experiences. If you meet the Basic Qualifications for this role and are excited about the opportunity, we encourage you to apply-even if you don't meet every single Additional Qualification. Whether you're starting your career, re-entering the workforce, transitioning fields, or seeking the next step, we welcome your unique perspective. Please use your cover letter to share your passion for art museums and how you envision contributing to this role.

Qualifications

Candidates **MUST** meet the following basic qualifications in order to be considered for this role:

- Ph.D. in chemistry/physical science combined with experimental research experience and demonstrated experience of an ability to conduct academic research required.
- Additional Qualifications and Skills:
- A high level of scientific achievement and a serious interest in a career as a scientist in the museum field
- Experience with microscopy of diverse types, image analysis, and advanced computational skills desirable
- Strong oral and written communication skills required
- Demonstrated interest in the visual arts

- Record of publication and/or presentation, and knowledge of one or more foreign languages preferred
- Museum or related experience preferred
- Commitment to fostering engagement with original works of art in a university museum context, for all visitors
- Excellent organizational, interpersonal, and communication skills; ability to work independently as well as collaboratively as part of a team

Additional Information

Term: This fellowship is a term position starting September 8, 2026 and ending on September 2, 2029.

Compensation: \$60,000 annualized compensation.

Benefits: The Fellow has access to travel funding and is eligible to participate in Harvard's fringe benefits program.

Standard Hours/Schedule: 35 hours per week.

Work Location: This position works on site at both the museum in Cambridge, MA, and periodically at a second facility in Somerville, MA.

Pre-Employment Screening: Identity, Education, and Criminal.

Orientation and Review Period: This position has a 3-month orientation and review period.

Application Procedures:

Please apply online with a cover letter and a résumé or curriculum vitae. Complete applications will be reviewed on a rolling basis, starting January 26, 2026, and continuing until the position is filled.

Please apply online with a cover letter and a résumé or curriculum vitae using the following link: us.smrtr.io/4pL3G

Applications can also be submitted via careers.harvard.edu using Posting Code: 001986SR

Complete applications will be reviewed on a rolling basis, starting January 26, 2026, and continuing until the position is filled. Applicant are encouraged to submit as early as possible.

Upon review of applications, select candidates will be notified to submit two letters of recommendation. Supporting documents may include writing samples and other materials.

Straus Center for Conservation and Technical Studies

Harvard Art Museums
Cambridge, MA
United States

JOB OPENING: ASSISTANT SCIENTIST/ASSOCIATE SCIENTIST (TECHNICAL STUDIES RESEARCH), THE GETTY CONSERVATION INSTITUTE

The Getty Conservation Institute invites applications for the full-time position of **Assistant or Associate Scientist** in our **Science** department.

Hiring Pay Scale for **Assistant Scientist**: \$70,958.16 - \$94,018.08 annually, commensurate with experience and internal equity

Hiring Pay Scale for **Associate Scientist**: \$83,742.88 - \$110,976.16 annually, commensurate with experience and internal equity

Link to application: jobs-getty.icims.com/jobs/4705/...

Questions? Email gcistaffing@getty.edu

Application deadline: February 17, 2026

Job Summary

We are looking for an **Assistant or Associate Scientist** to conduct scientific research within the Getty Conservation Institute's [Science Department](#). You will be an integral member of the [Technical Studies Research](#) team, and will conduct research and analysis on works of art from Getty's collections-which includes the Museum's collection of paintings, manuscripts, drawings, sculpture, and decorative arts, as well as prints, rare books, and objects in the collection of the Getty Research Institute-and from other institutions with which we collaborate.

This job will be based in our laboratories and offices at the Getty Center in Los Angeles. It will begin on-site full-time, and the opportunity to request a telework schedule may be available after an initial period of training and orientation, which will be discussed and approved by your supervisor. Typically, staff with approved telework schedules at the Getty Conservation Institute are in the office more than half of the time.

Major Job Responsibilities

- Conduct scientific analysis on works of art, in collaboration with other scientists, conservators, and curators, to improve the understanding and preservation of works in Getty's collections and at partner institutions.
- Develop research questions, perform literature reviews, determine analytical approaches, collect, interpret, and synthesize data, summarize results in written technical reports, and verbally communicate findings to Getty and external colleagues.
- Help coordinate scientific activities for projects across the Science Department, as assigned.

- Collaborate with conservators and curators to contextualize research findings in terms of significance to the work of art, artist, culture, or historical period.
- Conduct scientific research to further the understanding of historic technologies, material use, and/or material degradation.
- Provide analytical support for projects with other cultural, scientific, or academic institutions to research the chemical and physical properties of artists' materials.
- Recognize technology gaps and identify emerging technologies well-suited for use in the study of cultural heritage.
- Disseminate information/results to a wide array of audiences, including professional conservators, professional scientists, and the general public.
- Present research findings at professional conferences and publish papers in peer-reviewed journals.
- Organize seminars, symposia, and workshops to disseminate our research to the conservation and conservation science communities.
- Contribute to the organizational and administrative needs of the Technical Studies Research team, Science Department, and GCI.
- Prioritize your workload, effectively communicate with other team members, organize and archive samples and reports.
- Contribute to the short- and medium-term project goals and contribute to establishing strategic priorities for the Technical Studies Research team. Participate in meetings, committees, and planning sessions for the Science department and GCI.
- Foster a welcoming workplace that mirrors varied backgrounds, perspectives, and experiences; participate in development opportunities that promote supportive and inclusive environments; and incorporate those values into your daily work and interactions with others.
- Additionally, professional development is encouraged and supported through on-the-job training, attendance at specialized training courses, and participation in professional meetings and workshops.

Qualifications

- Master's degree in chemistry or another natural science
- 3–7 years of experience in scientific research
- Experience in the field of heritage conservation

Knowledge, Skills and Abilities

- Broad familiarity with analytical science (instrumentation and research applications).
- Ability to synthesize and interpret data from a number of sources.
- Experience in the removal and mounting of samples from art objects for analysis.
- Knowledge of safe handling practices for works of art.
- Experience working with conservators, curators, and scientists from a variety of disciplines.
- Creative problem-solving skills and a demonstrated ability to learn new skill sets.
- Ability to work effectively individually and in a highly collaborative environment.
- Demonstrated excellent organizational, data management, prioritization, communication, and writing skills.
- Knowledge of artists' materials and methods.

International candidates are welcome to apply. Discussions regarding possible visa sponsorship typically occur once a final candidate has been identified and will depend on a number of factors, including but not limited to, type of visa required and current regulations. Recent changes in US immigration and work-related visa policies may limit our ability to provide sponsorship for certain visa types.

[All candidates must apply online](#). Please be prepared to upload your cover letter and CV/resume when prompted to do so by the online application system. Candidates who successfully complete the online application process will receive an automated message via email. If you have questions about this position or the recruiting process, please email gcistaffing@getty.edu.

Benefits and Perks

Here are just some examples that Getty offers/provides for full-time employees:
Medical, Dental and Vision insurance coverage, starting on date of hire. Getty pays 75%-95% of the premium, depending on the plan selected.
403(b) Employee Investment retirement plan – with up to 5% Getty Match
Getty contribution of 6%, on behalf of employee, to 401(a) retirement account
Educational Assistance and professional development
Paid Vacation, Sick and Personal Days
12 Paid Holidays
Many positions have bi-weekly Off-Fridays
On-Site Fitness Center at Getty Center
Community service opportunities

To learn more about our comprehensive benefits and long list of perks, go to [Getty HR](#).
Getty is committed to creating a welcoming workplace that reflects the various backgrounds of the communities we serve. We value differences in the pursuit of inquiry and knowledge, mutual understanding, respect, trust, transparency, and cooperation. All qualified applicants will receive consideration for employment without regard to age, ancestry, citizenship or immigration status, color, disability, ethnicity, familial status, gender identity and/or expression, genetic information, marital status, national origin, race, religion, sex, sexual orientation, veteran status, or any other protected status.

Anna Duer
Reference Librarian
Getty Conservation Institute
Los Angeles, CA
aduer@getty.edu

JOB POSTING: ERIC AND JANE NORD CONSERVATION SCIENTIST AT THE CLEVELAND MUSEUM OF ART

*Shape the Future of Conservation Science at the Cleveland Museum of Art: The Cleveland Museum of Art (CMA) invites applications for its inaugural **Eric and Jane Nord Conservation Scientist** - a visionary role at one of the world's leading art museums. This is a rare opportunity to **build a groundbreaking conservation science program from the ground up**, advancing research and care for a collection spanning 6,000 years of artistic achievement.*

Position: Eric and Jane Nord Conservation Scientist

Reports to: Eric and Jane Nord Chief Conservator

Position: Full-time, permanent

Start date: After July 1, 2026

Description:

The Cleveland Museum of Art welcomes applications for the museum's inaugural Eric and Jane Nord Conservation Scientist. This new role offers the opportunity to establish a groundbreaking conservation science program dedicated to the care, research, and interpretation of one of the world's most significant museum collections.

As the museum's first Eric and Jane Nord Conservation Scientist, the successful candidate is responsible for developing and leading the museum's conservation science program and establishing scientific research priorities focused on the CMA's collection in collaboration with conservation and curatorial colleagues. Duties include the technical analysis of artworks, the testing of conservation materials, and offering guidance and technical support to conservators to facilitate their treatment and preservation approach. The conservation scientist oversees the administration, budgeting, and all activities in the analytical lab, and is responsible for hiring and managing the Eric and Jane Nord Post-Doctoral Conservation Science Fellow, interns, and contractors in that area. They collaborate with colleagues and departments across the museum, including Curatorial, Technical Imaging, Facilities, Collections Management, Public and Academic Engagement, Exhibitions, Design, Philanthropy, Security, Operations, and more. They must meet critical deadlines in support of conservation treatments, exhibitions, acquisitions, loans, publications, capital projects and other major museum activities. The conservation scientist plays a key role in helping the museum move towards more sustainable practices.

This new position has been generously endowed by the Eric and Jane Nord Family Fund which includes funding for a full-time conservation scientist position, a post-doctoral conservation science fellow (which will be hired by the scientist in forthcoming years), and analytical lab operating support. The incoming scientist

will be expected to purchase, operate, and maintain new scientific equipment utilizing substantial recent additional gifts. The department already has a partially equipped 1,000 square foot analytical laboratory that resides within the Eric T. and Jane Baker Nord Conservation Suite, an 18,000 square foot integrated facility with five conservation labs (Asian paintings, Objects, Paper, Paintings, and Textiles), a technical imaging studio with multimodal capabilities, including an Apollo infrared camera, a library, administrative offices, and two preparatory spaces for frames and paper. The analytical lab is already functioning with the following equipment: an FTIR equipped with a Continuum microscope and Fisher Thermo Scientific iS50 bench with an iS50 Raman module and iS50 diamond sampling station; Bruker 5i XRF Spectrometer; Bruker M6 Jetstream micro-XRF scanner; Struers LaboPol-20/LaboForce-50 Polishing Grinder; Zeiss Axio Imager M2m fluorescent microscope and Zeiss AxioSkop-2 MOT fluorescent microscope. Additionally, the department has an X-radiography facility with 100kV and 360kV tubes, utilizing a Carestream digital scanner for digital X-ray imaging.

About the Conservation Department

The successful candidate will join a convivial, generous, and skilled conservation department consisting of ten conservators, three technicians, and a lab coordinator, along with numerous interns (pre-program to graduate) and fellows. The Conservation team is committed to the mentorship and support of emerging conservation professionals, and regularly hosts pre-program conservation interns, graduate interns, and post-graduate fellows with the support of substantial endowment funds; the Eric and Jane Nord Family Fund includes a dedicated conservation science post-doctoral fellowship. The conservation team is an active part of the public program and engages regularly with the museum's visitors and donors. The department also has access to the significant resources of the Cleveland Museum of Art, including a dedicated conservation technical imaging specialist and an outstanding library and archive, which is one of the largest in the nation, prioritizes collecting conservation literature, and supports a dedicated research librarian who assists with conservation-specific queries. For more information about the department please visit: www.clevelandart.org/conservation

About the Museum and Its Collection

The Cleveland Museum of Art is renowned for the quality and breadth of its collection, which includes more than 63,000 objects and spans 6,000 years of achievement in the arts. A major renovation and expansion project completed in 2014 has transformed the museum into a significant international forum for exhibitions, scholarship, performing arts, and art education. One of the top comprehensive art museums in the nation and free of charge to all, the Cleveland Museum of Art is located in the University Circle neighborhood. The city and surrounding areas contain excellent cultural institutions, outdoor parks, and schools. Cleveland has a robust art and culture scene, including one of the world's finest symphonies. Local resources and collaborators include the Cleveland Clinic and ICA-Art Conservation, which is the nation's oldest regional lab, along with Case Western Reserve University (CWRU) with its innovative maker space, think[box] and scientific centers including the Swagelok Center for Surface Analysis of Materials (SCSAM) and the Materials for Opto/Electronics Research and Education (MORE) Center.

For more information on the museum's strategic plan, please visit www.clevelandart.org/...

Requirements and Key Competencies:

A doctoral degree in chemistry, materials science, conservation science, or a related discipline, or a master's degree in an applicable area combined with significant museum conservation science experience.

At least five years of conservation science experience in a museum, laboratory, or cultural heritage setting.

Demonstrated expertise and mastery of analytical techniques for identifying and characterizing cultural heritage materials, including microscopy, FTIR, Raman, and XRF spectroscopy. Experience with multimodal imaging techniques, including using X-ray equipment, is strongly preferred.

Familiarity with the types of artwork represented in the museum's collection along with knowledge of artists' materials and their degradation processes.

Demonstrated administrative experience in lab management, including equipment maintenance and ensuring health and safety protocols are followed.

Strong organizational and project management skills.

Proven ability as an effective communicator of scientific findings to specialist and general audiences.

Broad and deep knowledge of general museum conservation practices.

Strong record of achievement in the field.

Salary:

Salary range: \$100,000 - \$135,000. Full-time work is 35 hours per week; occasional overtime might be necessary. The position comes with a generous package of benefits.

Application Procedure:

Please visit [the application portal](#) for the full posting. **Application materials are due by February 15, 2026.** Interviews will commence in March.

For consideration, please submit the following materials in English. PDF format is strongly preferred, and please be sure to include your last name in the title of each document.

A letter stating your interests and intent in applying for the position and applicable experiences

Curriculum vitae

2 writing samples, one ideally a peer-reviewed published article

3 examples of analytical reports

Contact list for three professional references, indicating their relationship with you

Sarah Scaturro, PhD
Eric and Jane Nord Chief Conservator
Cleveland Museum of Art
Cleveland
United States

JOB OPENING: ASSISTANT SCIENTIST **(BUILT HERITAGE RESEARCH INITIATIVE),** **THE GETTY CONSERVATION INSTITUTE**

The Getty Conservation Institute invites applications for the two-year, limited-term position of **Assistant Scientist** in our **Science** department.

Hiring Pay Scale: \$70,958 - \$94,018 annually, commensurate with experience and internal equity

Link to application: jobs-getty.icims.com/jobs/4680/...

Questions? Email gcistaffing@getty.edu

Application deadline: February 17, 2026

Job Summary

We are looking for an **Assistant Scientist** to fill a two-year, limited-term position, providing research and analytical support in the Getty Conservation Institute's Science Department. Your work will be part of the Built Heritage Research Initiative, a multi-project initiative aiming at improving the understanding of built heritage materials and their response to weathering and developing novel approaches for their preservation. You will be an integral member of the team, helping us broaden our expertise on traditional and innovative methods for investigating critical material properties, assessing the efficacy and durability of conservation treatments, and monitoring changes due to natural and accelerated weathering, integrating laboratory and field-based techniques.

This job will be based in our laboratories and offices at the Getty Center in Los Angeles. It will begin on-site full-time, and the opportunity to request a telework schedule may be available after an initial period of training and orientation, which will be discussed and approved by your supervisor. Typically, staff with approved telework schedules at the Getty Conservation Institute are in the office more than half of the time.

Major Job Responsibilities

You will contribute to the Stone Conservation and Learning from Nature projects, improving current methods and developing innovative strategies for damage assessment and monitoring as part of our work on accelerated aging of porous substrates (stone, plasters) via salt crystallization, and field exposure trials to investigate the durability of earthen materials and conservation treatments. Conduct research and provide analytical support to the Built Heritage Research Initiative team's efforts to:

- Explore multi-scale methods for damage assessment due to accelerated and natural weathering of built heritage materials (stone, plasters, earthen substrates).
- Improving existing methodologies based on photographic and photogrammetric

approaches for detecting damage onset and monitoring damage evolution in laboratory and field conditions.

- Investigate laboratory approaches based on 3D microscopy for early-stage detection of deterioration patterns and the integration with other non-destructive or minimally invasive methods (including, but not limited to, ultrasonic testing, DRMS).
- Develop simplified, practice-oriented protocols for effective transfer of damage assessment and monitoring methods to the conservation community.
- Prioritize workload, prepare samples, identify and apply appropriate instrumental techniques available at the GCI, collect/organize/manage/interpret data, create reports, and perform literature reviews.
- Contribute to setting up and conducting laboratory accelerated aging protocols and field exposure programs, applying and adapting standard protocols, and developing new ones.
- Assist with developing characterization and monitoring strategies for the long-term assessment of conservation treatments of built heritage surfaces in real-world conditions.
- Present research findings at professional conferences and contribute to publishing papers in peer-reviewed journals.
- As part of the Built Heritage Research Initiative team, you will develop short- and medium-term project goals and contribute to establishing strategic priorities.
- Additionally, professional development is encouraged and supported through on-the-job training, attendance at specialized training courses, and participation in professional meetings and workshops.

Qualifications

- Bachelor's degree in material science, geology, or other natural science, architecture, engineering, or conservation is required; Master's degree preferred.
- 1-3 years of experience in scientific research, preferably in the field of cultural heritage conservation.

Knowledge, Skills and Abilities

- Experience using photographic techniques for documentation, condition assessment, and monitoring changes of decorated and non-decorated built heritage surfaces.
- Experience with multi-scale application of photogrammetric methods for documentation and monitoring damage of heritage surfaces and use of related software.
- Experience using a range of analytical techniques for the characterization of built heritage materials and the evaluation of conservation treatments both in the lab and in the field (e.g., digital microscopy, optical microscopy and SEM-EDX, VIS-light spectrophotometry, water absorption and contact angle measurements).
- Hands-on familiarity with samples collection, specimens preparation, and execution of laboratory testing protocols, including accelerated aging tests.
- Knowledge of the behavior, main weathering mechanisms associated with built heritage porous materials and related conservation strategies is preferred.
- Experience working with conservators in conservation science laboratories and in the field is preferred.
- Creative problem-solving skills and an openness to learning new skills sets.
- Ability to work effectively individually and in a highly collaborative environment.
- Demonstrated excellent organizational, data management, prioritization, communication, and writing skills.

International candidates are welcome to apply. Discussions regarding possible visa sponsorship typically occur once a final candidate has been identified and will depend on a number of factors, including but not limited to, type of visa required and current regulations. Recent changes in US immigration and work-related visa policies may limit our ability to provide sponsorship for certain visa types.

No relocation assistance will be provided for this position.

[All candidates must apply online.](#) Please be prepared to upload your cover letter and CV/resume when prompted to do so by the online application system. Candidates who successfully complete the online application process will receive an automated message via email. If you have questions about this position or the recruiting process, please email gcistaffing@getty.edu.

Benefits and Perks

Here are just some examples that Getty offers/provides for full-time employees:

- Medical, Dental and Vision insurance coverage, starting on date of hire. Getty pays 75%-95% of the premium, depending on the plan selected.
- 403(b) Employee Investment retirement plan – with up to 5% Getty Match
- Getty contribution of 6%, on behalf of employee, to 401(a) retirement account
- Educational Assistance and professional development
- Paid Vacation, Sick and Personal Days
- 12 Paid Holidays
- Many positions have bi-weekly Off-Fridays
- On-Site Fitness Center at Getty Center
- Community service opportunities

To learn more about our comprehensive benefits and long list of perks, go to [Getty HR](#).

Getty is committed to creating a welcoming workplace that reflects the various backgrounds of the communities we serve. We value differences in the pursuit of inquiry and knowledge, mutual understanding, respect, trust, transparency, and cooperation. All qualified applicants will receive consideration for employment without regard to age, ancestry, citizenship or immigration status, color, disability, ethnicity, familial status, gender identity and/or expression, genetic information, marital status, national origin, race, religion, sex, sexual orientation, veteran status, or any other protected status.

Anna Duer
Reference Librarian
Getty Conservation Institute
Los Angeles, CA
aduer@getty.edu

JOB POSTING: OBJECTS CONSERVATION FELLOW, HARVARD ART MUSEUMS

Job Description

At the intersection of public access and higher education, the Harvard Art Museums invite everyone to embrace inquiry, dialogue, and new perspectives on art and ideas. The museums' global collections encompass a broad range of time periods and geographies.

The Fellowship program at the Harvard Art Museums is designed to broaden the experience of those embarking on professional museum careers in art history and related fields, conservation and conservation science, and/or museum education. Fellows are integral members of the museums' staff, take part in departmental and museum-wide meetings, and collaborate with colleagues across the museums. Fellows are active members of the program cohort, participating in regular Fellows meetings, workshops, specialized training, and organized activities throughout the year, including presenting their work at an annual Fellows Symposium.

Job-Specific Responsibilities:

The focus for the Objects Conservation Fellow will be the examination, treatment, and preventive care of works of art from the Harvard Art Museums' collections as driven by exhibition, loans, and research needs. A collaborative technical research project focusing on a work(s) of art from the Harvard Art Museums' collections will comprise approximately 15% of the first year of the fellowship.

Under the supervision of the Head of Objects Lab, the Fellow is an integral member of the staff, carrying out a broad range of activities, including treatment; preparation of accompanying written and photographic documentation, estimates, correspondence, and condition reports for exhibitions, loans, and acquisitions; presentation of research and other projects; lab maintenance; and leading or participating in lab tours.

Foregrounding the museums' teaching and research mission, the Fellow also participates in interdisciplinary teaching and contributes to a rich offering of public and academic interpretive programs across various platforms.

The Fellow may supervise students and temporary employees.

The above covers the most significant responsibilities of the position. It does not, however, exclude other duties, the inclusion of which would be in conformity with the position.

Physical Requirements:

- Ability to work safely in lab and workshop environments, including the use of chemicals and tools, while wearing appropriate personal protective equipment (PPE)
- Excellent hand skills and manual dexterity for precise treatment and handling tasks

- Ability to perform fine but physically demanding work, standing or sitting for extended periods while using manual and power tools
- Ability to lift, move, and position objects weighing up to 25 pounds
- Ability to color match
- We believe in the potential of candidates from all backgrounds and experiences. If you meet the Basic Qualifications for this role and are excited about the opportunity, we encourage you to apply-even if you don't meet every single Additional Qualification. Whether you're starting your career, re-entering the workforce, transitioning fields, or seeking the next step, we welcome your unique perspective. Please use your cover letter to share your passion for art museums and how you envision contributing to this role.

Qualifications

- Candidates MUST meet the following basic qualification in order to be considered for this role:
- Master's degree or equivalent in conservation or related field.
- Additional Qualifications and Skills:
- Demonstrated record of treatment and research
- Familiarity with state-of-the-art imaging tools used for conservation documentation, including digital photography and X-radiography
- Proficiency with computer software, including image processing software
- Museum or related experience preferred; interest in expanding canonical narratives strongly encouraged
- Commitment to fostering engagement with original works of art in a university museum context, for all visitors
- Excellent organizational, interpersonal, and communication skills; ability to work independently as well as collaboratively as part of a team

Additional Information

Term: This fellowship is a term position starting on September 8, 2026, and ending on June 30, 2028.

Compensation: \$60,000 annualized compensation

Benefits: The Fellow has access to travel funding and is eligible to participate in Harvard's fringe benefits program.

Standard Hours/Schedule: 35 hours per week

Work Location: This position works on site at both the museum in Cambridge, MA, and periodically at a second facility in Somerville, MA.

Pre-Employment Screening: Harvard University requires pre-employment reference and background screenings: Identity, Education and Criminal.

Orientation and Review Period: This position has a 3-month orientation and review period.

Application Procedures:

Please apply online with a cover letter and a résumé or curriculum vitae using the following link: us.smrtr.io/4pnkc

Applications can also be submitted via careers.harvard.edu using Posting Code: 001993SR

Complete applications will be reviewed on a rolling basis, starting January 26, 2026, and continuing until the position is filled. Applicant are encouraged to submit as early as possible.

Upon review of applications, select candidates will be notified to submit two letters of recommendation. Supporting documents may include writing samples and other materials.

Straus Center for Conservation and Technical Studies
Harvard Art Museums
Cambridge, MA
United States

TWO PHD POSITIONS AT THE UNIVERSITY OF CANTERBURY, NEW ZEALAND

Two PhD Scholarships are available, funded by a Royal Society New Zealand Marsden grant titled ‘A land of ice and rising mountains: Understanding the climate-tectonic nexus in New Zealand’.

Synopsis: Glacial records from the New Zealand Southern Alps provide insight into global climate change, due to linkages to Southern Ocean conditions, which controls global greenhouse gas exchange. Although not well studied, more expansive older (pre-50,000 years) glacial ice limits suggest that 1) either the climate was significantly colder and/or wetter (snowier) in the past allowing greater glacial mass balance or 2) that tectonic uplift and erosion have preconditioned mountain valleys to restrict ice extent due to valley deepening, producing less extensive ice margin positions with time. Research will use a combination of field work, geochronology and modelling to test end-member hypotheses.

PhD 1 will focus on establishing cosmogenic nuclide exposure age chronologies of glacial cycles in the Otago -Canterbury region. The younger glaciations will target surface glacial deposits whereas older advances will require additional sampling of depth profiles in glacial outwash gravels. The PhD student will work closely with Dr David Fink (Australian Nuclear Science and Technology Organisation) on developing the ^{10}Be - ^{26}Al chronology. The candidate will use the resultant chronologies to model ice advances down the Clutha and Rakaia Valleys working with Profs Jamie Shulmeister (Canterbury), Rittenour (Utah State) and Thackray (Idaho State).

PhD 2 will focus on stratigraphy, luminescence dating of glacial sediments, and 3-D finite element modelling to constrain glacier geometries. The old glaciations will require the application of novel luminescence techniques working with Prof Tammy Rittenour. The student will focus on 3-D finite element modelling to decipher the erosional and tectonic histories of the valleys, working with Dr Leighton Watson (Canterbury). They will also work with Profs Shulmeister and Thackray.

The University of Canterbury domiciled PhD scholarships are for 3 years at NZ\$35,000 and also include tuition fees and student levies. All fieldwork costs will come from the project and the respective students will spend time at either the Australian Nuclear Science and Technology Organisation in Sydney (PhD 1) or the Utah State luminescence laboratory in Logan, Utah (PhD 2). The PhD students will be supported to at least 1 international conference.

New Zealand does not differentiate between local and international students for PhD fees and the PhDs are open to all qualified candidates irrespective of nationality. In the first instance please **contact Jamie Shulmeister** (James.shulmeister@canterbury.ac.nz) providing a short (1-2 page) cover letter on why you are interested in the project/s, what your career aspirations and how doing the PhD will assist those aspirations. Please also provide a copy of your undergraduate/masters academic record, your CV and two academic referees who we can contact. Deadline for applications is **13th February 2026**. Shortlisted candidates will be interviewed via zoom starting in mid-February and the

PhD positions will be filled on a rolling basis. The positions are available to be taken up from March 2026.

For more information about the formal application process for admission to a PhD at the University of Canterbury, see here: <https://www.canterbury.ac.nz/study/uc-graduate-school/future-research-students/become-a-research-student>.

ASSOCIATE PROFESSOR |
ARCHAEOLOGICAL MATERIALS,
ISOTOPES, THE CYPRUS INSTITUTE

Dear All,

The Cyprus Institute is advertising a position as [Associate Professor](#) in Archaeological Materials Science with focus on the use of isotopes. This is a tenure / tenure-track position as part of the EU-funded ERA Chair project [One Archaeological Science](#) in the BEMME Region (please imagine the formally required EU Funding Logo here).

To cite from the advert:

The ERA Chair “One Archaeological Science” project ([One Archeological Science – OneArchSci](#)) aims to promote the use of isotope analyses across the archaeological science teams at STARC. The position offers an opportunity to build on the research profile of our material science laboratories within the domain of (inorganic) archaeological materials science, with expertise in geological methodologies such as petrography, mineralogy and chemical (elemental and isotope ratio) analysis methods. We seek candidates who can capitalise on this investment and in addition can contribute to research in environmental archaeology and human bioarchaeology.

The successful applicant will be expected to be a leader in the development of key research facilities at The Cyprus Institute (continuation of SEM-EDS and optical petrography lab, additional self-acquired laboratory equipment), will develop the use of international analytical facilities in the framework of team science, and will explore the development of such laboratories at CyI. The successful applicant shall work regularly with the other Archaeological Science faculty at STARC for research development in the lab and the field, including the development of isotope-based research. They will contribute broadly to practical skills development and teaching at postgraduate level across the range of disciplinary expertise and joint programmes offered by CyI. They may also develop specialist modules in line with the curriculum and their own research expertise. They will be expected to attract external grants to recruit and supervise postgraduate research students and postdoctoral researchers. Experience in inter-sectoral outreach and collaboration is an additional strength.

The position closes on 12 February; in-person interviews for short-listed candidates are scheduled for the week of 20 April.

Please distribute widely!

Many thanks,

Thilo

Dr Thilo Rehren

A. G. Leventis Professor for Archaeological Sciences
Science and Technology in Archaeology and Culture Research Center
The Cyprus Institute
Nicosia, Cyprus

JOB ANNOUNCEMENT, AMS RADIOCARBON LABORATORY MANAGER (M/F), CIRAM, MARTILLAC, GIRONDE, FRANCE

CIRAM, a private French lab (<https://www.ciram-lab.com/en/>) (lab code CIRAM), is hiring a manager for its AMS radiocarbon lab. The lab is using an Ionplus AMS, LEA.

Please refer to the announcement below in the attached PDF for details. Those interested in the job posting may send queries to CEO Dr. Olivier Bobin: olivier.bobin@ciram-lab.com

CIRAM is a private laboratory specialized in Radiocarbon analysis by Accelerator Mass Spectrometry (AMS) for ultra-sensitive isotopic measurements, including radiocarbon dating and analysis of industrial biobased materials. Our laboratory operates within a quality management system compliant with ISO 17025, ensuring reliability, traceability and full control of analytical processes.

As part of our development, we are recruiting an AMS Radiocarbon Laboratory Manager.

Permanent position (CDI) – Full-time - Start date: April 2026

Gross annual Salary: from 50k€ (depending on experience and education qualifications)

Benefits: Insurance, bonus, possible remote work options

Location: Martillac (Gironde, France)

Mission

AMS operation & maintenance

- Oversee the day-to-day operation of the AMS system and ensure maximum uptime.
- Lead preventive, corrective and operational maintenance (ion sources, high voltage systems, beamline components, detectors, vacuum systems).
- Plan technical shutdowns and coordinate external interventions.
- Ensure compliance with safety requirements (HV, radiation, vacuum, chemical processes).

Laboratory workflow & analytical management

- Organize and prioritize the sample workflow.
 - Validate analytical protocols and ensure the accuracy and reliability of results.
 - Optimize performance (ion currents, stability, yield, background levels).
 - Maintain all ISO 17025-related documentation, traceability, calibration procedures and records.
 - Participate in audits, reviews, and continuous improvement actions.
- Team leadership & coordination
- Supervise and support a team of technicians, operators and engineers.

- Train new staff on AMS procedures and quality requirements.
- Allocate tasks and manage daily laboratory activities.
- Handle planning for technical interventions and on-call duties.

Development & continuous improvement

- Propose and lead improvement projects on instrumentation and analytical methods.
- Contribute to method validation, performance monitoring, and documentation enhancement.
- Participate in research, innovation and system upgrades.

External relations

- Act as the main point of contact for suppliers (ion sources, HV components, pumps, detectors).
 - Interact with customers, partners and scientific collaborators.
- CIRAM SAS au capital de 14.000 € Technopole Bordeaux Montesquieu Téléphone : +33 (0)5 57 34 34 80
480 825 652 RCS Bordeaux - APE 7112B 9 allée Jacques Latrille Portable : +33 (0)6 66 63 80 99
SIRET 480 825 652 00047 33650 Martillac E-mail : contact@ciram-lab.com
N° TVA Intracommunautaire FR 56 480 825 652 France Site Web : www.ciram-lab.fr

Candidate Profile

Technical skills

- Confirmed experience in AMS, particle accelerators, beam physics, or advanced mass spectrometry.
- This role requires a strong hands-on approach and the ability to work directly on instrumentation (assembly, disassembly, fine adjustments).
- Strong knowledge of:
 - o high-voltage systems,
 - o high vacuum / UHV,
 - o ion source operation,
 - o RF and/or magnetic systems,
 - o detectors (silicon, TOF, gas counters).
- Experience with ISO 17025 quality systems is a significant asset.

Education

- Master's degree or PhD in physics, instrumentation, analytical sciences, engineering, or equivalent.
- Previous experience on AMS, singletron, LINAC, tandem, cyclotron or related accelerator technologies is highly valued.

Soft skills

- Natural leadership, scientific rigor and strong organizational skills.
 - Ability to guide technical teams and manage complex operations.
 - Autonomy, initiative and strong problem-solving abilities.
 - Commitment to quality and continuous improvement.
-

RI FREER PRIZE FELLOWSHIPS, **APPLICATIONS NOW OPEN**

Deadline 31st March 2026

Ri Freer Prize Fellowship purpose: The Ri Freer Prize Fellowships are intended as writing-up awards for doctoral candidates researching the history of science, history of the Royal Institution, or heritage conservation science.

Key Dates and Application Information

Type of award: Prize Fellowship for doctoral candidates in their unfunded writing-up year.

Areas of research supported: history of science and technology; heritage conservation science; history of the Royal Institution.

Stipend: £18,000 (the Fellowship will pay maintenance but not fees).

Duration of Fellowship: 12 months (commencing 1 October 2026).

Type of award: Prize Fellowship for doctoral candidates in their unfunded writing-up year.

Application Process:

How to apply: To apply, please send the documents required via this application form - <https://rigb.tfaforms.net/33>

Applications close on 31/03/2026

Shortlisted applicants will be notified by April 2026 Two Ri Freer Prize Fellows will be announced by June 2026 Applications will be reviewed by a panel of experts in the specified subject areas.

There will be no interview.

Referees are only contacted at the short-listing stage.

All queries should be directed to Freer Administrator Hannah Pratt - hpratt@ri.ac.uk

Application Materials needed:

CV (no more than 2 sides)

General interest pitch of the applicant's doctoral research (750 words) Thesis summary (no more than 500 words), which MUST include the title of your thesis and your expected completion date.

Video This should be an Introduction to yourself and your research (A short film of no more than 3 minutes and should be submitted in the form of a video link via YouTube, and should be an unlisted video) more guidance on how to create a video suitable for your application can be found below.

Names and contact details for 2 referees, including PhD supervisor (referees will only be contacted at short-list stage).

Additional information:

All files must be clearly labeled to include the name of the applicant and the name of the document.

For more information on the application, please refer to the Ri Website (recommended) <https://www.rigb.org/about-us/work-us/ri-freer-fellowship>

Any queries should be directed to Freer Administrator Hannah Pratt h.pratt@ri.ac.uk All written application materials should be in PDF format Video guidance If you are unsure of how to submit a video link please follow the following guide on how to do so:

How to upload onto YouTube from Google

How to upload on to YouTube using your phone How to upload your video from Wix Videos should be clear and concise with minimal soundtrack We suggest using a microphone if possible The use of graphics relating to your research is encouraged

For further details such as criteria for assessment, more information regarding the fellowship and application terms and conditions please see the links below.

Will this opportunity suit you?

Ri Freer Prize Fellowships are awarded based on candidates' ability to identify and communicate the significance and potential of their research in a compelling way that can engage a general interest audience. For further details see the Criteria for Assessment.

Ri Freer Prize Fellow support: Ri Freer Prize Fellows will benefit from significant opportunities to promote their research on Ri platforms, and to establish valuable new contacts and collaborations in academia, industry, heritage, policy, charity and media sectors. There will also be opportunities to engage with the Ri's public lecture programs, archives, masterclasses and education programs. Any Freer Prize Fellowship winners will also be introduced to the Ri's network and receive training for professional development.

Ri Freer Prize Fellow commitments: Ri Freer Prize Fellows will commit to a number of general interest outputs to promote their research. The precise nature of these outputs will be decided in discussion with the Ri but will include short films; tours for visitors to Ri collections; and blogs. Ri Freer Prize Fellows will be supported to produce these outputs and where appropriate link their work to Ri collections and heritage as part of research promotion. Ri Freer Prize Fellows are not required to live in London but will be expected to attend key events.

About the Ri: Founded in 1799, the Ri is a world-famous independent charity dedicated to enhancing public understanding of science and the role of science in society. Among its many luminaries, the analytical chemist and pioneer of modern experimental physics, Michael Faraday, is the most famous. Philip Freer was a collateral descendant of Faraday and a great philanthropist who established the Philip Freer Trust to support postgraduate students to "make a difference in the world"

OPEN POSTDOCTORAL POSITION – HYPERSENSPECTRAL IMAGING IN HERITAGE SCIENCE (TUM INSITUMLAB)

The Technical University of Munich (TUM) – Chair of Conservation-Restoration, Art Technology and Conservation Science – is seeking a **Postdoctoral Researcher (TV-L E13, 100%)** to join the **insiTUMlab**, a DFG-funded Core Facility dedicated to non-destructive, in-situ analysis of cultural heritage.

The successful candidate will develop and apply **Hyperspectral Imaging (HSI)** methodologies and data analysis workflows for the investigation of cultural heritage objects and architectural surfaces.

More information about the insiTUMlab:

<https://www.arc.ed.tum.de/rkk/forschung/insitumlab/>

Salary: approx. €4,600–€6,500 gross/month, depending on experience (TV-L E13 scale).

Application deadline: 31 January 2026

For inquiries and applications, please contact:

Dr. Clarimma Sessa

Head of insiTUMlab, Technical University of Munich

clarimma.sessa@tum.de

Prof. Dr. Eva Mariasole Angelin

Tenure Track Assistant Professor

Technische Universität München / Technical University of Munich

TUM School of Engineering and Design

Professorship in Conservation of Architectural Surfaces

Oettingenstr. 15

80538 München

Tel. +49 (89) 21124 567

Mobil +49 15750725407

eva.angelin@tum.de

www.arc.ed.tum.de/cs

POSTDOC OPTIONS, UNIVERSITY OF GRONINGEN, THE NETHERLANDS

PhD-students who have completed their PhD-thesis in the field of archaeological Conservation, Archaeometry and Material Studies since 2023-2024 with excellent results, are invited to contact Albert Nijboer of the University of Groningen (the Netherlands) while sending their CV; A.J.Nijboer@rug.nl

When appropriate, he will get in touch with you regarding options for a Postdoc application at the University of Groningen.

My regards,

Albert

For more information on Nijboer:

<https://lcm2.web.rug.nl/en/home-2/>

<https://rug.academia.edu/AlbertNijboer>

DEBORA D. MAYER IMAGING AND SCIENTIFIC RESEARCH SCHOLARSHIP, THE FOUNDATION FOR ADVANCEMENT IN CONSERVATION (FAIC)

The Foundation for Advancement in Conservation (FAIC) is excited to announce the **Debora D. Mayer Imaging and Scientific Research Scholarship**, which will be accepting applications for the first time this year, with an annual deadline of September 15. Debora Mayer has generously donated funds to support the professional development of AIC members within the broad field of imaging sciences. These scholarships offer an opportunity to experience various techniques such as technical imaging (multispectral or hyperspectral), X-ray fluorescence spectroscopy, other types of spectroscopy, data gathering and visualization, and other techniques with the goal of pairing and integrating different modalities to obtain a fuller understanding of the material.

Scholarships support educational experiences, including attendance to professional development workshops, travel to a facility for hands-on experience and training, or the analysis of an item at a facility in which the applicant participates and collaborates in the analysis. Funds may be used to defray costs associated with introducing the applicant to or building their skill in the field of non-invasive materials analysis. Opportunities should focus on employing complementary techniques that combine imaging and chemical analysis.

Debora Mayer is the Conservator for Analytical Services and Technical Imaging at the Weissman Preservation Center at Harvard University. She is an AIC Fellow and received the 2025 AIC Robert L. Feller Lifetime Achievement Award for her work in microscopy, research, publication, and mentoring. Additionally, she has served in AIC's Book and Paper Group, Photographic Materials Group, and Education and Training Committee. Debora is an expert in the analysis of materials used in paper making and teaches courses in fiber microscopy. She holds an MS in Conservation from Winterthur/University of Delaware Program in Art Conservation.

Learn more about this scholarship opportunity: <https://www.culturalheritage.org/resources/funding/debora-mayer-scholarship>

Sarah Saetren
FAIC Education Manager

ΑΝΑΚΟΙΝΩΣΕΙΣ - ANNOUNCEMENTS

SPRING SCHOOL “AUDIO VISUAL METHODS IN COLLABORATIVE ARCHAEOLOGY: EXPLORING THE POLITICS OF HERITAGE”, THE NETHERLANDS INSTITUTE AT ATHENS, 20- 28 MARCH 2026

From 20-28 March 2026, the Netherlands Institute at Athens is organizing the intensive Spring School “*Audio Visual Methods in Collaborative Archaeology: Exploring the Politics of Heritage*”.

The Spring School is addressed to students in archaeology and heritage studies, BA (last year), Master, Research Masters, & PhD and is organized in collaboration with the Faculty of Archaeology of Leiden University.

For more information and registration:

<https://nia.gr/en/spring-school-audio-visual-methods-in-collaborative-archaeology-exploring-the-politics-of-heritage-20-28-march-2026/>

Please forward this message to whoever might be interested.

Sincerely,

Emmy Mestropian-Makri

Senior Administrator
Netherlands Institute at Athens
Makri 11
117 42 Athens
www.nia.gr
Tel: 0030 210 9210760
Mob: 6982306950

CALL FOR APPLICATIONS FOR TEACHING ANCIENT IN A DIGITAL AGE, AN NEH FUNDED INSTITUTE FOR HIGHER EDUCATION FACULTY (MAY–OCTOBER 2026)

The [Teaching Ancient in a Digital Age](https://wp.wvu.edu/tada/curriculum/) institute aims to expand data and digital literacy among educators in the fields of ancient Mediterranean studies by training higher education faculty and advanced graduate students on the digital methods and resources available for the study and analysis of ancient texts and material evidence. Over a series of virtual (May and September/October 2026) and in-person workshops (August 2026, held at Western Washington University in Bellingham, WA), participants will work with expert faculty to familiarize themselves with emerging technologies and the ethics and considerations surrounding their use. Participants will also contribute to the preparation of open access lesson plans and teaching resources through the workshop. You can find more details on the institute curriculum here: <https://wp.wvu.edu/tada/curriculum/>

Eligibility:

As per NEH policy, the institute is open to: United States citizens, including those teaching abroad at U.S. chartered institutions and schools operated by the federal government; residents of U.S. jurisdictions; and foreign nationals who have been residing in the United States or its jurisdictions for at least the three years immediately preceding the application deadline. Participants are provided with a fixed stipend of \$3450 USD to support the costs of transportation and accommodation during the in-person portion of the institute.

Applications:

Applications close March 6th, 2026 at 11:59pm Pacific Time. You can find the application instructions and link on the project website here: <https://wp.wvu.edu/tada/application/>

If you have any questions, please don't hesitate to reach out to the project directors, Christine Johnston (christine.johnston@wvu.edu) or Leigh Anne Lieberman (llieberman@princeton.edu).

ΝΕΕΣ ΕΚΔΟΣΕΙΣ – NEW PUBLICATIONS

ARCHAEOMETALLURGY OF IRON MEANS OF PRODUCTION AND PROCESSES FROM THE ORIGINS TO THE INDUSTRIAL REVOLUTION, BY MARCO CIMA

First edition 1991

Second edition 1996

Third edition essentially digital with complete revision of the texts developed within the activities of the Museo Archeologico del Canavese - May 2024

English digital edition January 2025

Publisher: Edizioni Nautilus Torino

Page numbers: 270

Book presentation

The distinctly Italian tendency to avoid historical summaries to avoid falling into the “trap” of creating a work that risks being neither exhaustive nor precise has been courageously overcome by Marco Cima in this reconstruction of the material systems and production processes of iron from its origins to the Industrial Revolution. The overall framework of the volume is European – albeit for the first time, the scattered hints of a history of iron production in Italy are presented in an organic matter – and its diachronic scale of examination leads one to think of a history of iron production in Italy are presented in an organic manner — and its diachronic scale of examination leads one to think of a history of extractive and metallurgical techniques that is detached from social contexts. Conversely, the risk of an “evolutionary” reading of technologies has been largely avoided: the systematic use of archaeological sources alongside written sources has played a crucial role in capturing the details of the typological transformations of furnace structures and various techniques, as well as the chronological overlaps in differentiated social contexts.

Cima’s contribution merits recognition for reaching into the narrative of indirect iron production, which is explored in depth as it enters the 18th century, providing historians - and especially archaeologists — with an essential tool to place the various production processes that precede and follow each stage of processing, thereby presenting the complexity of the interrelations between territory and forge.

The overall reconstruction is systematically articulated by subject, equipping non-specialists with the necessary tools to gain a very clear picture of the historical dynamics of production processes, while also enabling scholars to interpret or reinterpret the material or written sources they are working with.

The publication of this volume comes at a time of renewed interest in historiography regarding the themes of technology history and a resurgence in archaeological studies on production topics. This is an area where the Italian tradition is significantly disadvantaged compared to the European reference framework; one need only consider

the recent French historical literature, contrasted with the scant number of pre-industrial ceramic or glass production centres investigated in our country, let alone the substantial silence that has characterized the last five years regarding themes of extractive and metallurgical activities.

In my view, the volume on the archaeology of iron constitutes an important contribution that not only provides us with an updated synthesis of what has been elaborated thus far on the subject but also allows us to properly assess and highlight the value of the material evidence with which our territory is rich. I am particularly thinking of the growing interest in the problems of industrial archaeology and the design of archaeological-mining and metallurgical parks, where often only the monumental phases of the Industrial Revolution are considered, disregarding the less recent production phases and the entire ecosystem constituted by the mining complexes — still extant today, but often threatened by material quarries or destroyed by reckless dumping — and by woodland economies.

Therefore, Cima offers a history of techniques where the social context is not marginalized, and where synthetic analysis does not detract from a rich and functional iconographic apparatus, thus effectively and comprehensively responding to a demand generated by an ever-increasing need to read the past through integrated interpretative frameworks that allow for the combination of scientific knowledge, material remains and written sources.

† Riccardo Francovich
(full professor of Medieval Archaeology at the Siena University)
September 1991

This volume is a translated revised edition of the work of the same title published in 1991, which enjoyed considerable success. It is presented here with the necessary additions and updates resulting from new insights gained over three decades of research, with the aim of offering the public an archaeological manual on iron production systems. This book is the translation of 'Archeologia del Ferro 2024'. The volume is available exclusively in digital format via the Academia.edu portal.

Please visit the site:

[https://www.academia.edu/145526714/ARCHAEOMETALLURGY_OF_IRON Means of production and processes from the origins to the Industrial Revolution?email_work_card=view-paper](https://www.academia.edu/145526714/ARCHAEOMETALLURGY_OF_IRON_Means_of_production_and_processes_from_the_origins_to_the_Industrial_Revolution?email_work_card=view-paper)

**THE FATE OF NEUTRAL VERDIGRIS IN
WALL PAINTINGS: CHROMATIC, MICRO-
MORPHOLOGICAL, MINERALOGICAL AND
CHEMICAL TRANSFORMATIONS,
BY JIMÉNEZ-DESMOND, D., POZO-
ANTONIO, J.S. & ARIZZI, A.**

npj Herit. Sci. **14**, 12 (2026)

<https://doi.org/10.1038/s40494-025-02291-9>

Abstract

This study fills the gap regarding the behaviour of neutral verdigris pigment ($\text{Cu}(\text{CH}_3\text{COO})_2 \cdot \text{H}_2\text{O}$) in traditional wall-painting techniques, an area far less studied than its degradation in manuscripts or easel paintings. Verdigris was applied using three historical methods—a secco (egg yolk or rabbit glue), mezzo-fresco (lime water), and fresco (lime paste)—and complementary pigment–binder mixtures were prepared to isolate binder effects. Multimodal analyses (stereomicroscopy, spectrophotometry, OM, SEM, XRD, ATR-FTIR) revealed a striking contrast between acidic and alkaline environments: verdigris remained chemically and microstructurally stable in a secco but underwent rapid and extensive alteration in lime-based techniques. These transformations produced marked colour shifts, micro-textural heterogeneity, and micrometric secondary compounds such as copper and calcium acetates (e.g. paceite), and tenorite. The findings provide new insights into historical wall-painting practices as they re-examine the use of verdigris with certain painting techniques, also with significant implications for conservation strategies involving verdigris-containing artworks.

Please visit the site: <https://www.nature.com/articles/s40494-025-02291-9#citeas>

**ARCHAEOMETRIC ANALYSIS OF
HELLENISTIC TRANSPORT AMPHORAE
FROM AIGION AND TRAPEZA DIAKOPTO,
GREECE, BY VAYIA XANTHOPOULOU,
KONSTANTINOS FILIS, ATHANASIOS
VAROTSOS, PAVLINA SKINTZI AND
IOANNIS ILIOPOULOS**

Minerals **2026**, *16*(1), 65;

<https://doi.org/10.3390/min16010065>

Abstract

The city of Aigion, located in the northwestern Peloponnese, flourished as an important city-state especially during the Hellenistic period (323–32 BC). This is evidenced by abundant archaeological remains, including kilns, waste pits, and pottery workshop facilities. Among the ceramic goods produced by local workshops are various types of stamped and unstamped transport amphorae. Also, recent discoveries, approximately 15 km southeast in the village of Trapeza Diakopto, have uncovered a distinctive type of amphora—identified as Type B of the Corinthian–Corcyraean or Ionian–Adriatic tradition—from destruction layers dated to the 4th and early 3rd centuries BC. This study examines the technological attributes and provenance of transport amphorae from both sites through integrated petrographic and mineralogical analyses, drawing on 27 samples from Aigion and 17 from Trapeza. Petrographic analysis, focusing on compositional and textural characteristics, identified three distinct ceramic recipes (petrographic fabric groups AIG-1, AIG-2, and AIG-3) associated with amphora types I, II, and III at Aigion. Samples from Trapeza were grouped into two main fabric categories (TR1 and TR2a/b), along with a notable number of singletons. Moreover, petrographic observations combined with X-ray powder diffraction (XRPD) analysis provided insights into the firing technologies used. The results indicate that many amphorae from both Aigion and Trapeza were fired at temperatures below 850 °C, while others were fired at higher temperatures, ranging from approximately 900 °C to 1100 °C. The combined petrographic and mineralogical evidence illuminates local ceramic production techniques and interregional exchange patterns, contributing to a broader understanding of amphora manufacture and distribution in the northwestern Peloponnese from the Late Classical to the Late Hellenistic period.

Keywords:

Hellenistic amphora; Achaea; ceramic petrography; mineralogical analysis

Please visit the site: <https://www.mdpi.com/2075-163X/16/1/65>

ΕΙΔΗΣΕΙΣ - NEWS RELEASE

REPLACING ARCHAEOLOGISTS WITH AI - ARCHAEOLOGISTS CREATE A SEMI- AUTONOMOUS DETECTION SYSTEM, BY NATHAN STEINMEYER

Although you probably won't see robots walking around an excavation site anytime soon, that doesn't mean some archaeological tasks are not already being handled by artificial intelligence (AI). Publishing in the Journal of Archaeological Science, a team of researchers from the University of Haifa has presented a new method to detect and record walls in archaeological contexts through drone imaging and artificial intelligence. Now, a task that could have taken days or even weeks can be done in a matter of hours.

Mapping a Site

Although Indiana Jones's wild search for artifacts might be the popular image of archaeology, in reality, one of the most important aspects of any excavation is the painstaking recording of details. And especially because archaeology is an inherently destructive science, it is these details that end up telling the story of a site. However, the size, funding, and expertise of an excavation team can make a significant difference in the level of recording, which will nearly always result in some important information being lost. This is especially a problem when it comes to recording building stones. As walls can be made up of hundreds if not thousands of stones, it is a highly time-intensive task to thoroughly record the details of each individual stone. As such, archaeologists often resort to simple sketches, ground plans, and photographs, which can overlook important details. Thanks to advancements in artificial intelligence and imaging technology, however, that might not be a problem for much longer.

The University of Haifa researchers developed a new semi-autonomous artificial intelligence system that can detect building stones and wall segments in archaeological contexts. The system uses meticulously collected drone imagery to generate a detailed map of an entire site. The AI then scans the composite image and identifies various archaeological features, particularly stone walls and features. From this, it can then compare the stones to an extensive database to suggest what stone features belong together. Despite this automation, however, the system leaves room for archaeologists to manually correct the scans in cases where their interpretations of a feature differ. Once the features have been identified, the system can run various algorithms to automatically compare the site with other sites in its database and propose possible dates for the site and the construction methods used in its formation.

Although the system remains imperfect, it has the potential to significantly improve the speed of archaeological recording, particularly during survey work, where a team often covers a large area within a short period. Additionally, depending on the drone used, the system can achieve per-pixel resolution below 1 centimeter, and the programmability of drones enables a far more thorough record of the site than would be possible with a standard camera.

Finally, when paired with mounted LiDAR or multispectral imaging equipment, this system has the potential to penetrate through heavy vegetation and even below the surface.

Please visit the site: <https://www.biblicalarchaeology.org/daily/archaeology-today/replacing-archaeologists-with-ai/>

SCIENTISTS FOUND HIDDEN MATH IN ANCIENT FLOWER ART

Halafian pottery shows that early agricultural societies practiced advanced mathematical thinking through plant-based art long before writing.

Researchers report that the Halafian culture of northern Mesopotamia (c. 6200–5500 BCE) created the earliest known systematic plant imagery in prehistoric art. Fine pottery from this period features flowers, shrubs, branches, and trees arranged with careful symmetry and repeating numerical patterns, most notably petal and flower counts of 4, 8, 16, 32, and 64. These designs indicate that early farming communities in the Near East already used practical mathematical reasoning to divide space and quantities, likely connected to everyday tasks such as equitably sharing harvests from jointly cultivated land, long before writing or formal number systems appeared.

The findings come from a study published in the *Journal of World Prehistory*, which shows that some of the earliest artistic depictions of plants were not simply decorative but reflected underlying mathematical structure.

Through a detailed examination of ancient ceramics, Prof. Yosef Garfinkel and Sarah Krulwich of the Hebrew University identified the earliest consistent use of vegetal motifs in human history, dating back more than 8,000 years to the Halafian culture of northern Mesopotamia (c. 6200–5500 BCE). Their analysis reveals that these early agricultural societies painted flowers, shrubs, branches, and trees with deliberate precision, embedding evidence of advanced geometric and arithmetic thinking into their designs.

A New Understanding of Prehistoric Art

Much of earlier prehistoric art emphasized people and animals. Halafian pottery stands out as the point at which plants became a central subject of artistic expression in a consistent and visually refined manner.

Examining material from 29 archaeological sites, Garfinkel and Krulwich recorded hundreds of carefully crafted plant motifs. Some appear realistic, while others are more abstract, but all show intentional design choices rather than random decoration.

“These vessels represent the first moment in history when people chose to portray the botanical world as a subject worthy of artistic attention,” the authors note. “It reflects a cognitive shift tied to village life and a growing awareness of symmetry and aesthetics.”

Among the study’s most striking insights is the precise numerical patterning in Halafian floral designs. Many bowls feature flowers with petal counts that follow geometric progression: 4, 8, 16, 32, and even arrangements of 64 flowers.

These sequences, the researchers argue, are intentional and demonstrate a sophisticated grasp of spatial division long before the appearance of written numbers.

“The ability to divide space evenly, reflected in these floral motifs, likely had practical roots in daily life, such as sharing harvests or allocating communal fields,” Garfinkel explains.

This work contributes to the field of ethnomathematics, which identifies mathematical knowledge embedded in cultural expression.

The motifs documented span the full botanical spectrum:

Flowers shown with carefully even and balanced petal arrangements

Seedlings and shrubs depicted with clear attention to their botanical form

Branches organized into regular, rhythmic, repeating patterns

Tall trees portrayed as dominant forms, sometimes accompanied by animals or architectural features

Notably, none of the images depict edible crops, suggesting that the purpose was aesthetic rather than agricultural or ritualistic. Flowers, the authors note, are associated with positive emotional responses, which may explain their prominence.

Revising the History of Mathematics

While written mathematical texts appear millennia later in Sumer, Halafian pottery reveals an earlier, intuitive form of mathematical reasoning, rooted in symmetry, repetition, and geometric organization.

“These patterns show that mathematical thinking began long before writing,” Krulwich says. “People visualized divisions, sequences, and balance through their art.”

By cataloging these vegetal motifs and revealing their mathematical foundations, the study offers a new perspective on how early communities understood the natural world, organized their environments, and expressed cognitive complexity.

A meticulously executed drawing of a single large flower, depicted in a symmetrical arrangement with 16 or 32 petals, and a bowl with 64 (+ 12) flowers. Credit: Yosef Garfinkel

Reference: “The Earliest Vegetal Motifs in Prehistoric Art: Painted Halafian Pottery of Mesopotamia and Prehistoric Mathematical Thinking” by Yosef Garfinkel, and Sarah Krulwich, 5 December 2025, Journal of World Prehistory.
[<https://link.springer.com/article/10.1007/s10963-025-09200-9>]

Please visit the site: <https://link.springer.com/article/10.1007/s10963-025-09200-9>
[Go there for needed figs]

THE HOME OF NERO’S WIFE AT POMPEII - RENEWED EXCAVATIONS AT THE VILLA OF POPPAEA, BY NATHAN STEINMEYER

Renewed excavations near Pompeii are revealing more of the incredible riches of a house believed to be the home of Emperor Nero’s second wife, Poppaea. In addition to newly excavated rooms, archaeologists have uncovered multiple stunning frescoes and other remarkable finds.

The Villa of Poppaea was once a luxurious Roman seaside villa, not far from the cities of Pompeii and Herculaneum. Like those cities, it was similarly buried in the eruption of Mt. Vesuvius in 79 CE. With more than 100 rooms, the villa is one of the largest and most luxurious in the region. Various finds indicate it was likely owned by the infamous Roman Emperor Nero (r. 54–68 CE). Based on a few written source linking the site to Poppaea, archaeologists believe it was likely the empress’s home away from Rome.

Although the site has been extensively excavated in the past, renewed excavations were undertaken to reveal additional areas of the villa and to allow for the conservation of previously uncovered sections. “Despite the existing traces and the interpretative efforts made during the initial excavations, a great deal of uncertainty still surrounded the actual layout of this room and the rooms nearby,” explained Gabriel Zuchtriegel, Director of the Archaeological Park of Pompeii. “The current excavations may clarify the situation and also reveal new decoration with extraordinary details and colors.”

The renewed excavations have already uncovered multiple frescoes, including one of a peahen that is mirrored by a previously uncovered peacock, and another that depicts a theater mask. The team was able to connect the theater mask to the character Pappus, from the well-known Atellan farces. In these performances, Pappus is an old, foolish character attempting to act young, but he is mocked for his attempt. The new excavations also uncovered four previously unknown rooms, including one that was likely part of the villa’s bathing complex.

One of the more intriguing finds from the excavation was the discovery of trees planted within the villa’s garden. Using a plaster casting technique, archaeologists were able to recreate the trees in their original positions. Botanical analysis suggests they were likely olive trees.

As for conservation work, the team is working to restore the decorations of two small bedrooms within the villa, which were part of a relaxation area known as a cubicula. One of the rooms included frescoes depicting faux marble and fanciful architectural features that give the illusion of greater space. The room also includes a black-and-white mosaic floor decorated in a geometric pattern. The second room was decorated with a monochrome background and floral motifs. This room also included several architectural elements that appear to have been unfinished, suggesting it was undergoing restoration at the time of the Vesuvius eruption.

Please visit the site: <https://www.biblicalarchaeology.org/daily/ancient-cultures/ancient-rome/home-neros-wife-pompeii/>

LOST TEMPLE OF HITTITE GODDESS KUBABA DISCOVERED IN TURKEY SHEDS LIGHT ON ANCIENT ANATOLIAN WORSHIP, BY NISHA ZAHID

Archaeologists in northern Turkey say they have uncovered the long-lost Temple of Kubaba, a 2,600-year-old religious complex that is reshaping understanding of belief and ritual in ancient Anatolia.

The discovery was made at Oluz Mound, a significant settlement mound located in the Göynücek district of Amasya Province. Researchers say the temple dates back to the Phrygian period of the Iron Age and served as a major center of organized worship of the goddess.

Kubaba was one of Anatolia's most prominent deities. She was revered as a mother goddess associated with fertility, protection, and political authority, particularly during the Neo-Hittite and Phrygian eras. While ancient texts referenced her cult, archaeologists had long lacked clear physical evidence of a dedicated temple. Researchers say the newly uncovered structure fills that gap.

Sacred landscape shaped by rivers

Oluz Mound lies near the Çekerek River, known in antiquity as the Skylax. The river is a tributary of the Yeşilirmak, called the Iris in ancient sources. These waterways once linked inland Anatolia with the Black Sea, supporting trade, movement, and cultural exchange.

Archaeologists believe the temple's location was deliberate. Proximity to rivers may have reinforced symbolic links between water, fertility, and divine power, themes commonly associated with mother goddess worship.

Evidence of organized ritual practice

Excavations show the temple was carefully planned rather than informally constructed. Stone foundations, altars, and defined ritual spaces point to repeated and structured religious activity. Researchers say the layout reflects an institutional form of worship rather than household devotion.

Artifacts recovered from the area include cult-related architectural elements and ceremonial objects, suggesting the site functioned as a regional religious center. The evidence also indicates continuity in belief systems, even as political control in Anatolia shifted over time.

Excavations

The work is being carried out under the leadership of Şevket Dönmez, a faculty member in the Department of Archaeology at Istanbul University and the excavation director at Oluz Mound.

Dönmez said the site has a much deeper history than the newly uncovered temple alone. Settlement at Oluz Mound stretches back about 6,500 years, reaching into the Hittite period. While researchers have not yet fully excavated those layers, they have already found objects dating to the Hittite age.

Many of these early finds depict bulls. Dönmez said the bull was sacred to the Hittite storm god, one of the most powerful figures in Hittite religion. The material suggests that a large Hittite city lies buried beneath later occupation layers.

Fire altars and Phrygian worship

Excavations have also revealed fire altars and architectural remains linked to the Medes, pointing to ritual practices associated with this ancient Iranian people. Researchers say these findings demonstrate that Oluz Mound remained a sacred and culturally active site across multiple periods.

According to Dönmez, the Kubaba Temple was uncovered in a stratigraphic layer identified as “4-B,” associated with the Phrygian period. Years of careful excavation have exposed the temple’s sacred chamber, including a stone that symbolized the goddess herself.

Archaeologists also recovered numerous perforated bone objects around the temple. These include sheep phalanges and vertebrae. Researchers believe they were once strung together and attached to whip-like instruments used during rituals.

Dönmez said priests likely struck their bodies with these objects while dancing and circling the sacred space. The movement appears to have formed a ritual procession around the temple, reinforcing its spiritual focus.

A rare window into ancient belief

Researchers describe the Kubaba Temple as one of the clearest examples of organized mother goddess worship yet found in Anatolia. The discovery provides direct evidence of how ritual, movement, and sacred architecture came together in Iron Age religious life.

Excavations at Oluz Mound are ongoing. Archaeologists say future work may reveal more about how ancient communities expressed faith, identity, and power at one of Anatolia’s longest-lived sacred landscapes.

Please visit the site: <https://greekreporter.com/2026/01/23/lost-kubaba-temple-turkey-ancient-anatolian-worship/> [Go there for pict]

REMAINS OF A WAR ELEPHANT AND CATAPULT AMMUNITION FROM THE SECOND PUNIC WAR FOUND IN CÓRDOBA, A UNIQUE DISCOVERY IN EUROPE, BY GUILLERMO CARVAJAL

An international team of archaeologists and paleontologists has announced the discovery of physical evidence unique in Europe: an elephant bone dated to the Second Punic War (218–201 BC). The find, a small but revealing bone fragment, was made during an emergency excavation at the Colina de los Quemados site in Córdoba (Spain), identified with the ancient Iberian city of Corduba.

In March 2020, during construction work to expand the Provincial Hospital of Córdoba, archaeologists excavated a trench on the southern slope of the Colina de los Quemados. Beneath the collapse of an adobe wall, corresponding to a level of occupation and abandonment from the late Iron Age, they found a cuboid bone about 10 centimeters long. At first, its size and shape puzzled experts, as it did not correspond to any known species of Iberian terrestrial fauna.

After meticulous comparison with anatomical collections from the University of Valladolid and the University of Leiden (Netherlands), the bone was conclusively identified: it is the third carpal bone (os magnum) of the right foreleg of an elephant. The specimen was compared with bones from Asian elephants (*Elephas maximus*) and from a steppe mammoth, confirming its origin.

The identification was finally confirmed through a direct comparison with two carpal bones from Asian female elephants... and one from a steppe mammoth, explains the study.

An undeniable military context: artillery stones and coins

The importance of the bone lies not only in itself, but in the archaeological context in which it was found. The stratum corresponded to a late Iberian industrial area, but associated with it were up to twelve stone spheres of different lithologies, about 11 cm in diameter and weighing 1.4 kg. These spheres are, without a doubt, ammunition for lithoboloi or petroboloi, torsion catapults that hurled stones.

A heavy arrowhead was also found, characteristic of a scorpio (siege crossbow), along with a Carthaginian coin of the “Helmet” type (quadrans), minted in Cartagena between 237 and 206 BC.

This assemblage of finds points unequivocally to a military event. The dating of stamped pottery and Hispanic annular fibulae (brooches) places the episode in the 3rd century BC. All these elements converge in the same scenario: the Second Punic War, the conflict between Rome and Carthage for control of the western Mediterranean, which had the Iberian Peninsula as one of its main theaters.

A, Right third carpal (CIII) from the Hospital Provincial de Córdoba (HP-19 SU 324). Osteometric landmarks: 1–2, length of the medial articular facet for contact with the fourth carpal (CIV); 3–4, thickness (craniocaudal) of the proximal articular surface; 5–6, height of the frontal (dorsal) plane. B, Anatomical position of the bone in the right manus (forefoot) of an elephant. C, Position within the general skeletal structure. D, 3D scatter plot comparing measurements of the archaeological specimen and the comparative specimens; two female Asian elephants (Museo Anatómico de Valladolid and Laboratory for Archaeozoological Studies- Leiden) and Steppe Mammoth (Laboratory for Archaeozoological Studies- Leiden). Credit: R.M. Martínez Sánchez et al. 2026

Given the exceptional nature of the find, an attempt was made to obtain an absolute date through radiocarbon analysis. Although the collagen in the bone had not been sufficiently preserved, scientists dated the mineral fraction (bioapatite). The result placed the sample between the late 4th century and the 3rd century BC, a range that, although slightly broader and earlier than expected, is consistent with the period of the Second Punic War.

The results ruled out both a modern date and a Pleistocene (fossil) origin... The radiocarbon date obtained, which places the sample in the late 3rd or early 4th century BC, is broadly consistent with the chronology of the Second Punic War, the article states.

What was an elephant doing in Córdoba?

The presence of this bone raises a fascinating question: how did an elephant reach Iberian Corduba? The authors of the study, relying strictly on classical historical sources, consider six possible scenarios, ranging from the Carthaginian invasion of Hamilcar Barca (237 BC) to the possible later use of elephants in Roman spectacles. However, the radiocarbon dating and the material context—the artillery stones, the Carthaginian coin—make a direct link to the Second Punic War the most plausible option.

Ancient historians such as Polybius and Livy report that the Carthaginian generals Hamilcar, Hasdrubal, and Hannibal maintained between one and two hundred elephants in Iberia at the start of the war. Although the sources do not mention a major battle in Corduba, the authors point out that it is very likely that skirmishes, minor engagements, or even sieges occurred that were not recorded by chroniclers.

The discovery at Colina de los Quemados fits into an emerging archaeological pattern of the war: other Iberian sites besieged or attacked during that period, such as Kissa (Tarragona), Akra Leuke (Alicante), Castillo de Doña Blanca (Cádiz), Iliturgi (Jaén), or the oppidum of Puente Tablas (Jaén), have revealed artillery ammunition (stones and scorpio points) with nearly identical characteristics. Corduba now joins this select group of conflict scenarios.

A, Area excavated in 2020, showing the collapse of the adobe wall referenced in the text (F and G). B, Find context and detail of lithobolos (stone-thrower) ammunition. C, Scorpio (bolt-thrower) point. D, Hispanic annular fibulae and a coin (quadrans –“AE14”-Hispanic-Carthaginian calcos). E, Detail of Late Iberian painted and stamped ceramics. Credit: R.M. Martínez Sánchez et al. 2026

One of the major historical debates concerns which elephant species the Carthaginians used. Classical sources describe their African elephants as smaller than the Asian elephants used by the Seleucids, leading to the idea that they might have been forest elephants (*Loxodonta cyclotis*), smaller than savanna elephants (*Loxodonta africana*). However, recent genetic studies complicate the picture, suggesting that the Ptolemies (allies of Rome) may have trained savanna elephants.

The Córdoba bone, being a carpal and incomplete, does not allow for a conclusive species identification. Its measurements are larger than those of the Asian female elephants used for comparison, which could indicate a large animal, but the lack of additional skeletal remains prevents confirmation. The absence of collagen also ruled out the possibility of conducting ancient DNA or paleoproteomic analyses, which would have settled the matter.

A trophy, a fallen animal

The researchers ask why only a single isolated bone was found and not more remains of the animal. They propose several options: it could be the remnant of an animal that died at the site, whose other bones were dispersed or destroyed; or it could be a bone kept as a trophy or curiosity. However, they rule out the idea that it was a trade object, given its unremarkable nature and limited artisanal utility.

The idea that the bone was treasured as a rarity or an exotic gift seems unlikely given the context, the text notes.

What is crucial is that the bone was found beneath a collapse, which protected it from natural and human agents that would have destroyed other remains. Its discovery opens a window onto a violent episode, probably a siege or attack, that may have contributed to the abandonment of the Iberian oppidum and to the subsequent foundation of the Roman city of Corduba.

The find is extraordinary because, beyond ivory, elephant skeletal remains in European archaeological contexts are extremely rare. This small bone constitutes tangible physical proof of a phenomenon previously attested mainly by coins, texts, and paintings.

The elephant carpal from Colina de los Quemados in Córdoba (Spain) may constitute one of the few examples of direct evidence for the use of these animals during Classical Antiquity, not only in the Iberian Peninsula but also in Western Europe, the study concludes. And it adds: Although it would not represent one of the legendary specimens that Hannibal led across the Alps, it could potentially embody the first known relic—so long sought by early modern European scholars—of the animals used in the Punic Wars for control of the Mediterranean.

In short, this forgotten bone beneath an adobe wall for more than two thousand two hundred years now stands as a silent but eloquent proof of the fury of war, of the passage of the gigantic “tanks of antiquity” through the peninsula, and of the complex and often violent transition between the Iberian and Roman worlds.

SOURCES

Rafael M. Martínez Sánchez, Agustín López Jiménez, et al., The elephant in the oppidum. Preliminary analysis of a carpal bone from a Punic context at the archaeological site of Colina de los Quemados (Córdoba, Spain). Journal of Archaeological Science: Reports, Volume 69, February 2026, 105577. doi.org/10.1016/j.jasrep.2026.105577

Please visit the site: <https://www.labrujulaverde.com/en/2026/01/remains-of-a-war-elephant-and-catapult-ammunition-from-the-second-punic-war-found-in-cordoba-a-unique-discovery-in-europe/> [Go there for pict]
