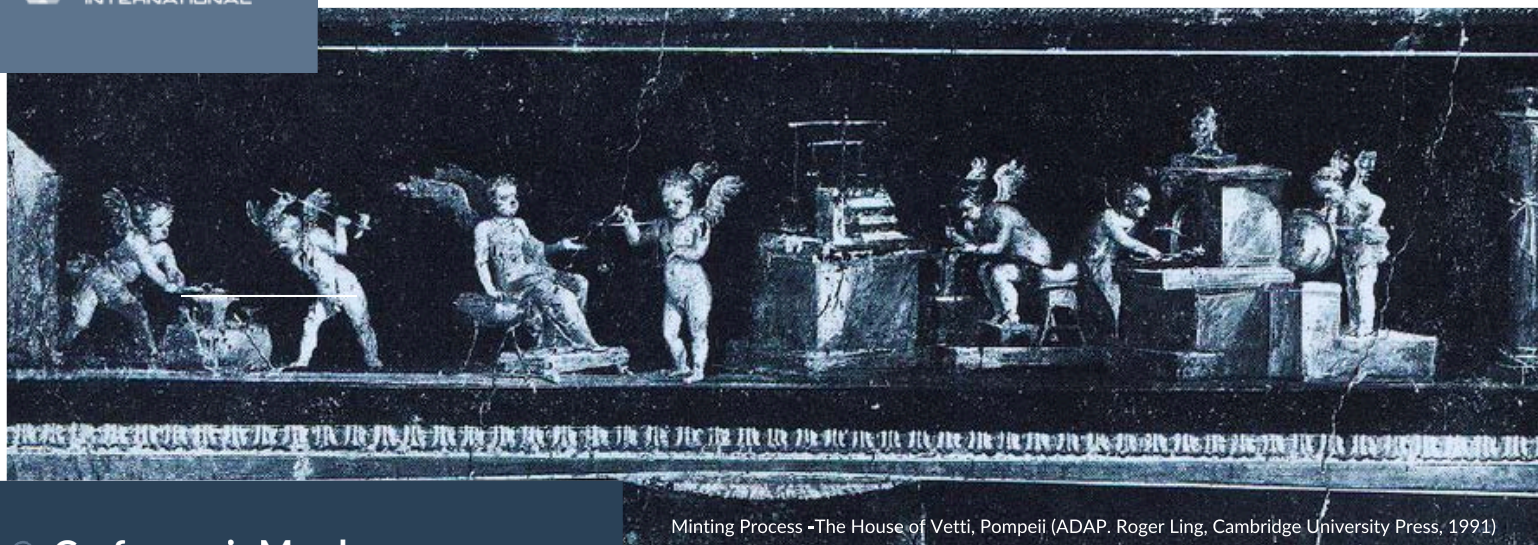


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Minting Process -The House of Vetti, Pompeii (ADAP. Roger Ling, Cambridge University Press, 1991)

Conference in Mendoza

I JORNADAS REGIONALES DE INGENIERÍA INVERSA APLICADAS AL PATRIMONIO METÁLICO

Del óxido que se pierde, al dato que permanece.

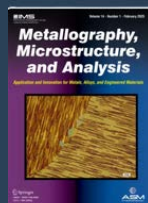


1st Conference on Reverse Engineering Applied to Metallic Heritage, organized by Patricia Silvana Carrizo and team, with presentations, lab visits, a student panel and a poster session.

13 OCT 2026, 8 AM - 9 PM
UTN FRM Auditorium, Mendoza, Argentina

Third Special Issue

The third special issue of Metallography, Microstructure, and Analysis (MMA) on Archaeometallurgy is taking shape and coming soon!



Watch on YouTube: Committee Webinars

Recordings of recent committee webinars are now available on ASM International's YouTube channel. Click a title to watch:

► [Omid Oudbashi: Corrosion in Copper Alloys](#)

► [Patricia Carrizo: The Mendoza Iron Bridge](#)

► [Diana Arano: Shipwreck Artifacts](#)

[Browse all ASM webinars on YouTube →](#)

New committee officers took office on September 1. See page 5.

IMAT 2026: Quebec City

September 28 - October 1, 2026

Archaeometallurgy Session
Tuesday, September 29 • 9-10 AM



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50 YEARS OF AEROSPACE AND 30 YEARS OF ARCHAEOMETALLURGY

by Russell Wanhill



I began my career as a 1960s-vintage metallurgist. After a doctorate (1968, UMIST, Manchester) and a fellowship at the University of Pennsylvania, I joined the Royal Netherlands Aerospace Centre (NLR) in 1970, eventually retiring as a Principal Research Scientist in 2008. In the meantime I completed another doctorate (1994, Faculty of Aerospace Engineering, Delft).

Aerospace Materials

My NLR tasks were twofold: (1) engineering property evaluations of new alloys, specialising in fracture mechanics, fatigue, corrosion, and fractographic analysis; (2) forensic engineering (failure analysis). Both required teamwork and international collaborations. A post-retirement stay at the Defence Science and Technology Organization (DSTO), Melbourne, was most productive, leading to several archival papers and books, and two chapters in the latest (2023/2024) ASM Fractography Handbook.



Archaeometallurgy

In 1994 staff from the Allard Pierson Museum (Amsterdam) visited us for advice on conserving a Roman iron nail. They also brought fragments from a Ptolemaic period silver vase. SEM-EDS analysis of the fragments indicated the vase to be approximately 97 wt.% silver containing copper, gold and lead. More interesting to me were intergranular and faceted transgranular fractures of the fragments. Over the next 29 years the study of these low-ductility fracture modes in a variety of silver artifacts was generously aided by information and images from experts, especially Peter Northover, who lent us metallography samples from his vast collection. The final result (preceded by other publications) was a comprehensive paper in the first MMA Special Issue on Archaeometallurgy (2023). This paper introduced basic fracture mechanics concepts for qualitatively understanding cracking in ancient metallic objects.

Since 2015 Omid Oudbashi and I have been collaborating on archaeometallurgical topics. This has enabled me to greatly broaden my interests and contribute to joint publications in the ASM House Journal AM&P and another chapter in the ASM Fractography Handbook. We have also been preparing an archaeometallurgy textbook on Iranian copper-base alloys, due to be published in 2026.

Forensic Fracture Problems

Aerospace alloys and archaeometallurgical materials can and do experience damage and fracture problems that require forensic analyses [1]. Obviously, the analyses are more challenging for aerospace vehicles, for example the helicopter accident illustrated in Figure 1. And yet, in their own context, the damage to valuable and rare ancient artifacts needs to be thoroughly investigated to enable optimum restoration and conservation as part of our cultural heritage, for example the silver cup shown in Figure 2 (page 3).

Fig. 1 Merlin helicopters (a) In-flight. (b) An earlier model after a 'hard landing': the aircraft disintegrated owing to impact-induced brittle fracture of the airframe alloy. The brittleness problem resulted in changing this alloy to a more damage-tolerant older alloy, despite a significant weight increase. Note: The crew survived this accident.



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Are You Interested in Archaeometallurgy?
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PROFESSIONAL
SPOTLIGHT

50 YEARS OF AEROSPACE AND 30 YEARS OF ARCHAEOMETALLURGY

by Russell Wanhill

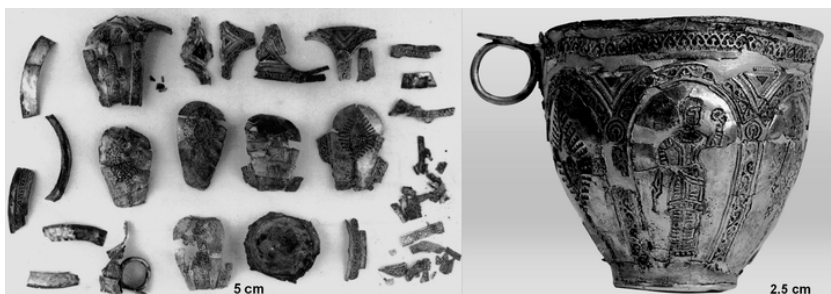


Fig. 2 Restoration of an antique silver cup (the so-called Khan Cup). The cup had disintegrated owing to long-term stress-corrosion cracking in a burial environment. Images courtesy of Gerhard Stawinoga, Archäologisches Landesmuseum, Schleswig, Germany.

Retrospection

As a long-serving practical research metallurgist I am certain that both aerospace materials R&D and archaeometallurgical studies offer engrossing and dynamic career choices. There is much to learn and discover!

Reference

1. R.J.H. Wanhill, Forensic Metallurgy in Archaeology and Aerospace, Advanced Materials & Processes, 183(4), p 23–28, 2025.

Russell Wanhill

Advanced Materials & Processes

Committee authors in ASM's magazine

The July 2026 issue of AM&P featured contributions from committee members Patricia Carrizo, Omid Oudbashi and Russell Wanhill, and Hide Kanematsu. Patricia has published one AM&P article every year since 2021. A new two-part article by Omid Oudbashi and Russell Wanhill is scheduled, with the first part appearing in January 2027.

► [Read AM&P online](#)

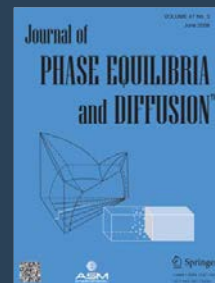
Committee News

- New officers since September 1: **Joseph Mitchell (Chair)**, **Alexandre Mégret (Vice Chair)**, **Nassos Lazaridis (Secretary)** and **Omid Oudbashi (Past Chair)**.
- **Sharada Srinivasan** received a major grant for a center of excellence in archaeomaterials and archaeometallurgy.

Coming Soon

Phase Studies in Archaeometallurgy: Call for Papers

Peter Northover is seeking 4–5 authors to contribute papers on phase studies in archaeometallurgy for a topic-focused issue of the Journal of Phase Equilibria and Diffusion, likely to be published in 2028. If you are interested, please contact the committee.



► [Journal of Phase Equilibria and Diffusion](#)



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GUEST ARTICLE

THE IRON AND STEEL HERITAGE FORUM

by Anthony Meadow, SIA Board Member and Chair of the Iron and Steel Heritage Forum

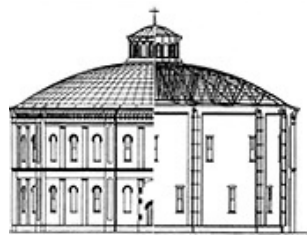
To begin, you might be wondering what industrial archeology is about. The Society for Industrial Archeology (SIA) is the premier organization for industrial heritage, history, and archaeology in North America. Since its founding in 1972, the SIA has built a dedicated community of people and organizations – our members and supporters – interested in these topics. This open, diverse, and distinguished group gathers regularly to share new information about the development, history, and preservation of industrial heritage sites at conferences and tours, through our publications, and as part of other types of programs.

SIA programs support new and original studies that advance knowledge in the field of Industrial Heritage, including the identification, documentation, analysis, interpretation, and preservation of cultural resources that are associated with the history and development of industrial society. Our activities include an annual conference, an annual tour, a newsletter and a refereed journal.

The Iron and Steel Heritage Forum (ISHF) is the first interest group of the SIA. Special interest groups are a new activity of the SIA and their goal is to provide activities focused on the interests of our members. ISHF was the first, but others have recently started, such as the Bridge and Infrastructure SIG.

ISHF covers a broad range of topics as befits a major North American industry: mining of iron ore, iron making, steel making, steel processing (hot and cold rolling, continuous casting, casting, forging), transportation networks, “interesting” users and uses of iron and steel, business history, labor & union history, art & photography, steel and iron museums and historic sites, and, of course, metallurgy.

There are two realms in which metallurgy is of interest to the members of the ISHF. (Other members of the SIA are interested in studying other metals such as copper and brass.) We are interested in the various metallurgical disciplines used throughout the steel industry. Our interest in history means that we are interested in metallurgical analysis of materials from historic sites, such as metals and slag. The graduate program in Industrial Heritage and Archaeology at Michigan Technological University organized a series of archeological projects to research the West Point Foundry in New York. This work resulted in a special issue of the SIA's refereed journal, *IA*.



SOCIETY FOR
INDUSTRIAL
ARCHEOLOGY

Activities of the ISHF began in July 2024, primarily our monthly talks on iron and steel. Initial talks were mostly on historical topics, but we are now having more technical talks and are looking for speakers who can talk about these topics.

However, we have ambitious plans for the future. We have begun establishing formal affiliations with museums, historic sites, archives, and other organizations that have a focus on iron and steel. There is no directory of museums focused on iron and steel, although we are working towards that, but we estimate that there are several dozen museums, historic sites, and archives with substantial properties and holdings related to iron and steel. We also believe that there may be several hundred abandoned iron furnaces that sit, mostly undisturbed, in forests around North America.

One of the goals of having relationships with museums is to work together to make the public more aware of the history and heritage of iron and steel, as well as the industry as it is today. Working in a steel mill today is enormously different than it was 50 years ago, let alone 100 years ago. The industry does not communicate with the public, and so the vast majority have no idea of how much the industry has changed.

If you are interested in the history and heritage of your industry, please join us. We are working on building a stronger online presence, including a website. You can join our mailing list to receive news of upcoming talks, books on steel, details of events organized by steel museums and more by sending a blank email (no subject or message needed) email to Iron-Steel-SIG+subscribe@SIA.groups.io. You can also contact me directly at tmeadow@ferrumwest.com.



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Learn more

► [Society for Industrial Archeology \(sia-web.org\)](http://Society for Industrial Archeology (sia-web.org))

► [MTU graduate program in Industrial Heritage & Archaeology](#)

► [IA journal special issue on the West Point Foundry \(JSTOR\)](#)

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[Read MIT's full tribute](#)

In Memoriam: Thomas Rose

The ASM Archaeometallurgy Committee mourns the loss of Dr. Thomas Rose, a member and contributor of our committee, who passed away on September 2, 2026, at the age of 37.

Born in Berlin, Thomas studied at Goethe University Frankfurt and earned his PhD in Archaeology through a joint program of Ben-Gurion University of the Negev and Sapienza University of Rome. After research and coordination roles at the Deutsches Bergbau-Museum Bochum and Goethe University Frankfurt, he joined MIT's Department of Materials Science and Engineering in January 2026 as an assistant professor, holding the POSCO Professorship in Materials Science, and as a member of the Center for Materials Research in Archaeology and Ethnology (CMRAE).

His research explored how copper and its alloys were produced, transformed, and circulated in early societies, combining geochemistry, mineralogy, experimental archaeology, and materials science. He also co-founded the Young Researchers in Archaeometry workshop, a reflection of his generosity toward early-career scholars.

Colleagues remember him as a world-class scientist and, above all, as a kind and generous person. Our field has lost a bright voice far too soon. We extend our heartfelt condolences to his family, friends, and colleagues.

ASM ARCHAEOMETALLURGY TECHNICAL COMMITTEE

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Alexandre Mégret (Vice Chair)
Nassos Lazaridis (Secretary)
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Tony Meadow	Udayan Pathak



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Suggestions for the newsletter?

[Let Us Know!](#)