

Report on the outcomes of a presentation and participation - Young Researcher and Innovator Conference¹

Action number: CA22145 - Computational Techniques for Tabletop Games Heritage (GameTable)

Grantee name: Francesca Condorelli

Conference Details

Conference title: CIPA 2025 SEOUL Heritage Conservation from Bits. From Digital Documentation to Data-driven Heritage Conservation

Conference web-page: <https://cipa2025seoul.org/>

Conference venue²: Seoul

Conference start and end date: 25/08/2025 to 29/08/2025

Accepted contribution details

Title of the presentation: From One Picture to Lost Play: Reviving Ancient Games with Artificial Intelligence for Digital Heritage Conservation

Type of the presentation: oral

Co-authors: NA

Other details of the presentation: AI-powered Heritage Data Management and Documentation (3)

Long Presentation (15 min) on 28/08/2025

Outcome of the conference participation

Description of the outcome of the presentation of the accepted contribution, in terms of grantee's visibility, including the establishment of new contacts for future collaborations

The presentation of the accepted contribution attracted significant attention from scholars, museum professionals, and technologists working in the field of cultural heritage. The paper introduced a novel pipeline for the 3D reconstruction of archaeological artifacts from minimal data, specifically single-view images, using Artificial Intelligence-based algorithms. This approach, developed as a solution to the inaccessibility of certain cultural objects, was received as an innovative contribution with practical applicability across multiple domains. The chosen case study — Coptic board games — provided a compelling example of how AI-driven methods can recover lost or inaccessible aspects of cultural heritage. The audience recognized the dual contribution of this work: it both advanced technical methods for digital reconstruction and addressed a heritage object type that is rarely studied but

¹ This report is submitted by the grantee to the Action MC for approval and for claiming payment of the awarded grant. The Grant Awarding Coordinator coordinates the evaluation of this report on behalf of the Action MC and instructs the GH for payment of the Grant.

² For an online conference, specify virtual participation; for hybrid conferences, specify whether it is an in-person or virtual participation.

important for understanding ancient ludic practices. Feedback during and after the session underlined the value of the methodology as both reproducible and scalable, offering clear benefits for wider heritage preservation initiatives.

The presentation considerably enhanced my visibility. Scholars in archaeology, heritage science, and computer vision acknowledged the originality of adapting a deep learning method derived from the LRM-NeRF family to low-data scenarios. This reinforced the grantee's standing as a researcher capable of bridging technological innovation with archaeological application.

Moreover, my work was highlighted by session chairs and received informal invitations for further dissemination through interviews and follow-up discussions. This visibility not only raised awareness of the presented research but also positioned the grantee as an emerging voice in the application of AI to cultural heritage.

Finally the contribution was praised for demonstrating a viable method to reconstruct inaccessible artifacts, a known challenge in heritage research. The open-source and reproducible nature of the workflow further enhanced the grantee's reputation for advancing accessible, community-oriented solutions.

The presentation led to promising new contacts with potential for future collaborations:

- **Museums and Collections:** Curators and digital heritage specialists from major museums, in particular Korean and Indian association, expressed interest in applying the methodology to undocumented artifacts, particularly those where traditional photogrammetry or scanning methods are not possible.
- **Interdisciplinary Research:** The talk generated discussions with scientists specializing in computer vision, who proposed joint projects to refine texture reconstruction and improve validation metrics. These collaborations would enhance both the technical and archaeological outcomes of the pipeline. In particular a collaboration is born with prof. Lerma from Valencia University and Prof. Rodriguez from the university of the Basque Country in Spain.
- **Cultural Heritage Organizations:** Representatives of networks dedicated to heritage digitization explored possible integration of the pipeline into larger-scale digital preservation initiatives. Its scalability and open-source framework were seen as particularly suitable for shared infrastructures. In particular representative of Europeana invited me to implement the same methodology on Europeana's data.
- **Educational Institutions:** Universities and research centers expressed interest in collaborating on teaching modules and workshops that highlight AI applications in cultural heritage, broadening the impact of the contribution beyond research into capacity building. In particular the IULM University in Milan (Italy) invited me to become professor in a course in Art Communication.

Overall, the presentation significantly increased my visibility and recognition across academic, professional, and heritage networks. It not only positioned me as an innovator in AI-driven cultural heritage research but also facilitated the establishment of connections with museums, interdisciplinary researchers, and heritage organizations. The feedback and invitations for collaboration demonstrated both the methodological relevance of the work and its potential for practical application, ensuring that the contribution will serve as a foundation for future partnerships and research initiatives.

Acknowledgement of inclusion of necessary supporting documents to claim the grant

I confirm that the following documents have been uploaded on e-COST as an integral part of this report:

- the certificate of conference attendance.
- the programme of the conference or book of abstracts / proceedings indicating the presentation (oral or poster) of the grantee.
- copy of the given presentation (oral).