



# Book of Abstracts

## SEMINAR Revealing Connections

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**November 28<sup>th</sup> 2024**

Giorgio Prodi Lecture Hall,  
Piazza San Giovanni in Monte, 2, Bologna



NEW FORMS OF CALLIGRAPHY IN CHINA:  
A CONTEMPORARY CULTURE MIRROR



DEPARTMENT  
OF CLASSICAL PHILOLOGY  
AND ITALIAN STUDIES  
DEPARTMENT  
OF INTERPRETING  
AND TRANSLATION



**Dominic Oldman**, Kartography (CIC) & British Museum (London, UK)

## **ResearchSpace: A Semantic and Processual Knowledge Base Platform - Theory and Practice**

Knowledge continually develops relating past to present and identifying wider contextual interdependencies. Yet traditional standards have focussed on descriptions that identify a 'kind of thing', and isolate intrinsic features independently from the rest of the world, without considering the interconnection of different natural and social systems. They operate as functional administrative or reference systems. Many heritage standards were designed with databases in mind which use a predefined abstract model lacking the structures and semantic architecture required to support knowledge building and meaningful interoperability. The progressive trend across all disciplines has been to move away from seeing the world as substances, to one made up of relationships; from static representations to dynamic unfolding relations; from intrinsic properties to emerging knowledge, from databases to graph structures. It is a change from the Cartesian mentality of the database system to the processual and reality based world of the knowledge base systems. ResearchSpace is a semantic and processual platform supporting the development of knowledge bases and this talk will identify key elements of its design, provide insight into its development, and use practical examples. It will also introduce the new version of ResearchSpace.

**Lukas Klic**, I Tatti | The Harvard University Center for Italian Renaissance Studies (Florence, IT)

## **Networks Are All You Need: Scaling Art History Research with the Semantic Web**

This talk will introduce Pharos, the International Association of Photo Archives, and its large-scale digital initiative to consolidate the historical photograph collections of fourteen European and North American art historical research centers. Built using the ResearchSpace platform, Pharos leverages linked data and semantic web technologies to go beyond traditional publishing systems. Rather than simply presenting images and metadata in isolation, data is aligned and cross-referenced across partner institutions and connected to multiple external vocabularies, allowing for different institutional perspectives to converge. By structuring data in a knowledge graph, relationships can be explored in ways that support both fine-grained analyses and broader inquiries into the history of art. Computer vision is used to connect artwork records across institutions, enabling Pharos to publish unique identifiers for each artwork. Vision models such as OpenAI's CLIP facilitate text-to-image semantic searches without reliance on metadata. IIIF is used to publish high-resolution images that are reusable in various contexts. The metadata model, based on CIDOC-CRM, offers a rich ontology and provides a solid, extensible foundation for the data. By allowing users to perform complex queries where data from multiple sources can be interwoven, Pharos offers an information network that empowers scholars to explore, connect, and contextualize art histories.



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FRAMEWORK PER L'ATTRAZIONE E IL RAFFORZAMENTO  
DELLE ECCELLENZE PER LA RICERCA IN ITALIA

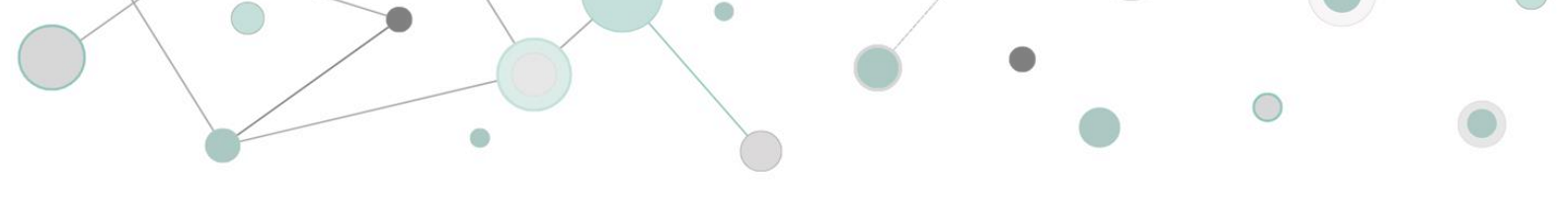


Digital Humanities  
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ALMA MATER STUDIORUM  
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**Gianmarco Spinaci & Remo Grillo**, University of Bologna (IT) & I Tatti | The Harvard University Center for Italian Renaissance Studies (Florence, IT)

## **Metapolis: A ResearchSpace Module for Visualizing History Through Geospatial Data**

Metapolis aims to develop a digital research infrastructure to support scholarship in the humanities that seeks to reconstruct places throughout time geospatially. As an interactive map-based publication platform, users can cross-pollinate archival, bibliographic, and multimedia sources with interpretive research, allowing for their interlinking and visualization of a map. It's built on top of ResearchSpace, designed both as a research and publication tool, allowing groups of scholars from a wide range of humanistic disciplines to connect their research and augment each other's findings through the layering of historical maps, interlinking them to sources to allow users to build knowledge about the world and its history. Among its critical features, Metapolis enlists the integration of specialized components that adapt native semantic data against different external data sources, including GIS-based SQL databases and REST APIs. This allows the platform to handle and query not only complex geospatial information but also crucial metadata, even when living outside native semantic frameworks such as the ones not accessible from SPARQL endpoints. Also, MetaPolis employs a custom development of ResearchSpace to display and interact with this historical information related to time and space: the Semantic Map component and its Advanced Controls. These components provide a flexible way to navigate in the Space-Time Volume, and to show, highlight, color and label geometries or entities using custom structured queries. It's possible to also integrate custom basemaps and historical maps, manipulate their layers, and provide simultaneous visualization of georeferenced data. With the collaboration between these adapters and the mapping component, Metapolis supports sophisticated data integration and enables researchers to interrogate diverse data, granting interoperability for in-depth, spatial-temporal studies on historical and cultural landscapes.

**Laura Pandolfo**, University of Sassari (Sassari, IT)

## **Semantic Web and Cultural Heritage: Ontology Design and Applications**

This talk introduces the role of the Semantic Web in the field of cultural heritage, with a particular focus on ontology design as a tool for preserving and interlinking cultural data. As the volume of digital cultural assets grows, the challenge lies not only in storing but also in making these resources meaningfully accessible and interoperable. Ontologies, by defining shared vocabularies and structured relationships, allow us to build a web of cultural knowledge that enhances discovery, analysis, and interpretation across disciplines and borders. We will examine relevant applications that use ontologies to bridge cultural knowledge gaps, showcasing how these initiatives leverage the Semantic Web to connect disparate collections and offer new pathways for understanding. In particular, two projects exemplify these principles in action: Women Writing Around the Camera and Bistiris. The former leverages a knowledge graph to explore women's historical contributions to cinema, connecting biographical and thematic data. The latter is an ontology designed to capture the intricate variations of the Sardinian traditional female costume.



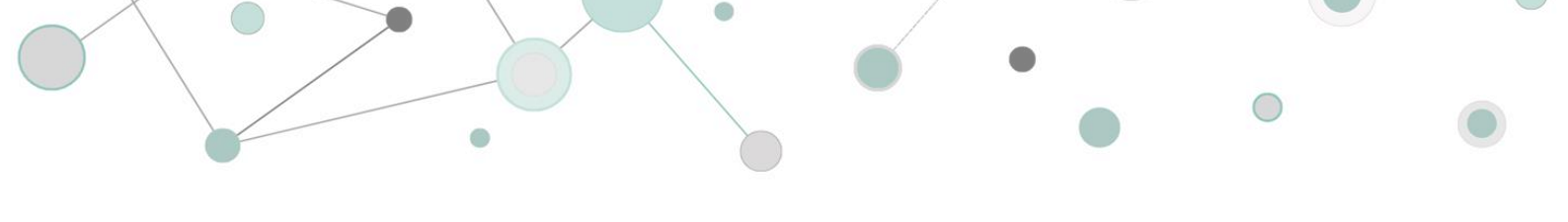
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**Alessandro Adamou**, The Bibliotheca Hertziana – Max Planck Institute for Art History (Rome, IT)

## Organizing Knowledge Around Human Engagement with Art and Literature

The experience of an individual who admires a painting, hears a musical piece, reads a novel or listens to someone read it aloud, is a well-established notion in the Humanities, insofar as it is captured and documented into tangible artifacts like diaries, reviews, or correspondence. Preserving this documentation through digitisation is a generally well-understood practice. Capturing the experience in the sense of formalising and structuring the knowledge that defines it, thereby centering on the experience itself as the immaterial object of cultural value, is among the least beaten paths in intangible cultural heritage.

This talk spans across a decade-long effort in understanding usable representational paradigms to formalise the knowledge around such aesthetic acts into semantically-structured datasets that could serve as a reference for future Linked Open Data projects. We begin by establishing a basic phenomenological framework for such acts in literature history and music history, through the AHRC-funded UK-RED and LED projects respectively. We then delve into how the reading experience evolved into a separation of engagement and response in the READ-IT project, to then generalise it on a logic based on ontological patterns. We continue with a reflection on ongoing and future applications in follow-up projects and in the remit of art history, with an outlook on how the hermeneutic dimension could gradually be incorporated in this vision.

The talk concludes with an overview on past and present implementation strategies and suitability considerations, ranging from adaptations of general-purpose content management systems to contemporary DH platforms such as ResearchSpace.

**Antonella Fresa**, Promoter S.r.l. (Pisa, IT)

## A Contribution Towards a Different Understanding of the Binary Relationship of East and West

The intervention explores the challenges of connecting communities when tackling cultures that are often not well-known, giving a meaning to the term Chinese cultural content when looking into European memory institutions, contributing to gain a shared understanding, and avoiding to become overwhelmed by the enormous amount and scope of Chinese cultural heritage that is collected in Europe, and that has greatly influenced our cultural development over the centuries.

The relevance of digital platforms, tools and experiences is at the forefront of public minds and many institutions have increased or moved activities online. In this ambit, the PAGODE project, co-funded by the EU, is the first European digital heritage project with a Chinese epicentre. The work conducted in the PAGODE project is illustrated with particular regard to the collection of digitised Chinese Cultural Heritage Objects via Europeana, the flagship initiative of the European Union, which provides access to Europe's digital cultural heritage. The role of digitisation, metadata creation, and adoption of controlled vocabularies is illustrated, as instruments for the discovery of European cultural treasures.

'China in perspective', the digital exhibition produced within the PAGODE project, is presented. The digital exhibition is available online through the Europeana portal providing access to contents and to the associated stories, based on hyperlinks and connections with the full content space, made up of tens of millions of cultural digital objects. A curated selection of best quality pictures from 11 content providers from the EU comprises four sections: arts, interventions, legacy and reflection. Furthermore, similar photographic poses and objects representing the human body, setting of landscape and drawing, architectural shapes, and details are presented, seeming to indicate common elements, as if Chinese culture had inspired common themes to appear in new and varied destinations.



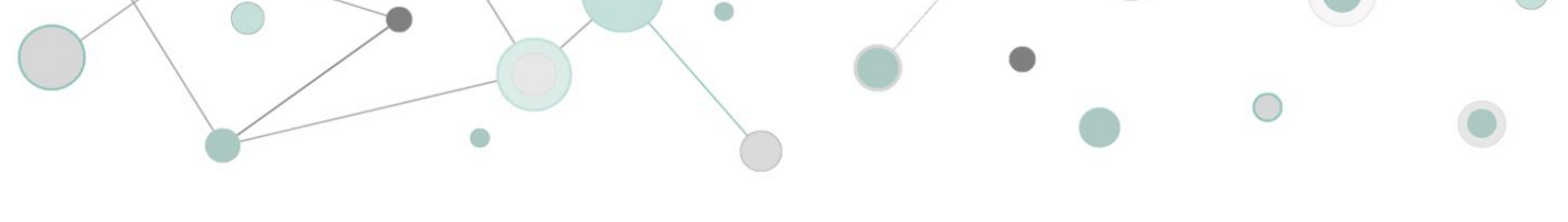
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**Etienne Posthumus**, FIZ Karlsruhe — Leibniz Institute for Information Infrastructure, Information Service Engineering (The Netherlands)

## **Linked Data and Images, Where to Once the Digitization is Done?**

Over the last decades many programs have been completed digitizing large collections of cultural heritage content. The question is not "should we do it?" any more, but "what should we do with it now?". Adding a metadata layer containing the basic "who", "where" and "when" in a standardized, open manner is a challenge to start with. But once this has been done, we could investigate an even deeper layer considering the semantic representations needed to ask "why?".

One of the techniques that can be considered is representing collections as Linked Data, and adding subject classification. In this talk we will look at the ICONCLASS and CIT systems, how they have been applied to visual collections, and what the plans are for the future.



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