(Re)Mediating the Past
Summer School in Digital Cultural Heritage

Tallinn University
27–29 August 2025
1 ECTS

Abstracts

Wednesday, 27 August

09:45–10:45 Paolo Martinelli (University of Bologna): Lecture: Four stories of digital remediation of cultural heritage

This lecture presents four case studies on the digital remediation of cultural heritage, explored through the lens of Umberto Eco's interpretive and cognitive semiotics. Each case reflects on a key challenge arising at the intersection of culture, technology, and meaning-making in the digital age. We will address the shifting balance between human semiotic competence and the delegation of interpretation to artificial intelligence; the role of open data in shaping democratic access to cultural knowledge; the emergence of non-fungible tokens (NFTs) as novel frameworks for authorship, ownership, and authenticity in digital art; and the reconfiguration of forgery and counterfeiting within digital cultural environments. Collectively, these case studies offer a critical semiotic perspective on the ways in which digital technologies transform the production, circulation, and interpretation of cultural meaning.

11:15–12:45 Paolo Martinelli: Workshop: Interfacing open data with generative AI: A semiotic approach to data accessibility

In this hands-on seminar, we will explore how generative AI tools can be used to access and interpret open data released by European public administrations. Building on the theoretical insights presented in the lecture, participants will work directly with real datasets—such as the performance records of public libraries—and experiment with querying them in natural language through AI interfaces. The aim is to understand how large language models can function as mediators between machine-readable archives and human users who lack technical skills in programming or data analysis. Through collaborative exercises, we will reflect on issues of data literacy, accessibility, and the semiotic implications of delegating interpretive tasks to artificial intelligence. Participants will be invited to generate summaries, comparative analyses, and visualisations from structured datasets, and to critically assess the reliability and sense effects produced by the AI. Rather than focusing on the tool itself, the workshop will highlight the semiotic conditions under which digital cultural content becomes readable, meaningful, and publicly usable—redefining what it means to "understand" a dataset in the age of generative mediation.

14:00–15:00 Chiara Piccoli (University of Amsterdam): Lecture: Re-constructing urban pasts in the age of AI: Methods, challenges and reflections

Urban memory is inscribed in architecture—not as static form, but as a living record of social and cultural meaning. As cities lose physical structures, digital 3D reconstructions offer evocative tools with which to visualise and engage with the past. This lecture presents case studies employing manual, rule-based, and AI-assisted workflows, reflecting on their interpretive nature, ethical implications, and technical challenges. From transparency and historical fidelity to sustainability and obsolescence, the talk interrogates what becomes worth remembering in an era of algorithmic abundance. It calls for curatorial responsibility, public engagement, and durable infrastructures to ensure that digital memory remains rigorous, accessible, and meaningful for present and future generations.

15:15–16:45 Chiara Piccoli: Workshop: Object-based storytelling – introduction to Voyager 3D Story

This workshop introduces participants to object-based storytelling through the Smithsonian Voyager 3D Story platform, focusing on how digital replicas and reconstructions of cultural heritage objects can serve as anchors for narrative and memory. Participants will explore how spatial annotations and multimedia integration can connect personal stories with historical interpretation. Using examples from Pure3D scholarly editions, the session examines how digital objects reshape context, agency, and meaning. It emphasises storytelling as a critical and ethical tool for memory-making in the age of digital reconstruction: transparent, reflexive, and grounded in interpretive accountability.

Thursday, 28 August

09:30–10:30 Asko Nivala (University of Turku): Lecture: Geoparsing and the Spatial Turn in Cultural History

Geoparsing refers to the extraction of spatial information from unstructured text, typically through the identification and disambiguation of place names. This process enables the conversion of texts into maps. In the context of cultural heritage, geoparsing offers new avenues for cultural-historical research and the study of spatial history. Where are the centres and peripheries of a textual corpus? In this lecture, I introduce the basic principles of geoparsing technology and demonstrate its practical application in cultural-historical research through two case studies. The first draws on my project *Romantic Cartographies: Lived and Imagined Space in English and German Romantic Texts, 1790–1840*, which investigated spatial constructions in early nineteenth-century German- and English-language Romantic literature, using materials from the digital archive *European Literature, 1790–1840: The Corvey Collection*. The second example comes from the project *Atlas of Finnish Literature, 1870–1940*, which mapped place names mentioned in Finnish-language fiction from that period.

10:50–12:40 Aldo Gangemi (University of Bologna): Lecture and workshop: Perspectival pluralism and deep humanities

How to integrate heterogeneous/incommensurable theories and data in the humanities, when they concern similar phenomena? From philosophy to psychology, from cultural heritage to politics, theories are rarely grounded in entities that are shared, rather they construct their own grounding. Humanistic theories generate a field populated by an enormous amount of perspectival entities and potential conflicts, limiting the application of empirical and experimental methods. The lecture will present a frame-based ontology of cognitive perspectivisation based on the Descriptions and Situations design pattern, with examples from the EU SPICE, FAIR and ArCo projects, and concrete cases of computational ontology design.

In the workshop I will introduce implemented Neurosymbolic AI methods (Logic-Augmented Generation, Polanyi Implicit Knowledge Extraction) as an operational platform to control Generative AI models in humanistic research.

13:30–14:30 Filip Ginter (University of Turku): Lecture: Automated prompting of LLMs as a tool for cultural heritage data preprocessing and analysis

In this lecture, we will explore methods of automated prompting of large language models (LLMs) with applications to processing historical and cultural heritage texts. In particular, we will familiarise ourselves with the concept of automated prompting and the LLM-as-program paradigm.

14:45–16:15 Filip Ginter: Workshop: Automated prompting of LLMs as a tool for cultural heritage data preprocessing and analysis

In workshop, we will examine how the concepts of automated prompting and the LLM-as-program paradigm are implemented in the popular DSPy library. Mastery of these techniques will enable you to automate the application of LLM-based processing to large data collections and support advanced use of LLMs as a tool for data preprocessing and analysis.

16:30–17:30 Indrek Ibrus (Tallinn University): Lecture: Building knowledge graphs for the study of cultural and economic evolution

This lecture argues that knowledge graphs (KGs) provide a tractable, scalable methodology for studying cultural and economic evolution and demonstrates this with a national-scale media corpus from Estonia. Conceptually, the approach operationalises Juri Lotman's semiosphere by treating each triple as a translation/dialogue event that reconfigures cultural relations over time; it adopts William James's relational pluralism by making predicates (e.g., verbs such as *cites, contradicts, adopts*) first-class analytical objects; and it follows John Dewey's view of valuation by reading shifts in discourse weightings and provenance as evidence of publics

testing and stabilising meanings. Empirically, we construct a temporally layered KG from two decades of economic and technology journalism across public and private media, align entities to authority files and registries, and link discourse to sectoral indicators from official statistics. An eight-stage NLP pipeline (tokenisation, parsing, Estonian NER, keywording, topic modelling, ontology alignment) mints versioned triples exposed via SPARQL/JSON-LD. We then apply time-resolved network analysis – community detection, centrality trajectories, diffusion paths, and motif analysis – to identify how concepts, actors, and narratives migrate between subsystems (media, policy, industry), when peripheral innovations become core, and how contention (criticism, contradiction) co-evolves with adoption. By fusing the discourse graph with economic time series, we test whether discursive salience and position changes anticipate sectoral outcomes, thereby extending national-innovation-systems analytics beyond retrospective surveys. The contribution is threefold: a theoretical synthesis that renders cultural evolution queryable; a reproducible data and methods stack for small-language contexts; and a governance blueprint (provenance-rich licensing, role-based contribution) that sustains the KG as public research infrastructure. The result is a living, auditable map of cultural change that supports scholarship, policy design, and the fine-tuning of nationally grounded AI models while preserving rights and transparency.

Friday, 29 August

09:30–10:30 Julia Noordegraaf (University of Amsterdam): Lecture: Unlocking digital cultural heritage in time and space: A scalable approach to the study of human culture

The rapid developments in digital technology have greatly increased the number of digital representations of cultural heritage and generated a wealth of new, born-digital heritage (UNESCO 2019). In tandem, a broad variety of tools, platforms, and infrastructures has emerged to find, access, enrich, analyse, and visualise digital cultural heritage sources and the information they contain. In particular, software for creating interactive maps and 3D visualisations facilitates the connection of digital cultural heritage sources to their related locations and supports the evocation of past places (Huurdeman and Piccoli 2021; Heuvel and Noordegraaf 2023). As such, these digital platforms allow for spatial and temporal explorations of the local past, offering new opportunities for humanities research (Bodenhamer et al. 2015). This lecture reflects on the opportunities offered by spatial and temporal approaches to cultural heritage for understanding the past of human culture via digital research. It argues that, in doing so, we need to adopt a 'scalable research framework' that alternates between the macro level—identifying patterns in large datasets, across space and through time—and the micro level of one particular text, image, location, person, or event (Noordegraaf 2025). It also reflects on the challenges of using digital methods and sources for humanities research, asking which historical 'truths' emerge and to what extent these are shaped by digital transformation and processing.

11:00–12:30 Asko Nivala: Workshop: Digital Mapping for Humanists: A Geoparsing Workshop

This hands-on workshop introduces the basic principles of geoparsing—the process of identifying and interpreting place references in textual sources. Through practical exercises and group discussion, participants will learn how spatial information embedded in historical and literary texts can be extracted, visualised, and analysed to support new kinds of research questions. No prior programming skills are required. By the end of the session, participants will have experimented with accessible tools to explore how texts can be transformed into maps, and how spatial approaches can enrich cultural and historical analysis.

13:30–15:00 Julia Noordegraaf: Workshop: Infrastructures for digital humanities research: Exploring audiovisual archival collections via the CLARIAH Media Suite

The increased availability of cultural heritage sources in digital form has generated a broad spectrum of tools, platforms, and infrastructures for accessing and analysing these materials. At both the national and European level, consortia have been established to coordinate and streamline the development and sustainability of infrastructures for digital scholarly research. In this workshop, we explore the Media Suite (https://mediasuite.clariah.nl/), a component of the Dutch national infrastructure for digital humanities research, CLARIAH, which is connected with the European research infrastructure consortia CLARIN and DARIAH. We examine the potential of the Media Suite to inspect and analyse audiovisual cultural heritage, including radio, television, film, archival records, and media art, and discuss the ways in which research infrastructures mediate our access to and interpretation of cultural heritage.