

## **P05. Digitization of Cultural Heritage and Heritagisation of the Digital: practices, concerns, and potentialities**

Vera Moitinho de Almeida, Diogo Marques and Luís Trigo (CODA - Universidade do Porto)

This panel is focused on the use of digital methods, techniques and technologies in cultural heritage (CH), and how they can be applied to tackle different sorts of research questions and needs.

According to UNESCO (2003, p.75), "digital heritage consists of unique resources of human knowledge and expression", including cultural, scientific, and educational. Digital resources - such as texts, images, graphics, databases, and software, among many others - may be born-digital data or converted into digital form from existing analog resources. "They are frequently ephemeral, and require purposeful production, maintenance and management to be retained. Many of these resources have lasting value and significance, and therefore constitute a heritage that should be protected and preserved for current and future generations. This ever-growing heritage may exist in any language, in any part of the world, and in any area of human knowledge or expression."

While much attention has been drawn in the past several years to the digitization of material and immaterial Cultural Heritage, as well as to the visualization and display of digital objects for educational and other dissemination purposes, less attention has been given to issues related to research data quality, analysis, preservation, interoperability, and re-use, among others. Considering this, we welcome presenters working with digital Cultural Heritage that can showcase multi-, inter-, or transdisciplinary research projects and case studies, while providing a critical reflection of their experiences. This panel aims to serve as a launchpad for a debate on digital Cultural Heritage good practices, concerns, and potentialities, and how they contribute to and shape research. Topics might include, but are not limited to:

- Digital data life-cycle;
- Data capturing and processing;
- FAIR databases;
- Research data archives and repositories;
- Programming in CH;
- Applications of AI, machine learning, and deep learning;
- 3D and spectral data;
- Computer vision and pattern recognition;
- Data segmentation and classification;
- Text mining and analysis;
- Open Data and Open Science;

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**Keywords:** Cultural Heritage; Research; Digital Methods; Digital Techniques; Digital Tools.

**Thematic lines:** Epistemological and research challenges in heritage; Networks of heritage researchers and research; Citizen science; Debates in heritage-related research: concepts in transformation (museums, archives, libraries); Heritage training/skills profile; Interdisciplinary and challenges to academic and vocational education; Patrimonialization/Heritagization; Challenges, Discourses, and Heritage Policies; Heritage practices; Heritage management.

**Short bio:** Vera Moitinho de Almeida is the coordinator of the Centre for Digital Culture and Innovation (CODA-FLUP), a Digital Humanities hub that is committed to digital transformation by working as a catalyst of innovative and interdisciplinary synergies in the Social Sciences and the Humanities. She has an interdisciplinary background: Ph.D. (honors) in Prehistoric Archeology, from UAB, with a dissertation entitled "Towards a functional analysis of archaeological objects through Reverse Engineering processes"; MSc in Prehistoric Archeology; MSc in Multimedia Technologies (honors); BA in Fine Arts. She has worked at the Austrian Academy of Sciences (IKant-ÖAW), STARC-CyI, LAQU-UAB, CIPA-IPA, in several international research projects and has published extensively in interdisciplinary fields. Her expertise covers various intertwined subjects: 3D/2D Digital imaging, Data Analysis, Digital data life-cycle, and FAIR principles; with a special focus on the development of methodologies and digital applications for research in Archaeology, Cultural Heritage, and Digital Humanities.

Diogo Marques is a researcher in Digital Humanities at CODA, FLUP. In 2018, he received his PhD in Materialities of Literature (University of Coimbra). His thesis focuses on the analysis of haptic interfaces as expressive elements in computational literature. He was a postdoctoral researcher at IELT – Instituto de Estudos de Literatura e Tradição (NOVAFCSH), within the scope of the VAST project: values across space & time (2020-21) and Research Fellow at Fernando Pessoa University, Porto (2018-2020). In 2020, he co-organized a volume of essays titled *Investigação-Experimentação-Criação: em Arte-Ciência-Tecnologia* (Porto: FFP Press). He is an author, curator and translator of experimental (cyber)literature and co-founding member of wr3ad1ng d1g1t5 collective. He is a member of MATLIT LAB, Humanities Laboratory of the University of Coimbra; Artech-Int – International Association of Computational Art; ELO – Electronic Literature Organization; and APEAA – Portuguese Association of Anglo-American Studies.

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Luís Trigo holds a Ph.D. in Language Sciences from FLUP and he develops his research integrated in CODA, FLUP. He advises and supports researchers from different FLUP R&D centers in the development of Digital Humanities projects, also aiming to connect researchers from different fields and to engage students and citizens in the research processes and results. In the most recent years, he developed his work and research in the field of Human Language Technologies both in Industry and Academia (namely, LIAAD - Laboratory of Artificial Intelligence and Decision Support, at INESC TEC and LIACC - Laboratory of Artificial Intelligence and Computer Science, FEUP). Before, he has worked for several years in publishing and marketing management positions, and taught technology and society subjects. His main research interests are Computational Linguistics, Artificial Intelligence, Information Retrieval, and Social Network Analysis and Visualization.

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