



Arcangelo Massari

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EDUCATION AND TRAINING

1 DEC 2022 – CURRENT

PHD IN CULTURAL HERITAGE IN THE DIGITAL ECOSYSTEM Alma Mater Studiorum, University of Bologna

Website <https://corsi.unibo.it/2cycle/DigitalHumanitiesKnowledge>

20 MAR 2023 – CURRENT Leuven, Belgium

PHD IN ENGINEERING TECHNOLOGY Katholieke Universiteit Leuven

Website <https://www.kuleuven.be/wieiswie/en/person/00170256> | **Level in EQF** EQF level 8

1 NOV 2023 – CURRENT

DOCTORAL PROGRAMME IN CULTURAL HERITAGE Una Europa

Website <https://www.una-europa.eu/study/una-her-doc>

7 JUL 2024 – 13 JUL 2024 Bertinoro, Italy

SUMMER SCHOOL ON ARTIFICIAL INTELLIGENCE & CREATIVITY Una Europa

Website <https://site.unibo.it/una-europa/en/summer-and-winter-school/summer-school-ai>

AUG 2019 – NOV 2021

MASTER DEGREE Alma Mater Studiorum, University of Bologna

Website <https://corsi.unibo.it/2cycle/DigitalHumanitiesKnowledge> | **Field of study** Digital Humanities and Digital Knowledge |

Final grade 110/110 with honours | **Level in EQF** EQF level 7 | **Type of credits** CFU | **Number of credits** 120 |

Thesis A methodology and an implementation to perform live time-traversal queries on RDF datasets

3 JUL 2022 – 9 JUL 2022

ISWS 2022 PARTICIPATION International Semantic Web Research Summer School

Website <http://2022.semanticwebschool.org/>

AUG 2017 – NOV 2019

BACHELOR DEGREE Alma Mater Studiorum, University of Bologna

Field of study Humanities | **Final grade** 110/110 with honours | **Level in EQF** EQF level 6 | **Type of credits** CFU |

Number of credits 180 | **Thesis** Valorizzare il sapere digitale: un esperimento di progettazione

● WORK EXPERIENCE

OCT 2022 – CURRENT Bologna, Italy

TEACHING TUTOR ALMA MATER STUDIORUM UNIVERSITY OF BOLOGNA

1. Lab sessions as part of the teaching in [Computational thinking and programming](#) of the Master's degree course in [Digital humanities and digital knowledge](#)
2. Tutoring sessions within the framework of the teaching in [Data science](#) of the Master's degree course in [Digital humanities and digital knowledge](#)

30 NOV 2021 – 31 OCT 2022 Bologna, Italy

RESEARCH FELLOW RESEARCH CENTRE FOR OPEN SCHOLARLY METADATA (UNIVERSITÀ DI BOLOGNA)

I was involved in the [OpenAIRE-Nexus](#) project, and I developed software to integrate [OpenCitations](#) into the European Open Science Cloud

● HONOURS AND AWARDS

4 JUN 2024

Gigliozzi Prize 2024 – Associazione per l'Informatica Umanistica e la Cultura Digitale

The Gigliozzi Award is given annually to the best contributions from young researchers in the field of digital humanities, presented at the annual AIUCD conference. In 2024, I won the award for the best oral presentation with the paper *HERITRACE: Tracing Evolution and Bridging Data for Streamlined Curatorial Work in the GLAM Domain*

Link <https://www.aiucd.it/premio-gigliozzi-2024/>

● CONFERENCES AND SEMINARS

28 MAY 2024 – 30 MAY 2024 Catania, Italy

Associazione per l'Informatica Umanistica e la Cultura Digitale (AIUCD) Conference 2024 - Catania

Participation in the Associazione per l'Informatica Umanistica e la Cultura Digitale (AIUCD) Conference 2024 with a contribution entitled "HERITRACE: Tracing Evolution and Bridging Data for Streamlined Curatorial Work in the GLAM Domain"

Links <https://doi.org/10.48550/arXiv.2402.00477> | <https://zenodo.org/doi/10.5281/zenodo.11474571> | <https://easychair.org/smart-program/AIUCD2024/>

24 OCT 2023 – 27 OCT 2023 Redwood City, California, USA

Hackaton "Mapping the Impact of Research Software in Science" hosted by the Chan Zuckerberg Initiative

Participated in the "Mapping the Impact of Research Software in Science" hackathon hosted by the Chan Zuckerberg Initiative, where I focused on integrating data models from three pivotal software citation datasets: SoMeSci, Softcite, and RRID. Led the development of a comprehensive mapping table that served as a cornerstone in creating a "gold dataset" aimed at enhancing the extraction and citation of software tools within scientific literature.

Link <https://github.com/chanzuckerberg/software-impact-hackathon-2023>

10 JUL 2023 – 15 JUL 2023 Graz, Austria

ADHO Digital Humanities Conferences 2023 - Graz

Participation in the ADHO Digital Humanities Conferences 2023 with a contribution entitled "Representing provenance and track changes of cultural heritage metadata in RDF: a survey of existing approaches"

Links <https://doi.org/10.48550/arXiv.2305.08477> | <https://doi.org/10.5281/zenodo.8153979> | <https://www.conftool.pro/dh2023/sessions.php>

21 MAR 2023 – 23 MAR 2023 Gothenburg, Sweden

RDA 20th Plenary Meeting - Gothenburg

Participation in the RDA 20th Plenary Meeting with a contribution entitled "Adopting the Scientific Knowledge Graphs Interoperability Framework in OpenCitations"

Links <https://doi.org/10.5281/zenodo.7702070> | <https://www.rd-alliance.org/plenaries/rda-20th-plenary-meeting-gothenburg-hybrid>

PUBLICATIONS

2024

Saving temporary exhibitions in virtual environments: The Digital Renaissance of Ulisse Aldrovandi-Acquisition and digitisation of cultural heritage objects

The project aims to digitize the "The Other Renaissance" exhibition on Ulisse Aldrovandi, making it accessible online. It involved acquiring, processing, and curating exhibition data, using hybrid acquisition techniques and open technologies. The process enhances the exhibition's digital findability, accessibility, interoperability, and reusability. Creation of the digital twin is underway.

Digital Applications in Archaeology and Cultural Heritage, 32, e00309, Elsevier

2023

Digitisation of Temporary Exhibitions: the Aldrovandi Case

The "The Other Renaissance: Ulisse Aldrovandi and the Wonders of the World" exhibition combines never-before-seen objects and art from Italian museums, enhanced with digital installations. A campaign using photogrammetry and 3D scanning was initiated to create a digital twin, preserving the unique collection and the story of early naturalists.

GCH23-Eurographics Workshop on Graphics and Cultural Heritage

2023

OpenCitations Meta

OpenCitations Meta is a new database for open bibliographic metadata of scholarly publications involved in the citations indexed by the OpenCitations infrastructure. Its automated data curation, following the OpenCitations Data Model, includes deduplication, error correction, metadata enrichment and full provenance tracking, ensuring transparency and traceability of data and bolstering confidence in data integrity, a feature unparalleled in other bibliographic databases. Its commitment to Semantic Web standards ensures superior interoperability compared to other machine-readable formats, with availability via a SPARQL endpoint, REST APIs and data dumps.

Quantitative Science Studies

2023

Representing provenance and track changes of cultural heritage metadata in RDF: a survey of existing approaches

This contribution offers a systematic review of the metadata representation models for provenance in RDF. Presented at the ADHO Digital Humanities Conference 2023.

Digital Humanities 2023. Collaboration as Opportunity (DH2023), Graz, Austria

2022

How to structure citations data and bibliographic metadata in the OpenCitations accepted format

The OpenCitations organization is working on ingesting citation data and bibliographic metadata directly provided by the community (e.g., scholars and publishers). This paper illustrates how such data should be structured to comply with the OpenCitations accepted format.

ULITE 2022, Cologne, Germany. CEUR-WS.org

2022

Enabling Portability and Reusability of Open Science Infrastructures

This paper presents a methodology for designing a containerized and distributed open science infrastructure to simplify its reusability, replicability, and portability in different environments.

TPDL 2022, Padua, Italy. Lecture Notes in Computer Science, vol 13541. Springer, Cham

2022

Toward a Comparison Framework for Interactive Ontology Enrichment Methodologies

This position paper proposes a framework consisting of multiple performance dimensions along which existing and future approaches to interactive ontology enrichment can be characterized.

VOILA! 2022, Hangzhou, China. CEUR-WS.org

2022

Identifying and correcting invalid citations due to DOI errors in Crossref data

This work aims to identify classes of DOI mistakes by analysing the open bibliographic metadata available in Crossref, highlighting which publishers were responsible for such mistakes and how many of these incorrect DOIs could be corrected through automatic processes.

Scientometrics 127, 3593–3612

2021

A methodology and an implementation to perform live time-traversal queries on RDF datasets

This master's thesis introduces a methodology to perform live time-traversal queries on RDF datasets and software based on this procedure. The Python software is called time-agnostic-library, and it enables all the time-related retrieval functionalities on every dataset that records provenance according to the OpenCitations Data Model. Also, it was used to develop a web application, the time-agnostic-browser, to achieve the same results through a graphical user interface.

- time-agnostic-library: [10.5281/zenodo.5579776](https://doi.org/10.5281/zenodo.5579776)
- time-agnostic-browser: <http://51.15.198.219/>
- Slides supporting the presentation: [10.5281/zenodo.5650936](https://doi.org/10.5281/zenodo.5650936)

2019

Valorizzare il sapere digitale: un esperimento di progettazione

This bachelor's degree thesis aims to annotate some representative Italian literature texts in XML/TEI, represent them in HTML using XSLT, and offer services: a map, a timeline, and some textual analysis tools.

- Website: <https://arcangelo7.github.io/collezione-digitale-poesie/>
- Repository: [10.5281/zenodo.5604619](https://doi.org/10.5281/zenodo.5604619)

● PROJECTS

MAR 2021 – JUN 2021

Cleaning different types of DOI errors found in cited references on Crossref using automated methods

The purpose of this work is to find an automated process to repair invalid DOI names.

- Data Management Plan: [10.5281/zenodo.4928592](https://doi.org/10.5281/zenodo.4928592)
- Protocol introducing the methodology: [10.17504/protocols.io.buuknwwu](https://doi.org/10.17504/protocols.io.buuknwwu)
- Software developed: [10.5281/zenodo.4946380](https://doi.org/10.5281/zenodo.4946380)
- The data gathered while running the methodology: [10.5281/zenodo.4892551](https://doi.org/10.5281/zenodo.4892551)
- Article presenting the research: [10.5281/zenodo.4914003](https://doi.org/10.5281/zenodo.4914003)
- Slides supporting the presentation: [10.5281/zenodo.4738553](https://doi.org/10.5281/zenodo.4738553)

DEC 2020 – MAR 2021

Plain X: redesign of the Paneangeli mobile application

Redesign of the Paneangeli mobile app to better address users from the 50-60 years segment. A feasibility study was conducted after completing an expert usability review and user testing on Paneangeli and its direct competitor, Giallo Zafferano. The application was redesigned, adopting the CAO=S model. Finally, various formative and summative inspections and tests on real users were carried out to assess the user experience of the new design.

- Report and final design: [10.5281/zenodo.5650747](https://doi.org/10.5281/zenodo.5650747)

DEC 2020 – FEB 2021

GenO - Gender Equality Open Data

Gender equality is a broad term involving several factors: to better understand the complex situation of this basic human right, GenO collects datasets about labour force, health, gender pay gap, childcare, digital economy and education. Through a legal, ethical and technical analysis of the sources used and the creation of meshup datasets and visualizations, GenO aims to provide a heterogeneous perspective on gender equality and how it is (or is not) guaranteed in different countries.

- Website: <https://gen-0.github.io/>
- Repository: [10.5281/zenodo.5650764](https://zenodo.org/record/5650764)

NOV 2020 – JAN 2021

Network analysis of the characters in A Game of Thrones: seeking for a predictive model of their death

In the context of quantitative literary analysis studies, this research aims to verify the existence of a predictive model of characters' death in literary works. Using George R. R. Martin's book *A Game of Thrones*, a monadic level test of logistic regression was performed between several centrality measures and the life and death condition of the characters at the end of the book.

- Working paper: [10.5281/zenodo.5650800](https://zenodo.org/record/5650800)

JUL 2020 – OCT 2020

MMMM (Metadata Model for Modern Magazines)

A framework to easily publish magazine numbers according to a modern and accurate page design. Articles are written in TEI and are represented in HTML and Docbook using XSLT. Metadata are converted on the fly from/to HTML, RDFa, Microdata, and JSON/LD.

- Website: <https://arcangelo7.github.io/mmmm/>
- Repository: [10.5281/zenodo.5603901](https://zenodo.org/record/5603901)

MAR 2020 – JUN 2020

From noise to music

This project aims to promote the fiftieth anniversary of Bruno Maderna through an animation made in Blender. It describes the relationship between music and computers in the twentieth century.

- Website: <https://arcangelo7.github.io/maderna-animation/>
- Repository: [10.5281/zenodo.5604459](https://zenodo.org/record/5604459)

JAN 2020 – APR 2020

Ada Lodlace

Knowledge organization around Ada Lovelace, Charles Babbage, and Luigi Federico Menabrea, through the realization of a conceptual model and its representation in RDF.

- Website: <https://ada-lodlace.github.io/>
- Repository: [10.5281/zenodo.5604546](https://zenodo.org/record/5604546)

NOV 2019 – JAN 2020

Meta Analyser Tool

Python software that accepts an input CSV file containing metadata on academic articles to perform analysis on such data.

- Repository: [10.5281/zenodo.5604571](https://zenodo.org/record/5604571)

APR 2019 – JUL 2019

Where M I – 21st Century audio tour guide

A pair of apps offers an agile and free way to quickly find audio-tourist guides on the web and create new ones.

• Repository: [10.5281/zenodo.5604637](https://zenodo.org/record/5604637)

● **LANGUAGE SKILLS**

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

● **DIGITAL SKILLS**

Application Development MEVN stack: MongoDB, Express.js, Vue.js, Node.js | Virtuoso | Blazegraph | Apache Jena Fuseki | GraphDB | Blender | Flask | Frontend: Bootstrap, D3.js, Handlebars.js, Jinja2, JQuery, Sass | Linux: Debian, Raspbian, Ubuntu | Python | Semantic Web technologies | Web technologies: HTML, CSS, Javascript | XML technologies: XML, XSLT, XPath, XQuery, TEI

● **DRIVING LICENCE**

Driving Licence: B

I authorise the processing of my personal data in the CV according to Art. 13 of Legislative Decree no. 196 of 30 June 2003 - "Personal Data Protection Code" and Art. 13 GDPR 679/16 - "European Personal Data Protection Regulation"

Leuven, Belgium , 22 Sep 2024


Arcangelo Massari