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Marilena Daquino

Research fellow in Digital Humanities

Research fellow at the *Digital Humanities Advanced Research Centre (/DH.arc)* of the University of Bologna (Unibo). She holds a master degree in History and a PhD in Library and Information Science/Computer science. Her research focus is on the application of Semantic web technologies to cultural heritage data. She previously worked as metadata specialist, ontology engineer, and project manager at the *Multimedia Center (CRR-MM, University of Bologna)*, and as a consultant at the *Knowledge Media Institute (KMI, Open University, Milton Keynes, UK)*. She is member of the editorial board of the Italian academic journal *Umanistica Digitale* and she is ambassador of the Federico Zeri Foundation in international consortia of cultural institutions (PHAROS, Linked.art). She is currently involved in the OpenCitations organisation infrastructure for the development of a large-scale corpus of open citation data.

LANGUAGES

English | C1

Italian | mother tongue

RESEARCH INTERESTS

Digital Humanities

digital hermeneutics
digital art history

Semantic Web

ontology design
Linked Open Data

Library and Information Science

photo archives
cataloguing systems
data management
open science
citation data
music data

SOFT SKILLS

PROFICIENT LEVEL

Image editing and graphics

Adobe Indesign, Photoshop

Presentation and writing

Office suite (Word, Excel, Powerpoint)
Google suite (Docs, Spreadsheet, Slides)

Teaching and supervising

CURRENT POSITIONS

§ Research fellow @ /DH.arc

Department of Classical Philology and Italian Studies, Unibo
2019.07.01-

- # Main researcher of a [Wellcome Trust funded project](#) (see project *OpenCitations in Context Corpus*) under the supervision of Prof. Silvio Peroni
- # Ontology development: extension of the [OpenCitations Data Model](#)
- # Software development: [pipeline](#) to mine PubMedCentral articles and re-engineer, publish, and query Linked Open Data
- # Data management: [PalREAD](#) (ERC project)
- # Lab assistant of *Computational thinking and Programming*, International Msc course Digital Humanities and Digital Knowledge ([DHDK](#))
- # Msc students tutoring (DHDK)
- # Msc thesis co-supervision (DHDK)
- # PhD co-supervision of a [soon-to-be candidate](#) at Leuphana University

§ Adjunct professor @ Unibo

Department of Philosophy and Communication (FILCOM), Unibo
2019.11.01-

- # 60-hour annual contract to teach [Humanistic IT](#), Bsc course
 - # Lectures and hands-on classes of web development and web communication
 - # Bsc thesis supervision
-

PRIOR WORK EXPERIENCE

§ Consultant @ Horizons spa

Bologna
2019.09.01-2019.12.01

- # Ontology development: bibliographic ontology and Wikidata alignment for the [Estense Digital Library](#)

- # Adjunct professor
- # Lab assistant
- # Professional courses teacher
- # Msc student tutor
- # Msc thesis co-supervisor
- # Bsc thesis supervisor

GOOD LEVEL

Empathy and reliability

- # Red Cross volunteer
- # Fire safety certificate
- # Sailing

TECHNICAL SKILLS

PROFICIENT LEVEL

Semantic web technologies

- # RDF, SPARQL, OWL
- # Py libraries: RDFlib, SPARQLWrapper
- # JS libraries: RDFJS

Web technologies

- # HTML, CSS, JS

Front-end frameworks

- # Bootstrap, JQuery

XML technologies

- # XML, XQuery, XSLT, XPath

NO-SQL databases

- # XBase, OmekaS
- # Blazegraph, Fuseki

Programming languages

- # Python, Javascript

Back-end frameworks

- # Flask, Webpy, Node.js

GOOD LEVEL

Natural Language processing

- # NLTK, SpaCy

Other techniques

- # Data analysis
- # Data visualisation

Version-control-systems

- # git (Github, Bitbucket)
- # SVN (Sourceforge)

OS

- # MAC, Linux

BASIC KNOWLEDGE

CV and Deep Learning

- # Keras, Pastec

§ Research assistant @ /DH.arc

Department of Classical Philology and Italian Studies, Unibo

2018.01.01-2019.06.30

- # Software development: Semantic Web applications for art historical photo archives (see projects ARTchives, mAuth), music libraries (see project Semantic MIDI tape), bibliographic data (see project BCite), and philology (see projects Vespasiano Letters, Paolo Bufalini's notebook)
- # Lab assistant of Computational thinking and Programming, International Msc course Digital Humanities and Digital Knowledge (DHDK)
- # Professional courses for [Fashion Research Italy \(FRI\)](#)
- # Msc students tutoring (DHDK)
- # Msc thesis co-supervision (DHDK)

§ Consultant @ Knowledge Media Institute

Open University, Milton Keynes, UK

2017.10.01-2017.10.30

- # Software development: Fuzzy temporal logic applications to query the Listening Experience Database ([LED](#))
- # Software development: Linked Open Data based catalogue of musical resources (see project musoW)

§ Managing Editor @ Umanistica Digitale

Bologna

2017.01.01-2019.06.30

- # Web design: [Umanistica digitale](#) multilingual website
- # Journal management: publication scheduling, editorial board meeting chair
- # Peer-review process supervision: assignments, rebuttal, proofreading
- # Camera-ready publication: DOCX to HTML+RDFa / Latex / PDF transformation

§ Research assistant @ Multimedia Center

Multimedia Center, Libraries and Study Services Division, Unibo

2014.04.01-2017.09.30

- # Project-based researcher and web developer (on commission)
- # DH project management staff: idea development, research products design, coordination between Humanities researchers and IT staff
- # Web development staff: (see projects Zeri&LODE, Dama Boba, IGCyr)
- # Data management support staff: H2020 data management plan
- # Professional courses for the Italian Association of Librarians (AIB)
- # Lab assistant: Humanistic IT, Bsc course, FILCOM, Unibo
- # Lab assistant: Text encoding and Web design, Msc course

EDUCATION

§ PhD @ Unibo (with honours)

2019.04.08

- # Mining Authoritativeness in Art Historical Photo Archives. Semantic Web Applications for Connoisseurship [[Thesis](#)]
- # Multi-disciplinary work in Library and Information Science and Computer Science resulted in a recommending system of artwork attributions recorded in photographic documentation of three art historical photo archives (the

Federico Zeri Foundation, Berenson Library - Villa I Tatti, Frick Art Library NY)

§ Visiting PhD student @ Knowledge Media Institute

Open University, Milton Keynes, UK

2017.10.01-2017.09.30

Development of a LOD-native catalogue of online musical resources [[link](#)]

§ Msc Degree in History @ Unibo (with honours)

Department of History and Cultures, Unibo

2013.11.25

Ontology development: people's roles in historical contexts [[Thesis](#)]

§ Bsc Degree in Italian Literature @ Unibo

Department of Classical Philology and Italian Studies, Unibo

2011.07.12

ROLES AND MEMBERSHIPS

§ Research centres membership

Digital Humanities Advanced Research Centre [/DH.arc](#) (2019-)

Research Centre for [Open Scholarly Metadata](#) (2020-)

§ Consortia membership

[Linked.art](#) (2019-) Editorial Board of international museums representatives for the definition of an application profile of CIDOC-CRM and the realisation of APIs for integrating museums data

[PHAROS](#) (2015-) International consortium of art historical photo archives dedicated to the realisation of a technology infrastructure for integrating partners' archival data

§ Program Committees

International Conference on Semantic Systems, SEM20-EU. Amsterdam, 2020.

Workshop on Scientific Knowledge Graphs, SKG 2020. Co-located with TPD. Lyon, 2020.

Italian Research Conference on Digital Libraries, IRCDL 2020. Bari, 2020.

International Workshop on Open data and Ontologies for Cultural Heritage, ODOCH'19. Co-located with CAiSE'19, Rome, 2019.

Workshop on Ontology Design and Patterns, WOP. Co-located with the International Semantic Web Conference (ISWC) [2019](#); [2018](#); [2017](#); [2016](#)

Workshop on Humanities in the Semantic Web, WHiSe. Co-located with the Extended Semantic Web Conference (ESWC) [2020](#) ; 16th International Semantic Web Conference (ISWC) [2017](#)

PhD Symposium, 20th International Conference on Knowledge Engineering and Knowledge Management, Bologna, 2016.

§ Editorial Boards

[Umanistica digitale](#) (2017-)

§ Event organiser

Workshop on Open Citations [WOOC](#), September 3-5, 2018. University of Bologna, Bologna, Italy [Chair, Social Media advertisement, Website maintenance].

Annual Conference of the Italian "Associazione per l'Informatica Umanistica e la Cultura Digitale" [AIUCD](#), Bologna, 2014. [Secretary, local organiser].

§ Other roles

Belgium Science Policy Office [BELSPO](#). Reviewer

INVITED TALKS

- # Open Science Fair. Porto, 16-18 September 2019. [\[Program\]](#)
- # 4th Swiss Congress for Art History. Mendrisio, 6-8 June 2019 [\[Program\]](#)
- # Seminar "Fotografia e linked Open Data". Udine, 15 May 2019 [\[Program\]](#)
- # MEMORIAV. Lausanne, 15-16 November 2018 [\[Program\]](#)
- # Workshop "Art Histories and Big Data". Leiden, 15-17 October 2018 [\[Program\]](#)
- # Seminar "Un obiettivo per la fotografia. Da bene culturale a strumento di mediazione e fonte storica". Senigallia, 11-13 April 2018 [\[Program\]](#)
- # Workshop "Online Information Quality". Leiden, 26-29 March 2018 [\[Program\]](#)
- # Seminar "Le fotografie nel semantic web: ontologie e linked open data". Rome, 16 December 2016 [\[Program\]](#)
- # Public Domain OpenFestival. Turin, 29 November - 3 December 2016 [\[Program\]](#)
- # ODS Open Data Sicilia 2016. Messina, 2-4 September 2016 [\[Program\]](#)

SPEAKER AT CONFERENCES

- # Digital Humanities. Utrecht, 8-12 July 2019. [\[Program\]](#)
- # 8th AIUCD Conference. Udine, 22-25 January, 2019 [\[Program\]](#)
- # 17th ISWC, SemSci Workshop. Monterey, CA, 9 October 2018 [\[Program\]](#)
- # 7th AIUCD Conference. Bari, 31 January - 2 February 2018 [\[Program\]](#)
- # 16th ISWC - WHiSe II. Vienna, 21-25 October 2017 [\[Program\]](#)
- # Digital Humanities. Krakow, 11-16 July 2016 [\[Program\]](#)
- # 4th AIUCD Conference. Turin, 17-19 December 2015
- # 9th MTSR - Metadata and Semantics Research Conference. Manchester, 9-11 September 2015 [\[Program\]](#)
- # 3rd AIUCD Conference. Bologna, 18-19 September, 2014 [\[Program\]](#)
- # 10th IRCDL Conference. Padua, 30-31 January 2014 [\[Program\]](#)

PROJECTS PORTFOLIO

§ **The Open Biomedical Citations in Context Corpus** [link](#)

OpenCitations; /DH.arc (2020 - ongoing)

A Linked Open Dataset of information mined from PubMed Central articles, including detailed bibliographic and citation metadata, e.g. bibliographic references, in-text references, and structural elements (e.g. sentences).

ontology development, software development

§ **ARTchives** [link](#)

Zeri Foundation, Bibliotheca Hertziana, Getty Research Institute, Kunsthistorisches Institut in Florenz, Scuola Normale Superiore, University Roma Tre. (2019)

A linked-data native cataloguing system for crowdsourcing and publishing data on art historians' archives. Aligned with Wikidata model, includes cataloguers support functionalities (Named Entity Recognition, Topics suggestion)

project design, software development, web design

§ **Vespasiano da Bisticci's letters** [link](#)

Department of Classical Philology and Italian Studies, Unibo (2019)

The Linked Open Data based digital edition of the eclectic Vespasiano da Bisticci's correspondence, presenting authors' and works networks.

ontology development, software development, web design

§ **mAuth** [link](#)

Department of Classical Philology and Italian Studies, Unibo (2018)

A web application based on an ontology-based ranking model for recommending artwork attributions retrieved from online photo archives.

project design, data collection, software development, web design

§ **BCite** [link](#)

Department of Classical Philology and Italian Studies, Unibo (2018)

A web application for bibliographic references correction and automatic creation of Linked Open Data according to the OpenCitations data model

project design, software development, web design

§ **Semantic Web MIDI Tape** [link](#)

Department of Classical Philology and Italian Studies, Unibo (2018)

A bash application for playing MIDI instruments, saving tracks, transforming MIDI tracks in Linked Open Data, populating the MIDI Knowledge Graph, and recommending similar music resources to users.

contribution to project design and to software development

§ **Paolo Bufalini's notebook** [link](#)

Department of Classical Philology and Italian Studies, Unibo (2018)

The Linked Open Data based digital edition of the notable Bufalini's notebook, including exploration tools for visualising inter and intra-text relations between quotations, translations and comments of classical works.

contribution to text encoding

project design, ontology development, software development, web design

§ **musoW** [link](#)

Knowledge Media Institute (KMI), Open University (2017)

A Linked Open Data based catalogue of crowdsources musical resources that are available online.

contribution to project design

data collection, ontology development, software development, web design

§ **IGcyr** [link](#)

Department of Ancient History; CRR-MM (2017)

The digital edition of the collection of the inscription of Greek Cyrenaica.

data collection support

web development, web design

§ **Zeri & LODE** [link](#)

Zeri Foundation, CRR-MM (2015)

The knowledge graph of the catalogue of the Federico Zeri art historical photo archive, including detailed information on artworks, photographs, archival documents, and artwork attributions.

project design, ontology development, software development, web design

§ Dama Boba [link](#)

School of Italian Studies, European Literary Cultures, Linguistics; CRR-MM (2015)

The digital genetic edition of Lope de Vega's witnesses of his comedy "La Dama Boba".

data collection support and researchers' training

web development, web design

PUBLICATIONS

§ Books in Book Series

Daquino, Marilena. 2019. Mining Authoritativeness in Art Historical Photo Archives. In *Studies on the Semantic Web*, 40. ISBN: 978-1-64368-011-8.

§ Journal papers

Daquino, Marilena, Francesca Giovannetti and Francesca Tomasi. 2019. "Linked Data per le edizioni scientifiche digitali. Il workflow di pubblicazione dell'edizione semantica del quaderno di appunti di Paolo Bufalini." *Umanistica Digitale*, 4:7. DOI:<https://doi.org/10.6092/issn.2532-8816/9091> [ITALIAN]

Daquino, Marilena. 2019. "A computational analysis of art historical linked data for assessing authoritativeness of attributions." *Journal of the Association for Information Science and Technology*, pp. 1- 13. <https://doi.org/10.1002/asi.24301>

Daquino, Marilena. 2019. "Art historical photo archives and Semantic Web. Problems, resources and research lines." *JLIS.it* 10:2, pp. 37-47. DOI:<http://dx.doi.org/10.4403/jlis.it-12533> [ITALIAN]

Carriero, Valentina, Marilena Daquino and Francesca Tomasi. 2019. "Semantic alignment in museums, archives and libraries. The ontologies for describing relationships." *JLIS.it* 10:1, pp. 72-91. DOI:<http://dx.doi.org/10.4403/jlis.it-12499> [ITALIAN]

Daquino, Marilena and Francesca Tomasi. 2017. "Linked Cultural Objects: dagli standard di catalogazione ai modelli per il web of data. Spunti di riflessione dalla Fototeca Zeri." *Umanistica Digitale* 1.1. DOI:<https://doi.org/10.6092/issn.2532-8816/7195> [ITALIAN]

Daquino, Marilena, et al. 2017. "Enhancing semantic expressivity in the cultural heritage domain: exposing the Zeri Photo Archive as Linked Open Data." *Journal on Computing and Cultural Heritage (JOCCH)* 10.4: 21. DOI:<http://doi.acm.org/10.1145/3051487>

Mambelli, Francesca and Marilena Daquino. 2017. "Zeri & Lode. Il patrimonio della Fondazione Zeri in Linked Open Data." *IBC* 25:1, pp. 1-2. [ITALIAN]

Daquino, Marilena, and Francesca Tomasi. 2016. "Digital Humanities e Library and Information Science. Through the lens of knowledge organization." *Bibliothecae.it* 5.1, pp. 130-150. DOI:<https://doi.org/10.6092/issn.2283-9364/6109> [ITALIAN]

Tomasi, Francesca and Marilena Daquino. 2015. "Modellare ontologicamente il dominio archivistico in una prospettiva di integrazione disciplinare." *JLIS.it* 6:3, pp. 13-38. DOI:<http://dx.doi.org/10.4403/jlis.it-11133> [ITALIAN]

Tomasi, Francesca, Fabio Ciotti, Marilena Daquino and Maurizio Lana. 2015. "Esplorare semanticamente collezioni culturali: uno studio di fattibilità." AIDAinformazioni, 3-4, pp. 125-146. DOI:<https://doi.org/10.4399/97888548899278> [ITALIAN]

Daquino, Marilena, Silvio Peroni, Francesca Tomasi and Fabio Vitali. 2014. "Political Roles Ontology (PRoles): Enhancing Archival Authority Records through Semantic Web Technologies." In *Procedia Computer Science* 38, pp. 60-67. DOI:<http://dx.doi.org/10.1016/j.procs.2014.10.012>

§ Book Chapters / Conference Proceedings

Daquino, Marilena et al. 2018. "Creating Open Citation Data with BCite." In Demidova, E., A. J. Zaveri, and E. Simperl (eds.). *Emerging Topics in Semantic Technologies: ISWC 2018 Satellite Events*. AKA Verlag Berlin. DOI:<http://dx.doi.org/10.3233/978-1-61499-894-5-83>

Meroño-Peñuela, Albert, Reinier De Valk, Enrico Daga, Marilena Daquino, and Anna Kent-Muller. 2018. "The semantic web MIDI tape: An interface for interlinking MIDI and context metadata." In *Proceedings of the 1st International Workshop on Semantic Applications for Audio and Music*. Paris:ACM, pp. 24-32. URL:<http://oro.open.ac.uk/id/eprint/56752>

Meroño-Peñuela, Albert, Anna Kent-Muller, Reinier de Valk, Marilena Daquino and Enrico Daga. 2018. "A Large-Scale Semantic Library of MIDI Linked Data." In Page, Kevin (ed.). *DLFM '18 - Proceedings of the 5th International Conference on Digital Libraries for Musicology*. Paris:ACM. URL: <http://oro.open.ac.uk/id/eprint/60777>

Daquino, Marilena et al. 2017. "Characterizing the Landscape of Musical Data on the Web: state of the art and challenges." In *Second Workshop on Humanities in the Semantic Web - WHiSe II*, 21-25 Oct 2017, Vienna, Austria. URL: <http://oro.open.ac.uk/id/eprint/51570>

Daquino, Marilena. 2017. "Le professioni del lavoro digitale." In Tullini, Patrizia (eds.). *Web e lavoro. profili evolutivi e di tutela*. Torino:Giappichelli, pp. 107-122. ISBN: 9788892106284 [ITALIAN]

Daquino, Marilena. 2016. "Photo Archives in Linked Open Data—The Federico Zeri's Archive Case Study." In Ciancarini, Paolo, Francesco Poggi, Matthew Horridge, Jun Zhao, Tudor Groza, Mari Carmen Suárez-Figueroa, Mathieu d'Aquin and Valentina Presutti (eds.) *Knowledge Engineering and Knowledge Management*. Cham:Springer, pp. 219-223. DOI:http://dx.doi.org/10.1007/978-3-319-58694-6_34

Daquino, Marilena and Francesca Tomasi. 2015. "Historical Context Ontology (HiCO): A Conceptual Model for Describing Context Information of Cultural Heritage Objects." In *Communications in Computer and Information Science* 544. Berlin:Springer Verlag, pp. 424-436. DOI:http://dx.doi.org/10.1007/978-3-319-24129-6_37

Ciotti, Fabio, Marilena Daquino, and Francesca Tomasi. 2015. "Text Encoding Initiative semantic modeling. A conceptual workflow proposal." In Calvanese D., De Nart D., Tasso C. (eds.). *Digital Libraries on the Move. IRCDL 2015*. *Communications in Computer and Information Science* 612. Cham:Springer. DOI:https://doi.org/10.1007/978-3-319-41938-1_5

Tomasi, Francesca, Fabio Ciotti, Marilena Daquino and Maurizio Lana. 2015. "Using Ontologies as a Faceted Browsing for Heterogeneous Cultural Heritage Collections." In *Proceedings of 1st AI*IA Workshop on Intelligent Techniques At Libraries and Archives co-located with {XIV} Conference of the Italian Association for Artificial Intelligence, IT@LIA@AI*IA 2015*. URL: http://ceur-ws.org/Vol-1509/ITALIA2015_paper_5.pdf

Daquino, Marilena and Francesca Tomasi. 2015. "Ontological Approaches to Information Description and Extraction in the Cultural Heritage Domain." In *Humanities and Their Methods in the Digital Ecosystem (AIUCD '14)*. New York:ACM, 8. DOI:<http://dx.doi.org/10.1145/2802612.2802633>

§ Abstracts in Books of Abstract

Daquino, Marilena, Silvio Peroni and Francesca Tomasi. 2019. "Can we do better than computers? Teaching Computational Thinking to Digital Humanists." In *Allegrezza*, Stefano (ed.), AIUCD 2019 Book of Abstracts. AIUCD: Florence. ISBN: 978-88-942535-3-5 [[paper](#)]

Daquino, Marilena and Francesca Tomasi. 2017. "The Zeri Photo Library in linked open data." In *AIB CILW* (eds.). "The universe of cultural resources: between eureka and concrete actions." *AIB STUDI* 57.1, pp. 109-112. DOI:<http://dx.doi.org/10.2426/aibstudi-11569>

Daquino, Marilena, Silvio Peroni, Francesca Tomasi and Fabio Vitali. 2016. "The Project Zeri Photo Archive: Towards a Model for Defining Authoritative Authorship Attributions." In *Digital Humanities 2016: Conference Abstracts*, Kraków, Jagiellonian University & Pedagogical University, 2016, pp. 472-474.

§ Technical documentation

Daquino, Marilena, Silvio Peroni, and David Shotton. 2020. "The Opencitations Data Model". Figshare. DOI:[10.6084/m9.figshare.3443876.v7](https://doi.org/10.6084/m9.figshare.3443876.v7)

TEACHING AND TUTORING EXPERIENCE

§ Adjunct Professor @Unibo

FILCOM, Unibo (2019-) [Humanistic IT](#)

§ Msc Students Tutor @DHDK

DHDK, Unibo (2018-2019)

§ Professionalizing courses @Fashion Research Italy (FRI)

Fashion Research Italy, Bologna (2018) [Heritage management](#)

§ Lab Assistant @DHDK, Unibo

DHDK, Unibo (2017-) [Computational Thinking and programming](#)

§ Lab Assistant @FICLIT, Unibo

FICLIT, Unibo (2016-2017) [Humanistic IT](#)

§ Professionalizing courses @Italian association of librarians (AIB)

Unibo, Bologna (2015-2016) [Libraries and Linked data](#)

§ Lab Assistant @Unibo

School of Italian Studies, European Literary Cultures, Linguistics. Unibo (2014-2016) Text encoding and Web design

Bologna 22/06/2020

