

## **Semantic Web as an interlinking environment for knowledge dissemination in the cultural heritage domain**

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Semantic Web technologies have had a pervasive control on research activities in the cultural heritage domain. Each process related to data modeling moves toward the knowledge graph principle. Everything is connected, and the connection defines the real meaning of the observed domain.

Starting from these considerations the aim of this speech is to present some activities in enhancing cultural heritage information starting from the semantic power of data. In particular the process of ontology creation is the key to reflect on building relationships between pieces of knowledge. The discussion starts from the work on Vespasiano da Bisticci Letters as a case of semantic digital edition, to keep on with the Zeri Photo Archive, as an open linked data collection in the art of history domain, to continue until the abstract semantic modeling of ideas - i.e. from the interpretation act in authorship attribution to the role of people, mined from authority records, in an event-centric and context-oriented perspective.

All these activities will be described in the context of the Italian research environment in which I work: our Italian Association of Digital Humanities (AIUCD, Associazione per l'Informatica Umanistica e la Cultura Digitale), the Bologna Digital Libray (AlmaDL) and the centre for curation of digital resources that we built in the University of Bologna (CRR-MM, Multimedia Research Resource Centre).

## Francesca Tomasi bio

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Francesca Tomasi is an assistant professor in the Department of Classical Philology and Italian Studies at the University of Bologna since 2006.

She took her degree in Preservation of Cultural Heritage (archives and libraries), she has a postgraduate in Archival Science (School of Palaeography, Diplomatic and Archival Science), a specialization in Computer Science and a PhD in Italian Studies.

Her research focuses on digital humanities, and in particular on digital editions, digital libraries and digital historical archives, with a special attention to metadata, controlled vocabularies and ontologies in the field of cultural heritage.

She teaches at the moment ‘archives and computer science’ and ‘digital humanities’ in the School of Italian Studies at the University of Bologna.

She is member of different scientific committees. Among them: the Italian Association on Digital Humanities (Associazione Italiana di Informatica Umanistica e Cultura Digitale - AIUCD); the Phd on Digital Humanities for Medieval Studies; the research group on Classical Reception (Centro Studi “La permanenza del Classico”); the MultiMedia Research Resource Center (CRR-MM); the Unibo Web Portal; the IRCDL (Italian Research Conference on Digital Libraries); the Italian Master on Digital Texts and Scholarly Editions and the Leipzig School for Culture and Technology.

She is also in the editorial board of some journals (in particular “Griseldaonline”, “Schede umanistiche”, and “Bibliothecae.it”) and she is visiting researcher at the DDH (Department of Digital Humanities, King’s college, London).

She is now President of the Library of the School of Humanities (BDU - Biblioteca di Discipline Umanistiche) at the University of Bologna.

She attended a lot of conferences in the digital humanities domain as both invited lecturer and speaker in international meeting (among them: DocEng, TEI, IRCDL, DH, DocEng).

She is author of some books and she wrote several articles, most of them in peer reviewed journals, and she edited some proceedings of international conferences. She is finally the editor of a digital collection of XVI century letters (Vespasiano da Bisticci, *Letters*: <http://vespasianodabisticciletters.unibo.it>).

### Selected international publications

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2. F. Ciotti, M. Lana, F. Tomasi, *TEI, ontologies, linked open data: geolat and beyond*, «JOURNAL OF THE TEXT ENCODING INITIATIVE», Issue 8, 2015.
3. M. Daquino, F. Tomasi, *Historical Context (HiCo): a conceptual model for describing context information of cultural heritage objects*. «COMMUNICATIONS IN COMPUTER AND INFORMATION SCIENCE», vol. 544, Berlin, Springer Verlag, 2015, pp. 424-436.
4. C.M. Gonano, F. Mambelli, S. Peroni, F. Tomasi, F. Vitali, *Zeri e LOD. Extracting the Zeri photo archive to Linked Open Data: formalizing the conceptual model*, in: Digital Libraries (JCDL), IEEE, London, 2014.

5. M. Daquino, S. Peroni, F. Tomasi, F. Vitali, *Political Roles Ontology (PRoles): enhancing archival authority records through Semantic Web technologies*, «PROCEDIA COMPUTER SCIENCE», Vol. 38, Elsevier, 2014, pp. 60-67.
6. F. Tomasi, F. Vitali (eds), *DH-CASE 2013 - Collaborative Annotations in Shared Environments: Metadata, Vocabularies and Techniques in the Digital Humanities* (Proceeding of the 1st International Workshop located at DocEng '13, Florence, September 10-13, 2013), New York, ACM, 2013, pp. 1-113.
7. F. Tomasi, *Digital editions as a new model of conceptual authority data*, «JLIS.IT», 2013, 4.2, pp. 21-44.
8. S. Peroni, F. Tomasi, F. Vitali, *The aggregation of heterogeneous metadata in Web-based cultural heritage collections. A case study*, «INTERNATIONAL JOURNAL OF WEB ENGINEERING AND TECHNOLOGY», 2013, 8, pp. 412-432.
9. M. Barbera, F. Meschini, C. Morbidoni, F. Tomasi, *Annotating digital libraries and electronic editions in a collaborative and semantic perspective*, in: *Digital Libraries and Archives*, Berlin Heidelberg, Springer-Verlag, «COMMUNICATIONS IN COMPUTER AND INFORMATION SCIENCE», 2012, 354, pp. 45-56.
10. S. Peroni, F. Tomasi, F. Vitali, *Reflecting on the Europeana Data Model*, in: *Digital Libraries and Archives*, Berlin Heidelberg, Springer-Verlag, «COMMUNICATIONS IN COMPUTER AND INFORMATION SCIENCE», 2012, 354, pp. 228-239.