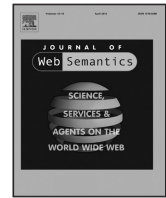




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Editorial

Web Semantics for Digital Humanities



1. What is digital humanities

Digital Humanities is a new and emerging field, which brings together humanities scholars, social scientists and computer and information scientists to work on agendas of both fundamental and applied research (Fig. 1). The field combines digital semantic technologies and (big) digital heritage data. Digital humanities research is typically driven by core questions in each of these disciplines: on the one hand semantic technologies are applied in novel ways in addressing research questions of humanities and social sciences; on the other hand these areas stimulate the development of novel methods in computer and information sciences.

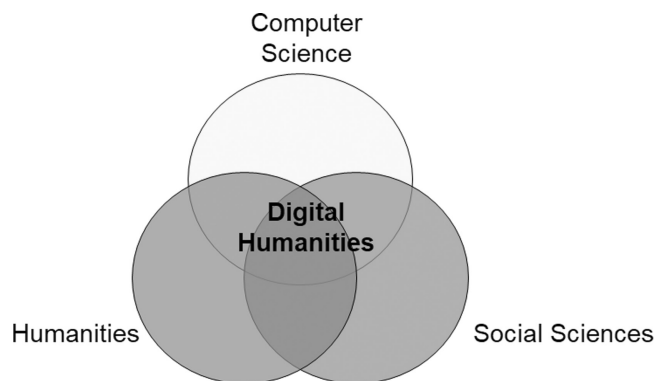


Fig. 1. Components of Digital Humanities.

2. Submissions

This special issue called for the submission of novel and impactful research results demonstrating the design, development, evaluation and use of research methods and infrastructures based on Semantic Web technologies for cultural heritage data, and use cases in digital humanities scholarship. More precisely, papers related to the following areas were solicited, illustrating the wide variety of interesting research topics between Digital Humanities and web semantics.

- Application of semantic Web technologies in literary, linguistic, cultural, media, and historical studies
- Semantics, linked (open) data and ontology-driven applications for the exploration of online cultural heritage collections

- Semantic enrichment of digital cultural heritage media
- Text mining and image mining (e.g. stylometry, topic modelling, sentiment mining) for the digital humanities
- Knowledge extraction and knowledge discovery based on cultural heritage data
- The role of semantic web technologies in the digitization and curation of cultural heritage objects
- Software development, systems design and information modelling in the cultural heritage domain
- Semantics-driven interfaces and interaction with heritage objects
- The role of semantics in advanced interaction technologies, e.g. augmented reality, VR, 3D, gaming
- The role of semantics in infrastructures and virtual research environments for digital humanities
- User studies and practices with semantics and linked (open) data

For the issue altogether thirteen papers were submitted, representing a wide field of topics and applications, and four papers were finally accepted for publication:

Tolstoy semanticized: Constructing a digital edition for knowledge discovery by A. Bonch-Osmolovskaya, D. Skorinkin, I. Pavlova, M. Kolbasov and B. Orekhovations presents the results of a project devoted to the creation of a digital critical edition of Leo Tolstoy complete works (90 volumes), including literary texts, letters and diaries. The annotated source can serve as a digital platform for the study of Tolstoy's oeuvre and his evolution as a publicist. The various annotation layers and visualisation functionality provide a stepping stone for explorations at multiple levels, and the adherence to common standards will facilitate comparative studies of this source and other literary corpora.

Semantic annotation of natural history collections by L. Stork, A. Weber, E. Gassó Miracle, F. Verbeek, A. Plaat, J. van den Herik and K. Wolstencroft deals with the problem of semantically describing natural history archival collections. The authors present a novel semantic model to structure named entities taking into account also their provenance, as well as an approach for the semi-automated extraction of these elements. The output is extensively evaluated with domain experts, starting from image scans of 8,000 field book pages.

User-centric pattern mining on knowledge graphs: An archaeological case study by W.X. Wilcke, V. de Boer, M.T.M. de Kleijn, F.A.H. van Harmelen and H.J. Scholten presents a pipeline for user-centric pattern mining applied in the archaeological domain, with positive feedback from domain experts, indicating high potential of the approach.

Evaluating the impact of semantic technologies on bibliographic systems. A user-centred and comparative approach by M. Rico, D. Vila-Suero, I. Botezan and A. Gomez-Perez addresses a critical challenge of cultural end-user applications. Online public access catalogues are claimed to enhance human consumption and user experience but is this really the case? Evaluation for this critical claim is needed but seldom done. This paper presents an interesting comparative evaluation of a widely deployed Online Public Access Catalogue (OPAC) and its counterpart Linked Data-based system, datos.bne.es.

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