

# Special Issue on Semantic Web for Cultural Heritage

## Scope

Cultural Heritage plays a central role to better understand previous generations and the history of where humankind comes from. The Web allows people to publish, explain and debate at all scales, local, national, and worldwide. Scientific researchers, organizations, associations, schools are looking for relevant technologies for annotating, integrating, sharing, accessing, visualizing, and analyzing the mine of cultural collections and, more generally, cultural data. There is also a need for taking into account profiles and preferences of end users in order to offer them highly personalized digital experiences. Several national and international research and innovation programmes (EUROPEANA, DARIAH, PARTHENOS, CrossCult, ARCHES, ARIADNEplus, etc.) have been launched to these directions. During 2018, which was the *European Year of Cultural Heritage*, several events and initiatives across Europe encouraged people to engage, explore and debate our rich and diverse cultural heritage.

A fundamental challenge that many of these aforementioned projects are dealing with is how to make Cultural Heritage data, which is made available by different actors in a multitude of different languages and formats, mutually interoperable, so that it can be searched, linked, and presented in a harmonized way across the boundaries of the datasets and data silos. Early solutions were based on the syntactic or structural level of data, without leveraging the rich semantic structures underlying the content. During the two last decades, solutions based on the **principles and technologies of the Semantic Web** have been proposed to explicitly represent the semantics of data sources and make both their content and their semantics machine operable and interoperable. In parallel, **knowledge representation models** have matured, such as the CIDOC-CRM's ecosystem, which is dedicated to the cultural heritage field including documentation, archaeology, history, architecture, etc. As more and more institutions bring their data to the Semantic Web level, the tasks of data integration, sharing, analysis, visualization, etc. are now to be conceived in this very rich framework.

This special issue is to offer to Computer Scientists, Data Scientists and Digital Humanities researchers who are involved in the development or deployment of Semantic Web solutions for Cultural Heritage the opportunity to present their realizations, the outcomes of their projects, being either some publicly reusable Semantic Web tools, some datasets or ontologies published in the Linked Open Data Cloud, or Semantic Web techniques, services and architectures for Cultural Heritage. Submissions can be of any of the types described in <http://www.semantic-web-journal.net/authors>.

## Topics

The topics of interest for this special issue include but are not limited to:

Semantic Web vocabularies and ontologies for Cultural Heritage

- Vocabularies, thesauri, metadata schemas, and ontologies
- Semantic Web content creation, annotation, and extraction
- Ontology creation, extraction, and evolution
- Ontology mapping, merging, and alignment

- Use and development of standards
- Developments and applications of the CIDOC CRM
- Ontology design patterns for Cultural Heritage

#### Semantic Web based tools for interaction with Cultural Heritage

- Search, query, and visualization of Cultural Heritage data on the Semantic Web
- Search through virtual and integrated Cultural Heritage collections
- Entity linking, analysis and enrichment of Cultural Heritage data
- Personalized access to Cultural Heritage collections
- Context-aware information presentation
- Navigation and browsing
- Interactive user interfaces
- Social aspects of Cultural Heritage access and presentation
- Trust and provenance issues in mixed collections and mixed vocabulary applications

#### Semantic Web techniques, services and architectures for Cultural Heritage

- Applications with clear lessons learned
- Ambient Cultural Heritage
- Cultural Heritage services for tourism, museums, digital libraries...
- E-infrastructures for Cultural Heritage
- Integration of virtual and physical collections
- Peer-to-peer Cultural Heritage architectures
- Reasoning strategies (e.g. contextual, temporal, spatial)

#### Special issue editors

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**Indicate in the cover letter that it is for the Semantic Web for Cultural Heritage special issue.**

#### Important dates

- Paper submission deadline: 21 June 2019
- Envisioned First round notification: September 2019