

Preface

Metadata and semantics are integral to any information system and important to the sphere of Web data. Research and development addressing metadata and semantics are crucial to advancing how we effectively discover, use, archive, and repurpose information. In response to this need, researchers are actively examining methods for generating, reusing, and interchanging metadata. Integrated with these developments is research on the application of computational methods, linked data, and data analytics. A growing body of literature also targets conceptual and theoretical designs providing foundational frameworks for metadata and semantic applications. There is no doubt that metadata weaves its way through nearly every aspect of our information ecosystem, and there is great motivation for advancing the current state of understanding in the fields of metadata and semantics. To this end, it is vital that scholars and practitioners convene and share their work.

Since 2005, the International Metadata and Semantics Research Conference (MTSR) has served as a significant venue for dissemination and sharing of metadata and semantic-driven research and practices. This year, 2016, marked the tenth anniversary of the MTSR, drawing scholars, researchers, and practitioners who are investigating and advancing our knowledge on a wide range of metadata and semantic-driven topics. The tenth anniversary of the International Conference on Metadata and Semantics Research (MTSR 2016) was held at the Universitäts Bibliothek of Göttingen (Germany) during November 22–25, 2016. MTSR 2016 celebrated its tenth anniversary with the theme of “Bridging the Past, Present, and Future of Metadata, Data, and Semantic Technologies” and reflected on the following questions: (1) How can the documented evidence produced over the past years be used as a driver for innovating management and processing of data and information? (2) How close are we from the vision of building powerful learning systems that will meet the needs of modern societies through high-quality data infrastructures and data-driven interfaces? (3) What are the main challenges yet to be addressed by modern metadata and semantics research?

MTSR conferences have grown in number of participants and paper submission rates over the past decade, marking it as a leading, international research conference. Continuing in the successful legacy of previous MTSR conferences (MTSR 2005, MTSR 2007, MTSR 2009, MTSR 2010, MTSR 2011, MTSR 2012, MTSR 2013, MTSR 2014, and MTSR 2015), MTSR 2016 brought together scholars and practitioners who share a common interest in the interdisciplinary field of metadata, linked data, and ontologies.

The MTSR 2016 program and the following proceedings show a rich diversity of research and practices from metadata and semantically focused tools and technologies, linked data, cross-language semantics, ontologies, metadata models, semantic systems, and metadata standards. The general session of the conference included nine papers covering a broad spectrum of topics, proving the interdisciplinary field of metadata, and

was divided into three main themes: Semantic Data Management, Big Data, Scalability; Synthesis of Semantic Models; and Information Extraction and Retrieval. Metadata as a research topic is maturing, and the conference also supported the following five tracks: Digital Libraries, Information Retrieval, Big, Linked and Social Data; Metadata and Semantics for Open Repositories, Research Information Systems and Data Infrastructures; Metadata and Semantics for Agriculture, Food, and Environment; Metadata and Semantics for Cultural Collections and Applications; and European and National Projects. Each of these tracks had a rich selection of short and full research papers, in total 23, giving broader diversity to MTSR, and enabling deeper exploration of significant topics.

All the papers underwent a thorough and rigorous peer-review process. The review and selection for this year were highly competitive and only papers containing significant research results, innovative methods, or novel and best practices were accepted for publication. From the general session, only nine submissions were accepted as full research papers. An additional 17 contributions from tracks covering noteworthy and important results were accepted as full research papers, and six as short papers, totaling 32 accepted contributions for this year's MTSR. The full papers represent 38.8 % of the total number of submissions.

Göttingen State and University Library (or the "SUB") is not only a historic site with precious special collections and one of Germany's largest academic libraries but also a hub for innovative library development, specifically with respect to metadata. Ranging from early involvement in generic metadata standards such as Dublin Core to substantial contributions to the highly sophisticated vocabularies, ontologies, and provenance models of the Consortium of European Research Libraries (CERL), it takes part in significant developments in the library world. Beyond the library world, it has established a metadata system for historic object collections and has been a forerunner in open access and research data management, contributing to metadata developments in the area of current research information systems (CRIS), data curation, usage data, and alternative metrics for scholarly communication.

This year the MTSR conference was pleased to host two remarkable keynote presentations by internationally known leaders in academia and multinational organizations. Prof. Dr. Philipp Cimiano, a professor of computer science at Bielefeld University, introduced: "Lemon: A Lexicon Model for Ontologies," a model recently synthesized into a suite of ontologies. This work is the output of an initiative of over three years carried out within the W3C community group focusing on the lexicon-ontology interface (ontolex). The initiative further incorporates earlier research in the field. Natural language is increasingly being recognized as an important facet in the field of ontologies, and it is of vital importance in the fields of digital libraries. The Lemon/Ontolex model presents innovative work in this area. Dr. Johannes Keizer has been working for the Food and Agriculture Organization of the United Nations (FAO of the UN) for the past 16 years, guiding the development of important digital resources such as AGROVOC and AGRIS, and heading a restructuring operation of the "International Information System for Agricultural Science and Technology." In his presentation, "Investing into Metadata and Semantics," Dr. Keizer shared his extensive experiences and insights reflecting the whys and wherefores of adopting semantic

solutions in the full array of knowledge management, dissemination, and sharing. His words emphasize the pivotal role that metadata and semantics can play in modern information systems.

We conclude this preface by thanking the many people who contributed their time and efforts to MTSR 2016 and made this year's conference possible. We also thank all the organizations that supported this conference. We extend a sincere gratitude to members of the Program Committees of both main and special tracks, the Steering Committee and the Organizing Committees (both general and local), and the conference reviewers. A special thank you to Dr. Wolfram Horstmann, Director of the SUB Göttingen of Göttingen, for hosting and supporting MTSR 2016, to Karna Wegner from FAO, UN, for supporting us throughout this event, to D. Koutsomiha, who assisted us with the proceedings, and to Stavroula, Vasiliki, and Nikoleta for their endless support and patience.

September 2016

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<http://www.springer.com/978-3-319-49156-1>

Metadata and Semantics Research

10th International Conference, MTSR 2016, Göttingen,
Germany, November 22-25, 2016, Proceedings

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J. (Eds.)

2016, XX, 378 p. 110 illus., Softcover

ISBN: 978-3-319-49156-1