Emmanouel Garoufallou
María-Antonia Ovalle-Perandones
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Communications in Computer and Information Science 1537

Metadata and Semantic Research

15th International Conference, MTSR 2021
Virtual Event, November 29 – December 3, 2021
Revised Selected Papers

Springer

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ISSN 1865-0929 ISSN 1865-0937 (electronic)
Communications in Computer and Information Science
ISBN 978-3-030-98875-3 ISBN 978-3-030-98876-0 (eBook)
https://doi.org/10.1007/978-3-030-98876-0

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Preface

Metadata and semantics are integral to any information system and important to the sphere of Web of Data, Semantic Web, and Linked Data. Research and development addressing metadata and semantics is 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, knowledge organization, 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 and research findings.

Since 2005, the International Metadata and Semantics Research Conference (MTSR) has served as a significant venue for the dissemination and sharing of metadata and semantic-driven research and practices. This year marked the 15th edition of MTSR, drawing scholars, researchers, and practitioners who are investigating and advancing our knowledge on a wide range of metadata and semantic-driven topics. The 15th International Conference on Metadata and Semantics Research (MTSR 2021) was organized by the Complutense University of Madrid, Spain, taking place between November 29 and December 3, 2021. Due to the COVID-19 pandemic, and taking into account all the available information and ongoing uncertainties and our concerns about the health and wellbeing of our community, the MTSR 2021 Organizing Committees decided to organize MTSR 2021 as an online conference. The MTSR 2021 Chairs, Organizing Committees, and Steering Committee adapted to an unprecedented situation and worked together to adjust the organizational structure of the conference to the current pandemic circumstances.

The MTSR conference series has grown in terms of the number of participants and paper submission rates over the past decade, marking it as a leading international research conference. Continuing the successful legacy of previous MTSR conferences, MTSR 2021 brought together scholars and practitioners who share a common interest in the interdisciplinary field of metadata, linked data, and ontologies. In total, 147 professionals from 41 countries registered for the MTSR 2021 online conference.

The MTSR 2021 program and the proceedings show a rich diversity of research and practices from metadata and semantically focused tools and technologies to linked data, cross-language semantics, ontologies, metadata models, semantic systems, and meta-data standards. The general session of the conference included 13 papers covering a broad spectrum of topics, proving the interdisciplinary view of metadata. The benefits and challenges of making data findable, accessible, interoperable, and reusable (FAIR) across domains and disciplines have been recognized and the opportunities for reuse, repurpose, and redeployment of data using semantic technologies have been verified. Recent advances on neural networks, natural language processing, and knowledge graphs

have been presented, promoting innovations and methods for topic modeling, semantic annotation, and automatic metadata generation.

Metadata as a research topic is maturing, and the conference supported the following eight tracks: Digital Libraries, Information Retrieval, Big, Linked, Social, and Open Data; Agriculture, Food, and Environment; Open Repositories, Research Information Systems, and Data Infrastructures; Digital Humanities and Digital Curation; Cultural Collections and Applications; European and National Projects; Knowledge IT Artifacts in Professional Communities and Aggregations; and Metadata, Identifiers, and Semantics in Decentralized Applications, Blockchains, and P2P Systems.

Each of these tracks had a rich selection of short and full research papers, in total 21, giving broader diversity to MTSR, and enabling deeper exploration of significant topics. MTSR 2021 also brought together researchers, scholars, practitioners, educators, and information professionals coming from libraries, archives, museums, cultural heritage institutions, and organizations from the educational sector (DOAbLE).

All the papers underwent a thorough and rigorous peer-review process, with two to five reviewers assigned to each paper. The review and selection for this year was 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 12 submissions were accepted as full research papers, representing 25% of the total number of submissions, and one submission was accepted as a short paper. An additional 15 contributions from tracks covering noteworthy and important results were accepted as full research papers, representing 44.1% of the total number of submissions, and six were accepted as short papers, bringing the total of MTSR 2021 accepted contributions to 34. The acceptance rate of full research papers for both the general session and tracks was 32.9% of the total number of submissions.

The Complutense University of Madrid was founded by Cardinal Cisneros because of the "Inter cetera" Papal Bull granted by Pope Alexander VI on April 13, 1499. Nowadays the Complutense University of Madrid has three main objectives: to educate professionals who will be useful for society, to foster scientific research, and to disseminate knowledge and the intrinsic values of the university. A wide range of degrees is offered to meet the expectations of intellectual, economic, and scientific demands. The Department of Library and Information Science at the Faculty of Documentation Sciences, which was the School of Library and Information Science before 2006, has the following research lines: society and library; information policies, information and communication technologies (ICT), and scientific communication; management, assessment, and administration in information science units; and photo documentation.

MTSR 2021 was pleased to host a remarkable keynote presentation by Marcia Lei Zeng, a Professor of Information Science at Kent State University, USA. In her presentation "Semantic Enrichment of LAM Data to Support Digital Humanities", Marcia addressed the field of digital humanities (DH) and the impact on libraries, archives, and museums (LAMs): "The field of digital humanities (DH) has advanced tremendously over the last decade and continues to expand. The demands for smarter and bigger historical and cultural heritage data, which usually cannot be obtained through web crawling or scraping, have directed attention toward the data provided by libraries,

archives, and museums (LAMs). In order to enhance LAM data's quality and discoverability while enabling a self-sustaining ecosystem, "semantic enrichment" has become an increasingly used strategy for LAMs during recent years, representing a major step in enhancing existing LAM data through semantic technologies." Marcia presented a framework for approaches used in semantic enrichment that can be applied to LAM data at various levels. She focused on structured and semi-structured data, with additional discussions on turning unstructured data into structured data, with the aim of maximizing LAM data's discoverability, use- and reuse-ability, and their value in the mainstream of DH and Semantic Web.

We conclude this preface by thanking the many people who contributed their time and efforts to MTSR 2021 and made this year's conference possible despite the unforeseen obstacles caused by COVID-19. We also thank all the organizations that supported this conference. We thank all the institutions and universities that co-organized MTSR 2021. We extend our sincere gratitude to the members of the Program Committees (both main and special tracks), the Steering Committee, and the Organizing Committees (both general and local), to all the special track chairs, and to the conference reviewers who invested their time generously to ensure the timely review of the submitted manuscripts. A special thanks to keynote speaker Marcia Lei Zeng. Also a special thank you to Anxhela Dani, Vasiliki Georgiadi, Chrysanthi Chatzopoulou, Chrysanthi Theodoridou, and Ilias Nitsos for supporting us throughout this event, to Anxhela Dani and Vasiliki Georgiadi who assisted us with the preparation of this proceedings and the Book of Abstracts, and to Vasiliki, Nikoleta, and Stavroula for their endless support and patience. Our thanks go to our best paper and best student paper sponsor euroCRIS. Finally, our deepest thanks go to all the authors and participants of MTSR 2021 for making the event a great success.

December 2021

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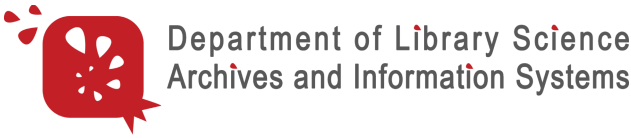

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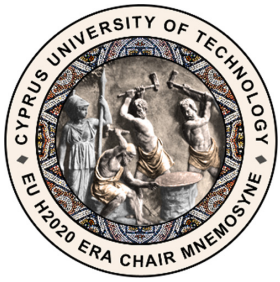

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