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Emmanouel Garoufallou · Francesca Fallucchi ·
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Metadata and Semantic Research

13th International Conference, MTSR 2019
Rome, Italy, October 28–31, 2019
Revised Selected Papers

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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 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 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. 2019 marked the 13th MTSR, drawing scholars, researchers, and practitioners who are investigating and advancing our knowledge on a wide range of metadata and semantic-driven topics. The 13th International Conference on Metadata and Semantics Research (MTSR 2019) was held at the Guglielmo Marconi University in Rome, Italy, October 28–31, 2019.

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, MTSR 2015, MTSR 2016, MTSR 2017, and MTSR 2018), MTSR 2019 brought together scholars and practitioners who share a common interest in the interdisciplinary field of metadata, linked data, and ontologies.

The MTSR 2019 program and the 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 18 papers covering a broad spectrum of topics, proving the interdisciplinary view of metadata. 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; Cultural Collections and Applications; European and National Projects; Open Repositories, Research Information Systems, and Data Infrastructures; Digital Humanities and Digital Curation; Agriculture, Food, and Environment; and Knowledge IT Artifacts in Professional Communities and Aggregations. The new eight track that MTSR 2019 introduced was on 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 24, 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 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 14 submissions were accepted as full research papers, representing 41.1% of the total number of submissions, and 4 as short papers. An additional 13 contributions from tracks covering noteworthy and important results were accepted as full research papers, representing 36.1% of the total number of submissions, and 11 as short papers, bringing the total of MTSR 2019 accepted contributions to 42. The acceptance rate of full research papers for both the general session and tracks was 38.6% of the total number of submissions.

Guglielmo Marconi University (GMU) is the first Italian Open University which has been recognized by the Ministry of Education (MIUR) in Italy and provides innovative high-quality degree programs in the fields of humanities, social sciences, law, business, and engineering. The GMU's mission is to promote interdisciplinary research and innovation. In its activities, the university adheres to the following pillars: openness, quality, professionalism, and international vocation.

MTSR 2019 was pleased to host a remarkable keynote presentation held by Dr. Alfio M. Gliozzo, Research Manager - Knowledge Induction at IBM T.J. Watson Research (New York, USA). In his presentation "Extending Knowledge Graphs Using Distantly Supervised Deep Nets" Dr. Gliozzo shared his extensive experience and insights about how to train deep nets for relation extraction using distant supervision able to induce taxonomies directly from text provided as input in any domain, thus enabling SMEs to easily customize them to their needs.

Furthermore, in a round table titled "The Digital World 2030", three keynote speakers from different disciplines discussed challenges and future developments for the next decade.

The first keynote in the field of Industry 4.0 was held by Professor Gabriele Arcidiacono, Full Professor of Machine Design and Head of Department of Innovation and Information Engineering (DIIE) at Guglielmo Marconi University (Rome, Italy). His presentation "Lean Education and Society 5.0: the Global Excellence" described the need for a cultural revolution which would go hand in hand with the technological one: the human technology oriented model of the Society 5.0.

The second presenter from the telecommunications research field was Professor Romeo Giuliano, Associate Professor in the Department of Innovation and Information Engineering (DIIE) at Guglielmo Marconi University (Rome, Italy). In his presentation "The 6-th Generation Network (6G): Drivers, Services and Requirements" Professor Giuliano explained how the forthcoming 6-th generation network will be, what services it will provide, and how it will be organized. 6G will be immersive in the environment we live in, equipped with artificial intelligence, providing social services worldwide.

The last presentation given by Professor Fabio Massimo Zanzotto, Associate Professor in the Department of Enterprise Engineering - University of Rome Tor Vergata was focused on computer science. In his talk "Hey, Merry Men! Robin-Hood Artificial Intelligence is Calling You!" Professor Zanzotto explained how the innovations of artificial intelligence are changing the future job market. Artificial intelligence is

exploiting human knowledge stored in personal data to replace workers owning this knowledge. A real research challenge for the future is how to constantly repay workers for their knowledge as these workers are contributing to the construction of the artificial intelligence that will replace them. Without a clear agenda, the artificial intelligence revolution will be a step of no return.

MTSR 2019 hosted a tutorial on “VocBench 3: Collaborative Development of Thesauri, Ontologies, Lexicons and RDF Datasets for the Semantic Web” organized by a remarkable team of Professionals and Professors as Armando Stellato, Manuel Fiorelli, Tiziano Lorenzetti, Willem van Gemert, Denis Dechandon, Christine Laaboudi-Spoiden, Anikó Gerencsér, Anne Waniart, Eugeniu Costetchi, and Andrea Turbati.

We conclude this preface by thanking the many people who contributed their time and efforts to MTSR 2019 and made this year’s conference possible. We also thank all the organizations that supported this conference. We thank all institutions and universities that co-organized MTSR 2019. We extend a sincere gratitude to members of the Program Committees both main and special tracks, the Steering Committee and the Organizing Committees (both general and local), and the conference reviewers who invested their time generously to ensure the timely review of the submitted manuscripts. A special thanks to local organization chair Professor Francesca Fallucchi from Guglielmo Marconi University, Italy; to program chair Professor Noemi Scarpato from San Raffaele Roma Open University, Italy; to workshop, tutorial, and demonstration chair Professor Ivo Keller from TH Brandenburg, Germany; and to all special track chairs of MTSR 2019. A special thank you to Francesca Fallucchi and Anxhela Dani for supporting us throughout this event, to Iro Sotiriadou and Anxhela Dani who assisted us with the preparation of proceedings, and to Vasiliki, Nikoleta, and Stavroula for their endless support and patience. Our thanks go to our sponsors Elsevier, Springer Nature, EBSCO, IEEE, and Reasonable Graph, and our best paper and best student paper sponsor euroCRIS. Finally, our deepest thank you go to all authors and participants of MTSR 2019 for making the event a great success.

September 2019

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