Preface

The 3rd International Workshop on Ordering and Reasoning (OrdRing 2014) was colocated with the 13th International Semantic Web Conference (ISWC 2014) in Riva del Garda, Italy. The OrdRing workshop series aims at stimulating a paradigm shift in semantic technologies toward novel methods that integrate ordering with reasoning inspired by stream and rank-aware data management.

The continuous growth of volume, velocity and variety of data poses new challenge for their processing, especially when it has to be done in real-time or near-real time. It often happens that orders are involved in those processes: the input data can be ordered by some criteria (e.g. recency, proximity), and so the output data (e.g. relevance). In both cases, orders can play a key-role, enabling the design of ad-hoc algorithms and processes that exploit those orders to increase the performance. A relevant example can be found in rank-aware data management, where there are techniques to perform query answering through streaming algorithms that exploit the natural or enforceable orders in the data. Moreover, in stream data management, algorithms are not only designed to be online and streaming, but also any-time: they processes the input data and they produce sequences of valid answers at different time instants. The expressive power of Semantic technologies is needed in those applications, but Semantic Technologies risk being unable to address the needs of those applications, because they do not consider ordering as an essential property. Ranking results is often seen as an added task, performed after inference, without affecting the inference process, which is order-agnostic.

The OrdRing workshops reflect a trend towards order-aware semantic technologies: both researchers and practitioners understand that order matters in reasoning over massive and highly dynamic data. The idea of Stream Reasoning is gaining considerable momentum. Some top-k query answering techniques for Linked Data appeared. Several works are considering SPARQL query answering on RDF annotated with partially ordered labels. The description logic community is investigating top-k ontological query answering.

This year, OrdRing registered the highest number of attendees of its series. This achievement was possible mainly thanks to the five papers that were presented. Two of them targetted the problem of identifying and selecting relevant data in huge data sets, while the others focussed on Stream Reasoning, in particular on its foundations and its future directions. Two papers were selected as best papers and won the opportunity to be published on Journal of Data Semantics.

The previous edition of OrdRing hosted the first face to face meeting of the W3C RDF Stream Processing Community Group. One year later, OrdRing featured a keynote by Jean-Paul Calbimonte, current chair of the W3C RSP-CG. During his speech, Jean-Paul reported on the first year of activity of the group and on the upcoming challenges for the second year activity.

We would like to thank the authors for their high-level submissions, the speakers for their involving presentations, and the attendees for their interest and participation during the event. Finally, we would like to thank the program

committee members, that helped us in selecting the papers by providing useful and valuable comments. Said so, we are happy and proud to present the proceedings of OrdRing 2014

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Milano

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Irene Celino
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Markus Krötzsch
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Table of Contents

Invited Talk

Accepted Papers

Program Committee

Alessandro Bozzon	TU Delft
Jean-Paul Calbimonte	École Polytechnique Fédérale de Lausanne
Peter Haase	fluid Operations
Alejandro Llaves	Universidad Politécnica de Madrid
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