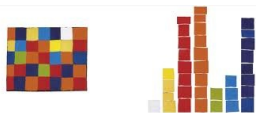Irene Celino   Emanuele Della Valle
Markus Krötzsch   Stefan Schlobach (Eds.)

OrdRing 2013

2nd International Workshop on Ordering and Reasoning

Workshop co-located with the 12th International Semantic Web Conference (ISWC 2013)

Sydney, Australia, October 22nd, 2013

Proceedings

Preface

OrdRing 2013 was the 2nd International Workshop on Ordering and Reasoning and was collocated with 12th International Semantic Web Conference (ISWC 2013) in Sydney. The OrdRing workshop series aims to stimulate a paradigm shift in semantic technologies toward novel methods that integrate ordering with reasoning inspired by stream and rank-aware data management.

More and more applications require real-time processing of massive, dynamically generated, ordered data, where order is often an essential factor reflecting recency, proximity or relevance. Stream and rank-aware data management techniques are progressively providing reactive and reliable query answering over such massive datasets, allowing integration of highly dynamic sources. Key to their success is the use of streaming algorithms that harness the natural or enforceable orders in the data. The expressive power of semantic technologies is needed in those applications, yet existing semantic technologies are often unable to address these needs, since 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's workshop received eight submissions out of which six were accepted. These submissions were equally distributed over two themes: extending the expressiveness of representation and query languages to better capture ordering information and reasoning over semantic data streams.

The increased interest in ordering and streaming information is also reflected by recent plans to start a W3C RDF Stream Processing Community Group. Given the close relation between the workshop topic and the discussion of the community group, the OrdRing workshop featured a keynote on this new group given by Oscar Corcho and was collocated with the open-door meeting of the group.

OrdRing 2013 featured excellent scientific papers, a high-profile keynote advocating the setting up of a community group for stream processing and a discussion of the future of the topic. We are happy and proud to present the proceedings of the workshop.

October 2013   Irene Celino, Emanuele Della Valle
                                         Markus Krötzsch and Stefan Schlobach

i

Workshop Organization

Steering Committee

Stefano Ceri – DEIB – Politecnico di Milano, IT
Ian Horrocks – University of Oxford, UK
Frank van Harmelen – Vrije Universiteit Amsterdam, NL

Organizing Committee

Irene Celino – CEFRIEL, Milano, IT
Emanuele Della Valle – DEIB – Politecnico di Milano, IT
Markus Krötzsch – University of Oxford, UK
Stefan Schlobach – Vrije Universiteit Amsterdam, NL

Program Committee

Alessandro Bozzon – Delft University of Technology, NL
David Carral – Wright State University, OH, USA
Oscar Corcho – Universidad Politécnica de Madrid, Spain
Peter Haase – fluid Operations, Walldorf, Germany
Carsten Lutz – Universität Bremen, Germany
Jeff Z. Pan – University of Aberdeen, UK
Axel Polleres – Siemens AG Österreich & WU (Wirtschaftsuniversität Wien), Austria
Sebastian Rudolph – Technische Universität Dresden, Germany
Steffen Staab – University of Koblenz-Landau, Germany
Umberto Straccia – ISTI-CNR, Pisa, Italy
Guido Vetere – IBM, Roma, Italy
Haofen Wang – Shanghai Jiao Tong University, China
Kewen Wang – Griffith University, Queensland, Australia
Gerhard Weikum – Max-Planck Institute for Informatics, Saarbrücken, Germany
Zhe Wu – Oracle, CA, USA

Additional Reviewers

Yuting Zhao – University of Aberdeen, UK

Contents