Lecture Notes in Computer Science   9898

Editorial Board

More information about this series at http://www.springer.com/series/7409

Magdalena Ortiz · Stefan Schlobach (Eds.)

Web Reasoning
and Rule Systems

10th International Conference, RR 2016
Aberdeen, UK, September 9–11, 2016
Proceedings

 Springer

Editors

Magdalena Ortiz
TU Wien
Vienna
Austria

Stefan Schlobach
Computer Science
Vrije Universiteit Amsterdam
Amsterdam, Noord-Holland
The Netherlands

Preface

The growth of the Web is without a doubt one the most far-reaching and transformational changes our world has witnessed in the last decades. It has put at our fingertips amounts of data that were unimaginable until just a couple of decades ago. But owing to the quantity, heterogeneity, and dynamicity of this data, making use of it raises enormous challenges. Managing and accessing Web data calls for increasingly better tools and techniques that are capable of reasoning and can infer useful information from data that may be noisy, distributed, heterogeneous, dynamic, incomplete, and inconsistent. Several successful research efforts have used rule-based systems, which allow us to represent knowledge and draw inferences from it, to overcome these challenges. Extensions and adaptations of classic rule-based languages have found their application in a range of areas like ontologies for the Semantic Web, querying Web data, semantic data management, and common-sense reasoning on the Web.

The International Conference on Web Reasoning and Rule Systems has become a major forum for discussion and dissemination of new results concerning Web reasoning and rule systems. This volume contains the proceedings of the 10th International Conference on Web Reasoning and Rule Systems (RR 2016), held during September 9–11, 2016, in Aberdeen, Scotland. The conference program included keynote talks by Abraham Bernstein, Meghyn Bienvenu, Ian Horrocks, and Leonid Libkin, covering diverse theoretical and practical topics of Web reasoning and rule systems. Extended abstracts of these talks are included in this volume.

The conference program also included presentations of 10 full research papers and three technical communications. The latter are a more concise paper format that provides the opportunity to present preliminary and ongoing work, systems, and applications that are of interest to the RR audience. The accepted papers were selected out of 17 submissions by our Program Committee (PC). This selection was based on four experts reviews (and in one exceptional case, three reviews) for each paper. We are deeply grateful to our PC members for their commitment in the process, and their efforts to provide high-quality constructive feedback to the authors.

To foster the participation and engagement of students, which is fundamental to RR and to our scientific community, RR 2016 hosted a doctoral consortium and a joint poster session, in coordination with the established co-location with the 12th edition of the Reasoning Web Summer School (RW 2016), held just before RR. The generous sponsorship of the NSF was fundamental to these events. The RR Conference and RW Summer School would like to acknowledge the support received from VisitScotland and VisitAberdeenshire, as well as from the Accenture Centre for Innovation and the K-Drive project, for which we are very grateful.

We want to thank the invited speakers for their valuable contribution, and the local organizer Jeff Pan and his team for their hard job organizing this event. We would like to thank our general chair, Umberto Straccia, as well as the doctoral consortium chair, Rafael Peñaloza, our publicity chair, Adila Alfa Krisnadhi, and our sponsorship chair,

Giorgos Stamou. As usual, EasyChair was an excellent conference management system and provided great support for the preparation of these proceedings. Last but not least, we thank all authors and participants of RR 2016, who make this event possible and are the heart of this community; we hope they had a wonderful time in Scotland.

July 2016   Magdalena Ortiz
                                                                            Stefan Schlobach

Organization

General Chair

Umberto Straccia — ISTI-CNR, Italy

Program Chairs

Magdalena Ortiz — TU Wien, Austria
Stefan Schlobach — Vrije Universiteit, Amsterdam, The Netherlands

Doctoral Consortium Chair

Rafael Peñaloza — Free University of Bozen-Bolzano, Italy

Publicity Chair

Adila Krisnadhi — Wright State University, USA and Universitas Indonesia, Indonesia

Sponsorship Chair

Giorgos Stamou — NTUA, Greece

Local Chair

Jeff Z. Pan — University of Aberdeen, UK

Local Organising Committee

Wamberto Vasconcelos — University of Aberdeen, UK
Martin Kollingbaum — University of Aberdeen, UK
Diana Zee — University of Aberdeen, UK
Nicola Pearce — University of Aberdeen, UK

Program Committee

Darko Anicic	Siemens AG, Munich, Germany
Meghyn Bienvenu	CNRS, University of Montpellier, Inria, France
Fernando Bobillo	University of Zaragoza, Spain
Elena Botoeva	Free University of Bozen-Bolzano, Italy
Pierre Bourhis	CNRS LIFL/Inria Lille, France
Loris Bozzato	Fondazione Bruno Kessler, Italy
Minh Dao-Tran	TU Wien, Austria
Sergio Flesca	DEIS - University of Calabria, Italy
Paul Fodor	Stony Brook University, USA
Andre Freitas	University of Passau, Germany
Víctor Gutiérrez Basulto	University of Bremen, Germany
André Hernich	University of Liverpool, UK
Aidan Hogan	DCC, Universidad de Chile, Chile
Yazmin Ibanez	TU Wien, Austria
Mark Kaminski	University of Oxford, UK
Benny Kimelfeld	Technion, Israel Institute of Technology, Israel
Roman Kontchakov	Birkbeck, University of London, UK
Markus Krötzsch	Technische Universität Dresden, Germany
Georg Lausen	University of Freiburg, Germany
Joohyung Lee	Arizona State University, USA
Domenico Lembo	Sapienza University of Rome, Italy
Thomas Meyer	Centre for Artificial Intelligence Research, UKZN and CSIR Meraka, South Africa
Marie-Laure Mugnier	University of Montpellier, France
Matthias Nickles	National University of Ireland, Galway, Digital Enterprise Research Institute, Ireland
Andreas Pieris	TU Wien, Austria
Axel Polleres	Vienna University of Economics and Business, Austria
Juan L. Reutter	Pontificia Universidad Católica, Chile
Francesco Ricca	University of Calabria, Italy
Sebastian Rudolph	Technische Universität Dresden, Germany
Vladislav Ryzhikov	Free University of Bozen-Bolzano, Italy
Juan F. Sequeda	Capsenta Labs, Austin, Texas, USA
Evgeny Sherkhonov	University of Amsterdam, The Netherlands
Mantas Simkus	TU Wien, Austria
Daria Stepanova	Max Planck Institute for Informatics, Germany
Domagoj Vrgoc	Pontificia Universidad Católica, Chile
Guohui Xiao	Free University of Bozen-Bolzano, Italy

Additional Reviewers

Alferes, Jose Julio
Güzel, Elem
Hansen, Peter
Schneider, Patrik
Steyskal, Simon
Thomazo, Michaël

Contents

Short Papers