Proceedings of

DeRiVE 2015

4th International Workshop on Detection, Representation, and Exploitation of Events in the Semantic Web

Co-located with the 12th Extended Semantic Web Conference (ESWC 2015), 31 May – 4 June, Portoroz, Slovenia

Preface

This volume contains the papers presented at DeRiVE2015: 4th Workshop on Detection Representation and Exploitation of Events in the Semantic Web held on Sunday May 31, 2015 in Portoroz (Co-located with the 12th Extended Semantic Web Conference - ESWC 2015)

In recent years, researchers in several communities involved in aspects of information science have begun to realise the potential benefits of assigning an important role to events in the representation and organisation of knowledge and media-benefits which can be compared to those of representing entities such as persons or locations instead of just dealing with more superficial objects such as proper names and geographical coordinates. While a good deal of relevant research for example, on the modeling of events has been done in the semantic web community, much complementary research has been done in other, partially overlapping communities, such as those involved in multimedia processing, information extraction, sensor processing and information retrieval research. However, these areas often deal with events with a different perspective. The attendance of DeRiVE 2011, DeRiVE 2012 and DeRiVE 2013 proved that there is a great interest from many different communities in the role of events. The results presented in there also indicated that dealing with events is still an emerging topic. The goal of this workshop is to advance research on the role of events within the information extraction and semantic web communities, both building on existing work and integrating results and methods from other areas, while focusing on issues of special importance for the semantic web.

We have defined questions for the two main directions that characterise current research into events on the semantic web. Orthogonal to that, we have identified a number of application domains in which we will actively seek contributions.

Question 1: How can events be detected and extracted for the semantic web?

- How can events be detected, extracted and/or summarized in particular types of content on the web, such as calendars of public events, social media, semantic wikis, and regular web pages?
- What is the quality and veracity of events extracted from noisy data such as microblogging sites?
- How can a system recognise a complex event that comprises several sub-events?
- How can a system recognise duplicate events?

Question 2: How can events be modelled and represented in the semantic web?

- How are events currently represented on the Web? In particular, how deployed is the schema.org Event class? Should scheduled events versus breaking events be represented the same way?

- To what extent can the many different event infoboxes of Wikipedia be reconciled? How to deal with the numerous Timeline of xxx topics in knowledge bases?
- How can existing event representations developed in other communities be adapted to the needs of the semantic web? To what extent can/should a unified event model be employed for different types of events?
- How do social contexts (Facebook, Twitter, etc.) change the implicit content semantics?

Application Domains: Research into detection (question 1) and representation (question 2) of events is being implemented in various application domains. Known application domains that we target are:

- Personal events
- Cultural and sports events
- Making something out of "raw" events
- Historic events and events in news and other media
- Scientific observation events
- Supply chain events

Among the submissions we received, 6 papers were selected for full presentation at the workshop:

- Jean-Paul Calbimonte and Karl Aberer - *Reactive Processing of RDF Streams of Events*
- Selver Softic, Laurens De Vocht, Erik Mannens, Martin Ebner and Rik Van de Walle - *COLINDA: Modeling, Representing and Using Scientific Events in the Web of Data*
- Michael Färber and Achim Rettinger - *Toward Real Event Detection*
- Gregory Katsios, Svitlana Vakulenko, Anastasia Krithara and Georgios Paliouras - *Towards Open Domain Event Extraction from Twitter: REVEALing Entity Relations*
- Loris Bozzato, Stefano Borgo, Alessio Palmero Aprosio, Marco Rospocher and Luciano Serafini - *A Contextual Framework for Reasoning on Events*
- Jacobo Rouces, Gerard de Melo and Katja Hose - *Representing specialized events with FrameBase*

May 31, 2015

Marieke Van Erp
Raphaël Troncy
Marco Rospocher
Willem Robert Van Hage
David A. Shamma

Program Committee

Eneko Agirre	University of the Basque Country, Spain
Stefano Borgo	LOA - CNR, Italy
Loris Bozzato	Fondazione Bruno Kessler
Christian Hirsch	University of Auckland, New Zealand
Jane Hunter	University of Queensland, Australia
Tomi Kauppinen	Aalto University, Finland
Azam Khan	Autodesk Research, Canada
Erik Mannens	Ghent University – IBBT, Belgium
Ingrid Mason	Intersect Australia Ltd
Diana Maynard	University of Sheffield, UK
Adrian Paschke	Freie Universiteit Berlin, Germany
Giuseppe Rizzo	EURECOM, France
Ansgar Scherp	Kiel University and Leibniz Information Center for Economics, Kiel, Germany
Ryan Shaw	University of North Carolina at Chapel Hill, USA
Thomas Steiner	Google Inc, Germany
Kerry Taylor	CSIRO & Australian National University
Denis Teyssou	Agence France-Presse