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The Semantic Web: Research and Applications

7th Extended Semantic Web Conference, ESWC 2010
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Proceedings, Part I

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Preface

This volume contains papers from the technical program of the 7th Extended Semantic Web Conference (ESWC 2010), held from May 30 to June 3, 2010, in Heraklion, Greece. ESWC 2010 presented the latest results in research and applications of Semantic Web technologies. ESWC 2010 built on the success of the former European Semantic Web Conference series, but sought to extend its focus by engaging with other communities within and outside Information and Communication Technologies, in which semantics can play an important role. At the same time, ESWC has become a truly international conference.

Semantics of Web content, enriched with domain theories (ontologies), data about Web usage, natural language processing, etc., will enable a Web that provides a qualitatively new level of functionality. It will weave together a large network of human knowledge and make this knowledge machine-processable. Various automated services, based on reasoning with metadata and ontologies, will help the users to achieve their goals by accessing and processing information in machine-understandable form. This network of knowledge systems will ultimately lead to truly intelligent systems, which will be employed for various complex decision-making tasks. Research about Web semantics can benefit from ideas and cross-fertilization with many other areas: artificial intelligence, natural language processing, database and information systems, information retrieval, multimedia, distributed systems, social networks, Web engineering, and Web science.

To reflect its expanded focus, the conference call for research papers was organized in targeted tracks:

- Mobility
- Ontologies and Reasoning
- Semantic Web in Use
- Sensor Networks
- Services and Software
- Social Web
- Web of Data
- Web Science

The research papers program received 245 full paper submissions, which were first evaluated by the Program Committees of the respective tracks. The review process included evaluation by Program Committee members, discussions to resolve conflicts, and a metareview for each potentially acceptable borderline submission. After this a physical meeting among Track and Conference Chairs was organized to see that comparable evaluation criteria in different tracks had been used and to discuss remaining borderline papers. As a result, 52 research papers were selected to be presented at the conference and are included in the

proceedings. The ESWC 2010 proceedings also include ten PhD symposium papers presented at a separate track preceding the main conference, and 17 demo papers giving a brief description of the system demos that were accepted for presentation in a dedicated session during the conference.

ESWC 2010 was happy to have had three keynote speakers and a dinner talk by high-profile researchers:

- Noshir Contractor, the Jane S. & William J. White Professor of Behavioral Sciences in the School of Engineering, School of Communication and the Kellogg School of Management at Northwestern University
- Sean Bechhofer, lecturer in the Information Management Group within the School of Computer Science at the University of Manchester
- Wolfgang Wahlster, Director and CEO of the German Research Center for Artificial Intelligence and a professor of Computer Science at Saarland University (Saarbruecken, Germany)
- Aldo Gangemi, senior researcher at the CNR Institute of Cognitive Sciences and Technology in Rome, and head of the Semantic Technology Lab.

Special thanks go to all the Chairs, Program Committee members, and additional reviewers of the different refereed tracks who all contributed to ensuring the scientific quality of ESWC 2010. Many thanks also go to the members of the Organizing Committee for their hard work in selecting outstanding tutorials, workshops, panels, lightning talks, and posters. We would like to also thank the Sponsorship Chair for reaching out to industry and various organizations supporting the 2010 edition of the conference, as well as the local organization, website and conference administration team put together by STI International for their excellent coordination during the conference preparation. Finally, we would like to thank the Proceedings Chair for the hard work in preparing this volume, Springer for the support with the preparation of the proceedings, and the developers of the EasyChair conference management system, which was used to manage the submission and review of papers, and the production of this volume.

May 2010

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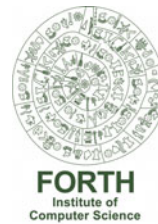
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