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The Semantic Web

16th International Conference, ESWC 2019
Portorož, Slovenia, June 2–6, 2019
Proceedings


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Preface

This volume contains the main proceedings of the 2019 edition of the Extended Semantic Web Conference (ESWC 2019). ESWC is established as a yearly major venue for discussing the latest scientific results and technology innovations related to the Semantic Web and linked data. At ESWC, international scientists, industry specialists, and practitioners meet to discuss the future of applicable, scalable, user-friendly, as well as potentially game-changing solutions. The 16th edition took place during June 2–6, 2019, in Portoroz, (Slovenia). Building on its past success, ESWC is also a venue for broadening the focus of the Semantic Web community to span other relevant research areas in which semantics and Web technology play an important role, as well as for experimenting with innovative practices and topics that deliver extra value to the community and beyond. This year’s conference introduced some novelties compared with the past, particularly a new call for research tracks, enabling the community to more actively participate in the selection of emerging and relevant topics. This call led to the creation of three new research tracks this year: (1) Distribution and Decentralisation, (2) Velocity on the Web, and (3) Research of Research. The addition of these novel tracks complemented six well-established research tracks, including: (1) Ontologies and Reasoning, (2) Linked Data, (3) Natural Language Processing and Information Retrieval, (4) Semantic Data Management and Data Infrastructures, (5) Social and Human Aspects of the Semantic Web and, (6) Machine Learning. Aside from these nine research tracks, the conference features the In-Use, Industry, and Resources tracks, showing the diversity of topics, the research and development activity, the services and applications, and the industry outreach of the Semantic Web community.

The Research, Resource and In-Use tracks follow an Open and Transparency Review Policy established by the conference in 2018. Under this policy, papers, reviews, meta-reviews, and decisions are made Web-available. Senior Program Committee (PC) members sign their meta-reviews and PC members are given the option to sign their reviews. Under GDPR regulations, authors are provided with an option for their papers to be removed from the website. This model follows the successful reviewing policy applied by the *Semantic Web* journal.

These 11 tracks, including the nine Research tracks, Resources, and In-Use, constitute the main scientific program of ESWC 2019. This program contains 39 papers: 26 Research, eight Resources, and five In-Use, selected out of 134 full paper submissions. This corresponds to a total acceptance rate of 29% (28% for Research, 31% for Resources, and 33% for In-Use). The Industry track included three presentations out of ten submissions from companies that have adopted Semantic Web technologies.

In addition to these tracks, the conference offered many opportunities for participation, including: a poster and demo session, workshops and tutorials, a PhD symposium, and a project networking session.

The poster and demo session accepted 18 posters and 20 demos. In this session, researchers had the chance to present their latest results and advances in the form of live demos or face-to-face presentations.

The PhD symposium program received and accepted five contributions. These high-quality papers covered a broad range of topics related to the themes of ESWC, including federated querying, natural language processing, and semantics and ontology matching. The authors, who are both early or mid-to-late stage PhD students, were mentored by senior Semantic Web researchers both before and during the conference.

The conference program contained five workshops, seven tutorials. These included both full-day and half-day events. The main topics of the workshops focused on sentiment analysis and opinion mining, deep learning, and large-scale analytics, building knowledge graphs, and semantic technologies for Industry 4.0. The tutorials addressed a wide range of semantic topics relevant for both experts and novice researchers. The topics offered include data lakes, semantic data enrichment, question-answering systems, ontology engineering, querying linked data and knowledge graphs, and analytics on linked data streams.

ESWC also offers an exciting opportunity for EU-funded projects to network during a special session organized at the conference.

These associated events created an even more open, multidisciplinary, and cross-fertilizing environment at the conference, allowing for work-in progress and practical results to be discussed. Proceedings from these satellite events are available in a separate volume. The program also included three exciting invited keynotes.

The general and program chairs would like to thank the many people who were involved in making ESWC 2019 a success. First of all, our thanks go to the 22 co-chairs of the Research, In-Use and Resources Tracks and the 352 reviewers for all tracks, for ensuring a rigorous and open review process that led to an excellent scientific program. The scientific program was completed by an exciting selection of posters and demos chaired by Sabrina Kirrane and Olaf Hartig. Special thanks go to the PhD symposium chairs, Victor de Boer and Maria-Esther Vidal, who managed one of the key events at ESWC. The PhD students may become the future leaders of our field, and deserve both encouragement and mentoring. We also had a great selection of workshops and tutorials, as mentioned earlier, thanks to the commitment of our workshop and tutorial chairs, Maria Maleshkova and Stefan Schlobach. Thanks to our EU project networking session chairs, Ioanna Lytra and Laura Koesten, we had the opportunity to facilitate meetings and exciting discussions between leading European research projects. Networking and sharing ideas between projects is a crucial success factor for such large research projects. We are additionally grateful for the work and commitment of Katja Hose and Ruben Verborgh, who established a challenge track. Thanks to Nelia Lasier and Steffen Stadtmüller for the organization of the industry track, and to Laura Hollink and Anna Tordai for playing the ever-challenging sponsor chair role. We thank STI International for supporting the conference organization. Stefano Borgo and Marija Komatar in particular deserve special thanks for the professional support of the local conference organization and for solving all practical matters. Further, we are very grateful to Agnieszka Ławrynowicz and Jędrzej Potoniec,

our publicity and Web presence chairs, who kept our community informed throughout the year and to Blake Regalia, our Semantic Technologies Coordinator. Special thanks to our proceedings chair, Karl Hammar, for all his work in preparing this volume with the kind support of Springer. We finally thank our sponsors, listed on the next pages, for their vital support of this edition of ESWC. The general chair would like to close the preface with his warm thanks to the program chairs, Miriam Fernandez and Krzysztof Janowicz, for their rigorous commitment to selecting an exciting ESWC 2019 scientific program.

April 2019

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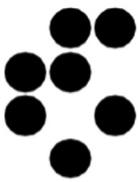
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