Preface

The International Semantic Web Conference (ISWC) is the premier forum for Semantic Web researchers and practitioners from around the world to gather and share ideas and discoveries. The conference continues to bring together a diverse set of individuals with skills and interests ranging from artificial intelligence to information systems and Web systems. We continue to see steadily increasing adoption of semantic technologies, although more often than not, their use is invisible to consumers.

This volume contains the proceedings of ISWC 2017 with all the papers accepted to the main conference tracks: the Research, Resources, and In-Use Tracks. In addition to the long-standing Research and In-Use Tracks, we have continued the Resources and Journal Tracks that were introduced last year. We also brought back an Industry Track and hope that this will encourage even more cross-fertilization between practitioners and researchers.

The Research Track is home to the most ground-breaking results in the field. This year, we received 197 full submissions, of which 44 were accepted for publication in this volume and presentation at the conference. A large team of reviewers, including 423 Program Committee (PC) members and 23 Senior Program Committee (SPC) members, was carefully selected to ensure a wide coverage of expertise. Each paper was assigned to five reviewers and to an SPC member. The assignment process was based on a bidding phase where PC and SPC members selected papers to review based on their expertise. PC members received a maximum of three papers to review, while SPC members received a maximum of nine papers. A specific form was designed by the Research Track chairs to facilitate the reviewing process and to ensure that all important aspects of the papers were examined. As per the usual process, we included a rebuttal period where authors could respond to the initial reviews. SPC members oversaw the reviews and discussion for each paper in order to resolve disagreements when possible and ensure constructive feedback. Discussions for the papers took place before and after the rebuttal phase to ensure that the authors could answer the key concerns highlighted by the reviewers and that the provided answers were debated, acknowledged, and considered for the final recommendation. Over the course of five days, the SPC members and Research Track chairs held discussions to assess all papers and to make a final decision on which papers to select. During this process, additional reviews were requested for controversial papers. Meta-reviews were written to summarize these discussions and the final recommendation for each paper. While the names of PC members were not visible to the authors, or to each other, during the reviewing period, PC members were given the opportunity to sign their reviews and discussions before the final decision was sent to the authors.

The purpose of the Resources Track is to share resources and best practices for developing them, as we strongly believe that this is crucial in order to consolidate research material, ensure reproducibility of results, and in general gain new scientific insights. The term "resource" can refer to: datasets, ontologies, vocabularies,

workflows, evaluation benchmarks or methods, replication studies, services, APIs, and software frameworks that have contributed to the generation of novel scientific work. One of the requirements of this track is that the resources were published with a permanent URI in order to guarantee future access. This year, our publisher piloted a dedicated infrastructure for publishing snapshots of resources to facilitate this process. The track received 76 submissions and accepted 23 of them; seven of these, as well as three of the Research Track, made use of the dedicated resource publishing facility, as can be seen from the respective references in these papers. Each paper received four reviews, and an SPC member provided a meta-review. Similar to the Research Track, there was a rebuttal phase, which was then followed by further discussion among the reviewers and managed by the SPC member who summarized all views in a recommendation to the Resource Track chairs. The final decisions were determined through discussions between the track chairs and the SPC members and were based on the overall views expressed by the reviewers, the meta-reviews and the lively discussions that occurred before and after the rebuttal phase.

The In-Use Track provides a forum for the community to explore the benefits and challenges of applying semantic technologies in concrete, practical applications, in contexts ranging from industry to government and science. This year, the track required that papers provide evidence that there is use of the proposed application or tool by the target user group, preferably outside the group that conducted the development. We received 29 submissions, and accepted nine. Each submission was assigned four reviewers.

Traditionally, ISWC has a different keynote speaker to kick off each day of the main conference. This year we had three exciting keynote talks delivered by Nada Lavrac (Jozef Stefan Institute), Deborah L. McGuinness (Rensselaer Polytechnic Institute), and Jamie Taylor (Google). The titles and abstracts of these talks are included in this volume.

There were many important activities at ISWC 2017 that are not represented in these proceedings. The two days prior to the main conference involved many smaller sessions: workshops, tutorials, and the doctoral consortium. Aidan Hogan and Valentina Presutti were our workshops and tutorials chairs, and selected seven tutorials and 19 workshops for the program. The doctoral consortium was chaired by Lora Aroyo and Fabien Gandon. In all, 26 PhD students submitted papers, and after review by the PC, 13 were accepted to the event.

The Journal Track provided the authors of papers recently published in Semantic Web journals the opportunity to present their papers to the conference community. The editors of the *Journal of Web Semantics* and the *Semantic Web Journal* selected a total of 12 papers published in the previous year (but never presented at ISWC).

The first day of the main conference included an Industry Track and a Posters and Demonstrations Session. The Industry Track was chaired by Achille Fokoue and Peter Haase with the goal of presenting the state of adoption of semantic technologies in industrial applications, whether it be specific industries or as a horizontal technology. This track received 30 submissions and accepted 18 for presentation. The Posters and Demonstrations Track was chaired by Nadeschda Nikitina and Dezhao Song.

This year saw the return of a reinvigorated Semantic Web Challenge. Led by Dan Bennett, Axel Ngonga, and Heiko Paulheim, this year's challenge involved two measurable tasks, i.e., knowledge graph population and knowledge graph validation.

In recognition of the maturing of the field, we added two new events to the conference. In order to reach out to the general public, we featured an event supported by the Vienna Business Agency for the local community in the form of a combined local business lounge and Semantic Web meet-up, co-located with the Posters and Demonstration Track. In addition, this year ISWC celebrated its first Job Fair, bringing together job candidates with open positions in both industry and academia.

The success of a large conference like ISWC also depends on a number of people whose contribution is not directly reflected in the program. We would like to thank our sponsorship chairs Michel Dumontier, Sabrina Kirrane, and Harald Sack, for their efforts in securing external funding to help offset the fixed costs of the conference. We would like to thank our student coordinators Lalana Kagal and Gianluca Demartini for managing the student travel fellowships and organizing the mentoring lunch. Stefan Dietze and Davide Taibi provided the valuable service of collecting and organizing our metadata; an essential task for a community that places so much value on semantics. Our publicity chair Anna Lisa Gentile did a fantastic job of getting the word out on multiple platforms. And of course, the proceedings you are reading today (whether in "old-school" paper form or electronically) would not have been possible without the diligent efforts of our proceedings chair, Christoph Lange.

Last, but certainly not least, we would like to give a big thank you to our local chairs Axel Polleres and Elmar Kiesling. Few people realize the amount of work that goes into the logistics of a conference of this scale, and often the local chairs are invisible unless something goes horribly wrong. Axel, Elmar, and their team have worked countless hours over the course of two years to ensure that everything runs smoothly.

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