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The Semantic Web – ISWC 2021

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Proceedings

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Preface

How often does it happen that no one at a big international conference complains about coffee, food, wifi, cramped rooms, and long queues everywhere? This has now happened, for the second year in a row, at the International Semantic Web Conference (ISWC). These are some of the advantages of organizing a virtual conference. It is true that virtual conferences are challenging and unsatisfying in many ways, but they force us all to rethink how to run conferences that are far more accessible to those with physical disabilities, visa restrictions, family constraints, or insufficient research and travel funds. Virtual conferences are also more friendly towards the environment, which does not normally appreciate our habit of flying around the world to attend endless conferences. Having said that, most of us desperately miss the best parts of a conference: the social and scientific buzz, the networking, and the late bar sessions where the greatest and stupidest ideas are sometimes born!

It is my honour to introduce the proceedings of ISWC 2021, and to be the general chair for this conference which celebrates its 20th birthday this year. My most important task as the general chair was to assemble the team that would actually drive the conference and lead it to success. I am so delighted and humbled by the brilliant organization committee, the Senior Program Committee (SPC), and the small army of over 460 Program Committee (PC) members who produced 1032 peer reviews.

This has not been a typical year by any stretch of the imagination, but it was thrilling to realize that ISWC is resilient to pandemics, where 1066 authors from 41 countries collaborated during difficult circumstances to make a total of 364 submissions to the various tracks of the conference. I am extremely thankful to all these brave authors, for without them this conference would have not even existed.

The Research Track, chaired by Eva Blomqvist and Andreas Hotho, received 133 full paper submissions, out of which 24 were accepted, resulting in an acceptance rate of 18%. This track is dedicated to novel and significant research contributions addressing theoretical, analytical, and empirical aspects of the Semantic Web and its intersection with other disciplines. As was the case last year, this track adopted a double-blind approach, where the authors and reviewers remain anonymous. One addition to this track this year was the introduction of a reproducibility checklist for the authors to complete at submission time, in an attempt to encourage them to pay close attention to this important issue. This track was supported by 238 PCs and 24 SPCs, in addition to many external reviewers.

The In-Use Track this year was chaired by Payam Barnaghi and Ying Ding, and continued with the tradition of taking submissions describing applied and validated applications and solutions that benefit from the use of Semantic Web technologies. This track had 45 PC members, received 31 submissions, and accepted 7 with a 23% acceptance rate. The Resources Track, chaired by Stefan Dietze and Achille Fokoue, promoted the sharing of resources which support, enable, or utilize Semantic Web research, including datasets, ontologies, software, and benchmarks. This Track received 38 papers, and

accepted 11, thus yielding a 29% acceptance rate. The Resources Track was aided by 8 SPCs and 38 PCs.

Aspects of innovative commercial and industry-strength knowledge graphs and semantic technologies were covered as usual by the Industry Track. This track was chaired by Juan Sequeda and Lorena Etcheverry, and received 20 submissions that are currently under review by 12 PCs. The Doctoral Consortium (DC) gave PhD students the opportunity to present their work and receive constructive feedback from senior members of the Semantic Web community. The DC Track was chaired by Valentina Tamma, Miriam Fernandez, and María Poveda Villalón, and received 16 submissions which were reviewed by 16 PC members who accepted 6 papers, thus giving an acceptance rate of 38%.

The Posters, Demos, and Lightning Talks Track was chaired by Catia Pesquita and Oshani Seneviratne. This track complements the paper tracks of the conference by offering an opportunity to present late-breaking research results, on-going projects, and speculative or innovative work in progress. The track received 102 poster and demo submissions, which were reviewed by 65 PC members who accepted 74 of them with an acceptance rate of 73%. The Lightning Talks part of this track opened a few weeks before ISWC 2021 took place.

Laura Hollink and Mayank Kejriwal chaired the Workshop and Tutorials Track of ISWC this year. Workshops are the primary venues for the exploration of emerging ideas as well as for the discussion of novel aspects of established research topics. Tutorials aim to deliver focused training to Semantic Web researchers and practitioners on key topics and latest work and technologies. Out of the 13 workshop and 4 tutorial proposals submitted, 12 and 3 were accepted respectively. The Semantic Web Challenges Track, chaired by Ernesto Jiménez-Ruiz, Jianyan Chen, and Despoina Magka, accepted 7 challenges this year. This track has a great record in advancing the state of the art in various Semantic Web areas through popular open competitions.

One new addition we came up with this year is the Missions Track. This track was partly inspired by the Vision Track that was included last year, and partly by the need to set up Missions to tackle big and persistent challenges. This year, the mission was Reproducibility. The track was chaired by Raphaël Troncy, and a few prominent scientists were invited to give short talks about their views, work, aspirations, and recommendations towards reproducibility in the Semantic Web.

My thanks also go to the local chair, Kathy Fontaine, and the rest of the local organization team for competently managing the conference, for developing and maintaining the conference website, and for taking care of all the digital logistics associated with running a virtual conference. The sponsorship and publicity chairs, Rafael Gonçalves and Anastasia Dimou, did a superb job in raising sponsorship for the conference in this particularly challenging climate and widely publicizing the conference and its program on the web and social media. I am also in gratitude to the proceedings and metadata chairs, Armin Haller and Mauro Dragoni, who skilfully navigated us through the challenging tasks of generating these proceedings, and of capturing and publicly sharing the conference data in a reusable and open format.

To reduce the ever expanding organization committee of ISWC, and to increase efficiency, we merged highly overlapping tracks and duties that are normally assigned to

different chairs. To this end, we combined publicity with sponsorship, DC with student mentoring, posters and demos with lightning talks, and proceedings with metadata. Hence, many of the members of the organization committee took on extra tasks compared to their predecessors from previous ISWC conference, for which I am very grateful.

Finally, my special thanks go to the Semantic Web Science Association (SWSA) for taking such good care of this conference for over 20 long years.

Harith Alani, ISWC 2021 General Chair, on behalf of all the editors.

September 2021

Andreas Hotho
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