

This is the proceedings of the 31th edition of the annual Benelux Conference on Artificial Intelligence (BNAIC 2019) and of the 28th Belgian Dutch Conference on Machine Learning (Benelearn 2019). These conferences were jointly organized by the Vrije Universiteit Brussel and the Université Libre de Bruxelles, under the auspices of the Benelux Association for Artificial Intelligence (BNVKI) and the Dutch Research School for Information and Knowledge Systems (SIKS), in collaboration with Brewery of Ideas under the name “AI Synergies”.

Held yearly, the objective of these conferences is to promote and disseminate recent research developments in Artificial Intelligence in the Benelux. For the first time, we have combined these two conferences with a whole-day business track (on the 6th of November 2019) and an ‘Art-AI’ evening (also the 6th of November 2019) into an overarching event, with the goal of further expanding the reach and impact of the two conferences and to allow people from industry to get in touch with the academics and learn about their work.

For the scientific part, we welcomed four types of contributions, namely A) regular papers, B) compressed contributions, C) demonstration abstracts, and D) thesis abstracts. We received 127 submissions, out of which 115 were selected for the conference and 18 were selected for inclusion (after a second round of reviewing) in the post-proceedings (to be published in the Springer CCIS series). In addition to the regular research presentations, short (walking) pitches and demonstrations, we were happy to include several other elements in the program of BNAIC 2019, among which keynote presentations by Ana Paia (Instituto Superior Técnico, University of Lisbon, Portugal), Marie-Christine Rousset (University of Grenoble Alpes, France) and Jeremy Pitt (Imperial College London, UK), a special FACt (FACulty focusing on the FACts of AI) session with presentations by Holger Hoos (Universiteit Leiden), Silja Renooij (Universiteit Utrecht) and Dirk Heylen (Universiteit Twente). Furthermore, a new experiment is launched this year: We replaced the classical poster sessions by Research Pitch Walks, in which a group of interested listeners follows a thematic tour, visiting a selection of posters. These walks are guided by a session chair who ensures a fair amount of time is spent on each poster, providing time for 5 minute pitches followed by questions, thereby increasing exposure and interest in the posters.

To conclude, we want to express our gratitude to everyone who made this conference possible: in addition to all invited speakers mentioned above, many thanks to Brewery of Ideas, iCity and all organizing and program committee members for their hard work to guarantee the high quality of this conference, both before and during the conference. Moreover, we wish to thank all student volunteers, administrative and secretarial assistants, and of course all the academic as well as business sponsors. We also gratefully acknowledge the help from the BNVKI and from previous organizers. And last, but certainly not least, we cordially thank all the authors who made important contributions to the conference. Without their efforts, this conference could not have taken place.

