AAAI-13 Preface

Welcome to the Twenty-Seventh AAAI Conference on Artificial Intelligence, AAAI-13! As can be seen in these proceedings, AI's scope and influence continue to grow. This year, we received 827 submissions across a variety of tracks, allowing us to put together a diverse and exciting technical program featuring the field's top research.

The AAAI-13 program seeks to capture the diversity of this important field. The main technical program features four special tracks — AI and the Web, Cognitive Systems, Computational Sustainability, and AI and Robotics — which highlight specialized areas of the field. The Spotlights track consists of invited presentations from senior members of other subareas within artificial intelligence, sharing recent results from sister conferences. The AAAI Symposium on Educational Advances in AI (EAAI, cochaired by Laura E. Brown and David Kauchak), which focuses on teaching AI, and the Innovative Applications of Artificial Intelligence Conference (IAAI, cochaired by Hector Munoz-Avila and David Stracuzzi), which emphasizes the relevance of AI in our everyday lives, are also integrated into the AAAI program.

We'll be hearing invited talks from several outstanding researchers: a keynote address by Raymond Mooney (University of Texas at Austin), and talks by Kristin P. Bennett (Rensselaer Polytechnic Institute), Vijay Kumar (University of Pennsylvania), Maja Mataric (University of Southern California), Tuomas Sandholm (Carnegie Mellon University), and a joint AAAI and IAAI talk by Larry Birnbaum (Northwestern University). The IAAI-13 program also features an invited talk by Lawrence Hunter (University of Colorado) and the IAAI Robert S. Engelmore lecture by Deborah L. McGuinness (Rensselaer Polytechnic Institute).

Overall, 690 papers were submitted to the technical program of AAAI-13, including the special tracks, 203 of which were accepted for publication in the proceedings, for an overall acceptance rate of 29 percent. All papers were grouped into technical sessions with oral presentations, and also received an opportunity to present a poster in a plenary poster session. In addition, we introduced a new Late-Breaking Papers track to give people a chance to present work that was initiated, enhanced, improved, or completed after the paper submission deadline in January. We received 115 late-breaking papers, 53 of which were accepted for presentation as short talks and posters (46 percent acceptance rate). These papers will be published in a AAAI technical report.

We used a slightly different reviewing process this year, designed with the goal of encouraging the publication of innovative and intellectually interesting work without sacrificing technical quality. Each paper was assigned to four program committee members, a senior program committee member to oversee the review process, and an associate chair to help resolve the most challenging decisions. We asked the program committee to evaluate papers in terms of their strengths across eight categories: technical quality, experimental analysis, formal analysis, clarity/presentation, novelty/innovation of question addressed, novelty/innovation of solution proposed, breadth of interest to the AI community, and potential for impact to practical applications. Papers that were assigned consistently high or low scores across categories were handled accordingly. However, instead of averaging the scores across categories, we put extra attention into evaluating papers that received a very high score in at least one category and a very low score in at least one category. This process helped us separate "diamonds in the rough" from papers that did not generate much excitement among the reviewers.

Authors had an opportunity to comment on the reviews, providing the input for a round of extensive discussions between the senior program chairs (SPCs) and the program committee. The SPC members wrote metareviews for all papers, summarizing the discussion and how the author feedback had been taken into account, and gave recommendations on acceptance. They defended their recommendations in individual

Skype calls with the program cochairs. In some cases, particularly controversial decisions were discussed with the associate chairs before the program cochairs made their final decisions. Reviews and feedback were provided to the authors.

A complex and prestigious conference like AAAI requires a tremendous amount of work by a large number of people. We would like to thank all of our associate chairs, senior program committee members, and program committee members for their dedicated efforts! They navigated the new reviewing process as well as a new conference management system and did an exemplary job. We recognized several members of the committee with special awards for their exceptional effort.

We enjoyed working with the chairs of the special tracks and thank them for articulating and pursuing their unique visions, recruiting outstanding papers and reviewers, and for managing the review processes to create excellent tracks: Jeff Heflin and Markus Krötzsch (Artificial Intelligence and the Web), Matthias Scheutz and James Allen (Cognitive Systems), Carla P. Gomes and Doug Fisher (Computational Sustainability and Artificial Intelligence), and Siddhartha Srinivasa and Andrea L. Thomaz (Robotics). Other organizers who contributed with distinction to the design and execution of the conference were Carmel Domshlak and Kevin Leyton-Brown (Tutorial Program), Eric Eaton and Holger Hoos (Workshop Program), Peter McBurney and Ayanna Howard (Doctoral Consortium), and Rudolph Triebel, Kristian Kersting, and Scott Sanner (Student Abstract and Poster). We encourage you to participate in their sessions to see the results of their tremendous work.

We thank Neil Burch and Eric Jackson for chairing the Poker Competition, and Marco Dorigo, Mauro Birattari, and Rehan O'Grady for cochairing the AI video competition. These sessions add another kind of excitement to the conference and we are delighted by what they were able to accomplish.

As in previous years, AAAI-13 has received an enormous amount of support from the AAAI staff, especially Carol Hamilton, Keri Harvey, and Colleen Boyce, who managed to keep track of all the relevant aspects. They put enormous effort into making the overall process smooth and finally guaranteeing the success of the conference. We'd like to thank the talented EasyChair developer, Andrei Voronkov, who extended the conference management system in significant ways to support the conference this year. Additional thanks go to Mike Hamilton for his work on producing these proceedings and other conference materials. We also had the wisdom and counsel of the AAAI President, Manuela Veloso, the AAAI Past President, Henry Kautz, and the AAAI Conference Committee, chaired by Subbarao Kambhampati. We are very grateful for the efforts of the AAAI-13 Local Arrangements Cochairs, Mausam and Luke Zettlemoyer.

Artificial Intelligence is an important and dynamic field of research. It is also a lot of fun and we are grateful to be a part of it. Running the AAAI conference is a huge effort by and for this community and getting to have a front row seat to the dedication that makes it all happen has been a rare privilege. We hope you will enjoy the fruits of these efforts and are very glad to have you share this experience with us.

– Marie desJardins and Michael Littman,
AAAI-13 Program Cochairs