

Preface

For the second time the International Conference on Intelligent Autonomous Systems (IAS) was held in Italy and organized by the University of Padova. Many years have passed since the 6th IAS Conference was held in Venice in 2000 and in those 14 years, the IAS Conferences have evolved to reflect the tremendous technological advancement of the field of Robotics. The 13th IAS was held in Padova from July 15 to 18, 2014 at Centro Congressi Padova with the goal of bringing together researchers and engineers from around the world to present their latest research accomplishments, innovations, and visions in the field of robotics and artificial intelligence.

The 13th edition of the IAS conference has a special motto: “Bringing autonomous robots into industrial production”. The aim was to highlight the most recent results of autonomous robots and intelligent systems which are now sufficiently mature and robust to operate in industrial production. Therefore, co-located with IAS-13 were organized several Industrial Workshops, an Industrial Forum focused on Horizon 2020, and a technological and scientific exhibit.

Of the 159 papers submitted to IAS-13 from all over the world, 83 papers were selected for oral presentation and 39 for poster presentation after going through a rigorous peer-review process. The scientific program consisted of 7 technical sessions in 4 tracks and 2 poster sessions, running over 3 days in comfortable slots of 25 min, to have time left for fruitful discussions. In addition, 16 workshops, 6 tutorials, and an Industrial Forum took place together with the conference. The program was enriched by six keynote talks given by Gary Bradski, Eugenio Guglielmelli, Koh Hosoda, Jan Peters, José del R. Millán, and Cyrill Stachniss. Finally, a Workshop on New Research Frontiers in Intelligent Autonomous Systems celebrating the 20th Anniversary of the International Society for Intelligent Autonomous Systems (IAS-Society) was held as a Post-conference meeting in Venice at the Telecom Future Centre on July 19, 2014. The workshop consisted of six Invited Talks given by Hajime Asama, Ruediger Dilmann, Frans Groen, Oussama Khatib, Sukhan Lee, and Lynne Parker, all worldwide leaders in Intelligent Autonomous Systems research, and by ten peer-reviewed position papers

to present exciting and visionary ideas to galvanize the research community and spur novel research directions.

We wish to thank the organizing committee members for their commitment and great effort, the 100+ program committee members, the local staff, and the student volunteers. We would also like to thank the authors, the conference participants, the sponsors, and the exhibitors for making IAS-13 a great success and a unique opportunity for scientists. We hope that these proceedings, and especially the participation in the IAS-13 Conference and its related events, will inspire new ideas, foster new research, and create new friendships which can grow into fruitful collaborations.

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