

# Preface

Welcome to the proceedings of the 15th International Conference on Intelligent Virtual Agents (IVA). IVA is the interdisciplinary annual conference in which leading scientists from around the world present and discuss their latest work on intelligent virtual agents. These agents are interactive characters, which humans can interact with. They often have anthropomorphic elements to evoke responses that humans would exhibit when interacting with other humans. For this, agents could use natural human modalities such as facial expressions, speech, and gesture. Besides interaction modalities, these agents are capable of real-time perception, cognition, and actions in the social environment they operate in. Constructing and studying these IVAs requires knowledge, theories, methods, and tools from a wide range of fields such as computer science, psychology, cognitive sciences, communication, linguistics, interactive media, human–computer interaction, and artificial intelligence.

The IVA conference was started in 1998 as a workshop on Intelligent Virtual Environments at the European Conference on Artificial Intelligence in Brighton, UK, which was followed by a similar one in 1999 in Salford, Manchester, UK. Then dedicated stand-alone IVA conferences took place in Madrid, Spain, in 2001, Irsee, Germany, in 2003, and Kos, Greece, in 2005. Since 2006 IVA has become a full-fledged annual international event, which was first held in Marina del Rey, California, then Paris, France, in 2007, Tokyo, Japan, in 2008, Amsterdam, The Netherlands, in 2009, Philadelphia, Pennsylvania, USA, in 2010, Reykjavik, Iceland, in 2011, Santa Cruz, USA, in 2012, Edinburgh, UK, in 2013, and Boston, USA, in 2014.

IVA 2015 was held in Delft, The Netherlands. The special topic of the conference was social training. Increasingly more research aims at utilizing the potential benefits of using intelligent virtual agents in automated training systems in domains with a strong emphasis on the social dimension of human–human interaction. Examples of such training domains are: negotiation, job interviewing, interrogation, aggression or conflict management, patient or customer conversation, but also social environments used for treatment of people with social anxiety or autism. The talks of the three keynote speakers each addressed social training from their own professional perspectives. Gerben van Kleef from the University of Amsterdam discussed emotions as social information, looking at implications for virtual interactions. Page Anderson from Georgia State University in Atlanta talked about how social training in virtual reality could be used to treat patients that suffer from social anxiety disorder. Michaël Bas as co-founder and CEO of Ranj serious games, looked at social training from a game perspective.

IVA 2015 received 70 submissions. Out of the 51 long paper submissions, only 11 papers were accepted as 14-page papers. Furthermore, there were 22 submissions accepted as 10-page papers, and 21 papers were included in the poster and demo track.

This year the conference also included two full-day workshops, one focusing on virtual health agents, and one focusing on engagement in social intelligent virtual

agents. In addition four tutorials were given, respectively, on: using annotations for virtual human research; social signal interpretation for virtual agents; design and use of questionnaires in human–computer interaction; and introduction to the virtual human toolkit. A selected group of PhD students were also invited to participate in the doctoral consortium where they discussed their PhD project under the guidance of senior scholars in the field of intelligent virtual agents.

The conference was jointly organized by the University of Twente and Delft University of Technology. The Science Centre Delft was this year’s conference venue. IVA conferences always depend on the contribution of a large number of people. For this year, we therefore would like to thank the senior Program Committee for their involvement in the review process, and the members of the Program Committee for their time and effort spent on reviewing all the submissions. Special thanks go to the three keynote speakers for reflection on the special topic. We would also like to thank Khiet Truong and Hannes Högni Vilhjálmsson for organizing the doctoral consortium, Tomoka Koda and Ronald Poppe for organizing the workshops, as well as Maaïke Harbers and Marieke Peeters for chairing the poster and demonstration track. We thank the journal *Artificial Intelligence* for sponsoring the PhD students who attended the doctoral consortium. Finally, we would like to express our thanks to Anita Hoogmoed, the conference secretary, who managed the conference administration and logistics.

But all of this would of course not have been possible without all the authors of the various papers included in these proceedings. Their work, effort, and devotion in sharing their insights help the scientific community to move forward in this challenging field of intelligent virtual agents.

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