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Ruth Aylett Brigitte Krenn
Catherine Pelachaud Hiroshi Shimodaira (Eds.)

Intelligent Virtual Agents

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Volume Editors

Ruth Aylett
Heriot-Watt University
Edinburgh, UK
E-mail: r.s.aylett@hw.ac.uk

Brigitte Krenn
Austrian Research Institute for Artificial Intelligence (OFAI)
Vienna, Austria
E-mail: brigitte.krenn@ofai.at

Catherine Pelachaud
CNRS-LTCI, Télécom-ParisTech
Paris, France
E-mail: catherine.pelachaud@telecom-paristech.fr

Hiroshi Shimodaira
The University of Edinburgh
Edinburgh, UK
E-mail: h.shimodaira@ed.ac.uk

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Preface

Welcome to the proceedings of the 13th International Conference on Intelligent Virtual Agents. While this conference represents a field of specialization with in computer science and artificial intelligence, it celebrates an endeavor that requires the integration of knowledge, methodologies, and theories from a wide range of fields such as sociology, psychology, linguistic, cognitive science, and interactive media.

Intelligent virtual agents are animated characters that not only move, but also exhibit human-like competence when dealing with the world around them, be it virtual or real. In particular these agents communicate with humans or with each other using natural human modalities such as speech and gesture. They are capable of real-time perception, cognition, and action that allows them to participate autonomously in dynamic social environments. Intelligent virtual agents are not built overnight or by lone practitioners. These are complex systems, built layer by layer, integrating numerous components that address important functions such as visual object tracking, speech recognition, perceptual memory, language understanding, reactive behavior, reasoning, planning, action scheduling, and articulation. Advances are made by sharing knowledge, components, and techniques. Therefore the annual IVA conference is central to advancing the state of the art. It is an interdisciplinary forum for presenting research on modeling, developing, and evaluating IVAs with a focus on communicative abilities and social behavior.

IVA was started in 1998 as a workshop at the European Conference on Artificial Intelligence on Intelligent Virtual Environments in Brighton, UK, which was followed by a similar one in 1999 in Salford, Manchester. 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, in 2010, Reykjavik, Iceland, in 2011 and Santa Cruz, USA, in 2012. Since 2005, IVA has also hosted the Gathering of Animated Lifelike Agents (GALA), a festival to showcase state-of-the-art agents created by students, academic or industrial research groups. This year's conference in Edinburgh, Scotland, represented a range of expertise,from different scientific and artistic disciplines, and highlighted the value of both theoretical and practical work needed to bring intelligent virtual agents to life.

The special topic of IVA 2013 was cognitive modelling in virtual agents. This topic touches on many aspects of intelligent virtual agent theory and application such as models of personality; theory of mind; learning and adaptation; motivation and goal-management; creativity; social and culturally specific behavior. Several papers deal directly with these topics. The remaining papers cover

important themes linked to the design, modelling, and evaluation of IVAs as well as system implementation and applications of IVAs.

IVA 2013 received 94 submissions. Out of the 61 long paper submissions,only 18 were accepted for the long papers track. Furthermore, therewere 18 short papers presented in the single-track paper session, and 34 poster papers were on display. Since IVA 2011, the proceedings are distributed only digitally.

This year's IVA also included four workshops that focused on "Computers as Social Actors," "Cultural Characters In Games and Learning", "Multimodal Corpora: Beyond Audio and Video," "Techniques Towards Companion Technologies." There was also a Doctoral Consortium where PhD students receive feedback from peers and established researchers.

IVA 2013 was locally organized by the Centre for Speech Technology Research (CSTR) at the University of Edinburgh, with the generous support of the School of Mathematical & Computer Sciences at Heriot-Watt University, UK; the Interaction Technologies Austrian Research Institute for Artificial Intelligence (OFAI), Austria; and CNRS – LTCI at Télécom-ParisTech, France.

We would like to wholeheartedly thank the scientific committees that helped shape a quality conference program, the Senior Program Committee for taking on great responsibility and the Program Committee for their time and genuine effort. We also want to thank our keynote speakers Jacqueline Nadel, from the Centre Emotion, La Salpétrière Hospital, Paris, France, Charles Sutton, University of Edinburgh, UK, Steve Holmes, vice president of the Mobile and Communications Group, Intel, USA, and Alessandro Vinciarelli, University of Glasgow, UK, for crossing domains and sharing their insights with us. Furthermore, we would like to express great appreciation for the work put in by Matthew Aylett who oversaw the poster and demo session, by Jonas Beskow, who coordinated the workshops, by Ana Paiva, who was responsible for the publicity of the conference, by Lynne Hall, who managed the Doctoral Consortium, by Magalie Ochs, who organized GALA, and by our tireless student volunteers and their coordinator David A. Braude, who kept everything running smoothly. We are grateful to Peter Bell and Atef Ben-Youssef for website design and the timely conference system support from Hiroshi Shimodaira. Atef Ben-Youssef helped to assemble the proceedings book. Finally, we would like to express deep gratitude to Hiroshi Shimodaira, Avril Heron, Samira Reuter, and Nicola Drago-Ferrante, who managed everything from registration and financials to decoration and local travel logistics.

Of course IVA 2013 would not have been possible without the valuable contributionsof the authors, whose dedication extends beyond the creation of intelligentvirtual agents to the creation and support of a vibrant research communitythat nurtures our passion for the field.

September 2013

Ruth Aylett
Brigitte Krenn
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