Preface

Welcome to the proceedings of the 9th International Conference on Intelligent Virtual Agents, held September 14–16, 2009 in Amsterdam, The Netherlands. Intelligent virtual agents (IVAs) are interactive characters that exhibit human-like qualities and 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, allowing them to participate in a dynamic physical and social environment.

IVA is an interdisciplinary annual conference and the main forum for presenting research on modeling, developing and evaluating IVAs with a focus on communicative abilities and social behavior. The development of IVAs requires expertise in multimodal interaction and several AI fields such as cognitive modeling, planning, vision and natural language processing. Computational models are typically based on experimental studies and theories of human–human and human–robot interaction; conversely, IVA technology may provide interesting lessons for these fields. The realization of engaging IVAs is a challenging task, so reusable modules and tools are of great value. The fields of application range from robot assistants, social simulation and tutoring to games and artistic exploration.

The enormous challenges and diversity of possible applications of IVAs have resulted in an established annual conference. It 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, and Tokyo, Japan, in 2008. Since 2005 IVA has also hosted the Gathering of Animated Lifelike Agents (GALA), a festival to showcase state-of-the-art IVAs created by university students, academic or industrial research groups. This year, papers on selected GALA submissions are also included in the IVA proceedings. The current conference represents well the range of expertise, from different scientific and artistic disciplines, and the value of both theoretical and practical work needed to create IVAs which suspend our disbelief.

The special application theme of IVA 2009 was games. The game industry is the source of the world's largest selection of interactive characters. To date, the creation of these characters and their social behavior has largely relied on carefully hand-crafted techniques rather than automation. However, hand-crafted approaches are unlikely to scale to larger environments, grander stories, more players and a greater demand for realism. An ongoing and so far unfulfilled goal of the game industry is to imbue characters with more intelligence and

self-determination. IVA 2009 was an opportunity to reveal, tackle and discuss the issues that relate to using IVAs in games, and aimed to strengthen links and the exchange of knowledge between academia and the game industry.

IVA 2009 received altogether 104 submissions. Out of the 72 long paper submissions, only 19 were accepted for the long papers track. Furthermore, there were 30 short papers presented in the single-track paper session and 35 demo and poster papers were on display. Finally, seven GALA papers document some of the work presented in the other categories.

IVA 2009 was locally organized by the Human Media Interaction Group of the University of Twente, and took place in NEMO, the National Science Museum in Amsterdam. We would like to thank the people who contributed to the high scientific quality of the event: the members of the Program Committee for their reviews and the members of the Senior Program Committee for their advice on preparing the event and evaluating the papers. We express our appreciation to Thomas Rist for his sincere selection of the best paper, and to Dirk Heylen for arranging the busy poster and demo session. Special thanks go to Patrick Gebhard, who was always available to assist with the submission and selection process. We acknowledge Jan Miksatko for administrating the conference website. We express our appreciation to the team of local organizers for taking care of the practical matters of the conference, and to the student volunteers for their assistance on the spot. Special thanks go to Lynn Packwood for keeping the financial issues under control. We are grateful for the support of our sponsors, which was essential for making the event happen.

Last but not least, these proceedings represent the scientific work by the participants and the invited speakers of IVA 2009. We thank all of them for their high-quality contributions. We hope that this volume will foster further research on IVAs, and we look forward to hearing of new work at future IVA conferences.

June 2009   Zsófia Ruttkay
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