Welcome to the proceedings of the 12th International Conference on Intelligent Virtual Agents. IVA is an interdisciplinary annual conference and the main forum for presenting research on modeling, developing, and evaluating intelligent virtual agents with a focus on communicative abilities and social behavior.

This conference represents a field of specialization within computer science, artificial intelligence, and human–machine interaction that aims at creating interactive characters that exhibit human-like qualities and communicate with humans or with each other in a natural way. Intelligent virtual agents should be capable of real-time perception, cognition, and action that allows them to participate in dynamic social environments. Creating these computational models involves the integration of knowledge, methodologies, and theories from a wide range of fields such as sociology, psychology, computer science, artificial intelligence, linguistics, cognitive science, and computer graphics.

IVA 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 event 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, and Reykjavik, Iceland in 2011.

This year’s conference was held in Santa Cruz, California, USA, September 12–14, 2012. It combined a wide range of expertise, from different scientific and artistic disciplines, and highlighted the value of both theoretical and practical work as necessary components to bring intelligent virtual agents to life.

The special topic of IVA 2012 was games and story telling. This topic touches on many aspects of intelligent virtual agent theory and applications. Narrative and story telling is a fundamental aspect of human experience. Telling a coherent compelling narrative involves integration of multimodal presentation functionalities such as speech, gesture, and facial expressions; coherent use of discourse context and appropriate contextual verbal and nonverbal gestures, the ability to portray personality and emotions, and an ability to monitor the audience and their reaction to the story. The talks by the three invited speakers addressed different aspects of essential requirements for IVAs. The talk by Noah Wardrip-Fruin from UCSC discussed different types of characters needed for gaming and narrative applications of IVAs. The talk by Jeremy Bailenson from Stanford discussed expressive gestures and how agents orient to one another by modifying their gestural expression in dialogic contexts. Rolf Pfeifer from Zurich discussed how embodiment affects intelligent agents’ perceptions and behavior. One of the
sessions at IVA 2012 was dedicated to paper presentations focusing on agents in gaming and story-telling environments.

IVA 2012 received 84 submissions. Out of the 74 long-paper submissions, only 17 were accepted for the long-papers track. Furthermore, there were 31 short papers presented in the single-track paper session, and 18 poster papers were on display.

IVA continues to develop and improve the anonymous reviewing process. This year continued the author rebuttal phase begun with IVA 2011, which led to more informed discussion of the papers. The Senior Program Committee was enlarged this year and given a more active role in reviewer recruitment.

Since 2005, IVA has also hosted the Gathering of Animated Lifelike Agents (GALA), a festival to showcase state-of-the-art agents created by student, academic, or industrial research groups. This year, the GALA event was combined with a demo event where participants were also able to demonstrate their latest results.

This year’s IVA also included two workshops. One on “Multimodal Analyses Enabling Artificial Agents in Human-Machine Interaction” and one focusing on “Real-Time Conversations with Virtual Agents.”

There were many people that contributed their time and talent in order to make IVA possible. First, we would like to thank the members of the Senior Program Committee that took on the great responsibility of making sure that the reviewing for papers in their sections was done on time, in a smooth and professional way, with thoughtful and respectful discussion of submitted work. Also, the Program Committee members dedicated significant time and genuine effort to provide thoughtful paper reviews. The contributions of the SPC and PC were essential to assembling a quality program. We also want to thank our keynote speakers, Jeremy Bailenson from Stanford University, Noah Wardrip-Fruin from the University of California, Santa Cruz, and Rolf Pfeifer from the University of Zurich, for crossing domains and sharing their insights with us. The Center for Games and Playable Media at UCSC helped develop our web presence and conference organization. We would also like to thank Jennifer Bloom at UCSC Conference Services for supporting the conference administration.

Of course, IVA 2012 would not have been possible without all the authors, whose contributions extend beyond the creation of intelligent virtual agents to the creation and support of a vibrant research community, fostering our even deeper passion for this challenging field of research.

September 2012

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