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

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# Table of Contents

## Keynote Talks

- **Endowing Virtual Characters with Expressive Conversational Skills**  
  *Marilyn A. Walker*  
  Page 1
- **Intelligent Expression-Based Character Agent Systems**  
  *Steve DiPaola*  
  Page 3
- **Past and Future Challenges in Creating Emotionally-Engaging Real-Time Digital Actors in Videogames**  
  *Casey Hudson*  
  Page 5

## Personality and Memory

- **Engagement vs. Deceit: Virtual Humans with Human Autobiographies**  
  *Timothy Bickmore, Daniel Schulman, and Langxuan Yin*  
  Page 6
- **A Socially-Aware Memory for Companion Agents**  
  *Mei Yui Lim, Ruth Aylett, Wan Ching Ho, Sibylle Enz, and Patricia Vargas*  
  Page 20
- **A Model of Personality and Emotional Traits**  
  *Margaret McRorie, Ian Sneddon, Etienne de Sevin, Elisabetta Bevacqua, and Catherine Pelachaud*  
  Page 27
- **BDI-Based Development of Virtual Characters with a Theory of Mind**  
  *Michal P. Sindlar, Mehdi M. Dastani, and John-Jules Ch. Meyer*  
  Page 34
- **How Do Place and Objects Combine? “What-Where” Memory for Human-Like Agents**  
  *Cyril Brom, Tomáš Korenko, and Jiří Lukavský*  
  Page 42
- **EXSTASIS – An Extended Status Model for Social Interactions**  
  *Martin Rumpler*  
  Page 49
- **Authoring Behaviour for Characters in Games Reusing Abstracted Plan Traces**  
  *Antonio A. Sánchez-Ruiz, David Llansó, Marco Antonio Gómez-Martín, and Pedro A. González-Calero*  
  Page 56
Gesture and Bodily Behavior

Modeling Peripersonal Action Space for Virtual Humans Using Touch and Proprioception ................................................................. 63

Nhung Nguyen and Ipke Wachsmuth

GNetIC – Using Bayesian Decision Networks for Iconic Gesture Generation ................................................................. 76

Kirsten Bergmann and Stefan Kopp

A Probabilistic Model of Motor Resonance for Embodied Gesture Perception ................................................................. 90

Amir Sadeghipour and Stefan Kopp

A Groovy Virtual Drumming Agent .................................................. 104

Axel Tidemann, Pinar Oztürk, and Yiannis Demiris

Motion Synthesis Using Style-Editable Inverse Kinematics ............ 118

Gengdai Liu, Zhigeng Pan, and Ling Li

Methodologies for the User Evaluation of the Motion of Virtual Humans ................................................................. 125

Sander E.M. Jansen and Herwin van Welbergen

Evaluation

A Study into Preferred Explanations of Virtual Agent Behavior ........ 132

Maaike Harbers, Karel van den Bosch, and John-Jules Ch. Meyer

Evaluating Adaptive Feedback in an Educational Computer Game ..... 146

Cristina Conati and Micheline Manske

Media Equation Revisited: Do Users Show Polite Reactions towards an Embodied Agent? .................................................. 159

Laura Hoffmann, Nicole C. Krämer, Anh Lam-chi, and Stefan Kopp

The Lessons Learned in Developing Multi-user Attentive Quiz Agents ............................................................................. 166

Hung-Hsuan Huang, Takuya Furukawa, Hiroki Ohashi, Aleksandra Cerekovic, Yuji Yamaoka, Igor S. Pandzic, Yukiko Nakano, and Toyoaki Nishida

On-Site Evaluation of the Interactive COHIBIT Museum Exhibit ...... 174

Patrick Gebhard and Susanne Karsten

Evaluating an Algorithm for the Generation of Multimodal Referring Expressions in a Virtual World: A Pilot Study ......................... 181

Werner Breitfuss, Ielka van der Sluis, Saturnino Luz, Helmut Prendinger, and Mitsuru Ishizuka
### Facial Expression and Gaze

- **Expression of Emotions Using Wrinkles, Blushing, Sweating and Tears**  
  *Celso M. de Melo and Jonathan Gratch*  
  188

- **Impact of Expressive Wrinkles on Perception of a Virtual Character’s Facial Expressions of Emotions**  
  *Matthieu Courgeon, Stéphanie Buisine, and Jean-Claude Martin*  
  201

- **Real-Time Crying Simulation**  
  *Wijnand van Tol and Arjan Egges*  
  215

- **Breaking the Ice in Human-Agent Communication: Eye-Gaze Based Initiation of Contact with an Embodied Conversational Agent**  
  *Nikolaus Bee, Elisabeth André, and Susanne Tober*  
  229

- **An Approach for Creating and Blending Synthetic Facial Expressions of Emotion**  
  *Meeri Mäkäräinen and Tapio Takala*  
  243

- **Animating Idle Gaze in Public Places**  
  *Angelo Cafaro, Raffaele Gaito, and Hannes Högli Vilhjálmsson*  
  250

### Culture, Affect and Empathy

- **Virtual Agents and 3D Virtual Worlds for Preserving and Simulating Cultures**  
  *Anton Bogdanovych, Juan Antonio Rodriguez, Simeon Simoff, and Alex Cohen*  
  257

- **One for All or One for One? The Influence of Cultural Dimensions in Virtual Agents’ Behaviour**  
  *Samuel Mascarenhas, João Dias, Rui Prada, and Ana Paiva*  
  272

- **Combining Facial and Postural Expressions of Emotions in a Virtual Character**  
  *Céline Clavel, Justine Plessier, Jean-Claude Martin, Laurent Ach, and Benoît Morel*  
  287

- **Expression of Moral Emotions in Cooperating Agents**  
  *Celso M. de Melo, Liang Zheng, and Jonathan Gratch*  
  301

- **Evaluating Emotive Character Animations Created with Procedural Animation**  
  *Yueh-Hung Lin, Chia-Yang Liu, Hung-Wei Lee, Shwu-Lih Huang, and Tsai-Yen Li*  
  308
Modeling Emotional Expressions as Sequences of Behaviors .......... 316
    Radoslaw Niewiadomski, Sylwia Hyniewska, and
    Catherine Pelachaud

I Feel What You Feel: Empathy and Placebo Mechanisms for
Autonomous Virtual Humans ........................................... 323
    Julien Saunier, Hazaël Jones, and Domitile Lourdeaux

Predicting User Psychological Characteristics from Interactions with
Empathetic Virtual Agents ............................................ 330
    Jennifer Robison, Jonathan Rowe, Scott McQuiggan, and
    James Lester

When Human Coders (and Machines) Disagree on the Meaning of
Facial Affect in Spontaneous Videos ............................... 337
    Mohammed E. Hoque, Rana el Kaliouby, and Rosalind W. Picard

Agents in Virtual Worlds and Games

Spontaneous Avatar Behavior for Human Territoriality ............... 344
    Claudio Pedica and Hannes Högni Vilhjálmssson

Tree Paths: A New Model for Steering Behaviors ........................ 358
    Rafael Araújo Rodrigues, Alessandro de Lima Bicho,
    Marcelo Paravisi, Cláudio Rosito Jung, Léo Pini Magalhães, and
    Soraia Raupp Musse

A Virtual Tour Guide for Virtual Worlds ................................ 372
    Dusan Jan, Antonio Roque, Anton Leuski, Jacki Morie, and
    David Traum

Design and Implementation of a Virtual Salesclerk ........................ 379
    Christopher Mumme, Niels Pinkwart, and Frank Loll

Duality of Actor and Character Goals in Virtual Drama ............... 386
    Maria Arinbjarnar and Daniel Kudenko

Tools and Motion Capture

EMBR – A Realtime Animation Engine for Interactive Embodied
Agents .......................................................... 393
    Alexis Heloir and Michael Kipp

Augmenting Gesture Animation with Motion Capture Data to Provide
Full-Body Engagement .............................................. 405
    Pengcheng Luo, Michael Kipp, and Michael Neff
ION Framework – A Simulation Environment for Worlds with Virtual Agents .................................................. 418
Marco Vala, Guilherme Raimundo, Pedro Sequeira, Pedro Cuba,
Rui Prada, Carlos Martinho, and Ana Paiva

DTask and LiteBody: Open Source, Standards-Based Tools for Building Web-Deployed Embodied Conversational Agents ........................................ 425
Timothy Bickmore, Daniel Schulman, and George Shaw

A Combined Semantic and Motion Capture Database for Real-Time Sign Language Synthesis .................................................. 432
Charly Awad, Nicolas Courty, Kyle Duarte, Thibaut Le Naour, and Sylvie Gibet

Mediating Performance through Virtual Agents ........................................ 439
Gabriella Giannachi, Marco Gillies, Nick Kaye, and David Swapp

Speech and Dialogue

Teaching Computers to Conduct Spoken Interviews: Breaking the Realtime Barrier With Learning .................................................. 446
Gudny Ragna Jonsdottir and Kristinn R. Thórisson

Should Agents Speak Like, um, Humans? The Use of Conversational Fillers by Virtual Agents .................................................. 460
Laura M. Pfeifer and Timothy Bickmore

Turn Management or Impression Management? ........................................ 467
Mark ter Maat and Dirk Heylen

Human-Centered Distributed Conversational Modeling: Efficient Modeling of Robust Virtual Human Conversations ........................................ 474
Brent Rossen, Scott Lind, and Benjamin Lok

Posters

Issues in Dynamic Generation of Sign Language Utterances for a Web 2.0 Virtual Signer .................................................. 482
Annelies Braffort, Jean-Paul Sansonnet, and Cyril Verrecchia

Towards More Human-Like Episodic Memory for More Human-Like Agents .................................................. 484
Cyril Brom and Jiří Lukavský
RealActor: Character Animation and Multimodal Behavior Realization System ................................................................. 486
   Aleksandra Cerekovic, Tomislav Pejza, and Igor S. Pandzic

Locomotion Animation by Using Riding Motion .......................... 488
   Sung June Chang and Byung Tae Choi

Automated Generation of Emotive Virtual Humans ..................... 490
   Joon Hao Chuah, Brent Rossen, and Benjamin Lok

Little Mozart: Establishing Long Term Relationships with (Virtual) Companions ................................................................. 492
   Secundino Correia, Sandra Pedrosa, Juliana Costa, and Marco Estanqueiro

Real-Time Backchannel Selection for ECAs According to User’s Level of Interest ............................................................ 494
   Etienne de Sevin and Catherine Pelachaud

Virtual Autonomous Agents in an Informed Environment for Risk Prevention ................................................................. 496
   Lydie Edward, Domitile Lourdeaux, and Jean-Paul Barthes

An Immersive Approach to Evaluating Role Play ....................... 498
   Lynne Hall, Ruth Aylett, and Ana Paiva

At the Virtual Frontier: Introducing Gunslinger, a Multi-Character, Mixed-Reality, Story-Driven Experience .............................. 500

Designing an Educational Game Facilitating Children’s Understanding of the Development of Social Relationships Using IVAs with Social Group Dynamics ......................................................... 502
   Wan Ching Ho and Kerstin Dautenhahn

Real-Time Rendering of Skin Changes Caused by Emotions .......... 504
   Yvonne Jung, Christine Weber, Jens Keil, and Tobias Franke

Extensions and Applications of Pogamut 3 Platform .................. 506
   Rudolf Kadlec, Jakub Gemrot, Michal Bída, Ondřej Burkert, Jan Havlíček, Lukáš Zemčák, Radek Pibil, Radim Vansa, and Cyril Brom

Interactants’ Most Intimate Self-disclosure in Interactions with Virtual Humans ................................................................. 508
   Sin-Hwa Kang and Jonathan Gratch
Evaluation of Novice and Expert Interpersonal Interaction Skills with a Virtual Patient ................................................................. 511
  Patrick G. Kenny, Thomas D. Parsons, Jonathan Gratch, and Albert A. Rizzo

Voice Feed-Backing for Video Game Players by Real-Time Sequential Emotion Estimation from Facial Expression .......................... 513
  Kiyohshi Nosu, Tomoya Kurokawa, Hiroto Horita, Yoshitarou Ohhazama, and Hiroki Takeda

RMRSBot – Using Linguistic Information to Enrich a Chatbot .......... 515
  Tina Klüwer

Cultural Differences in Using Facial Parts as Cues to Recognize Emotions in Avatars .......................................................... 517
  Tomoko Koda and Zsófia Ruttkay

Adaptive Mind Agent ................................................................... 519
  Brigitte Krenn, Marcin Skowron, Gregor Sieber, Erich Gstrein, and Jörg Irran

Study on Sensitivity to ECA Behavior Parameters ....................... 521
  Ladislav Kunc and Pavel Slavík

Influence of Music and Sounds in an Agent-Based Storytelling Environment ................................................................. 523
  António Leonardo, António Brisson, and Ana Paiva

Widening the Evaluation Net ....................................................... 525
  Brian Mac Namee and Mark Dunne

Are ECAs More Persuasive than Textual Messages? ....................... 527
  Irene Mazzotta, Nicole Novielli, and Berardina De Carolis

Adapting a Virtual Agent to Users’ Vocabulary and Needs ............ 529
  Ana Cristina Mendes, Rui Prada, and Luísa Coheur

Information State Based Multimodal Dialogue Management: Estimating Conversational Engagement from Gaze Information ........ 531
  Yukiko Nakano and Yuji Yamaoka

Synthetic Characters with Personality and Emotion ..................... 533
  Ary Fagundes Bressane Neto and Flávio Soares Corrêa da Silva

Modelling and Implementing Irrational and Subconscious Interpersonal and Intra-personal Processes ..................................... 535
  Andrew Nicolson

A Method to Detect an Atmosphere of “Involvement, Enjoyment, and/or Excitement” in Multi-user Interaction .......................... 537
  Yoshimasa Ohmoto, Takashi Miyake, and Toyoaki Nishida
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Want to Know How to Play the Game? Ask the ORACLE!</td>
<td>539</td>
</tr>
<tr>
<td>Paola Rizzo, Michael Kriegel, Rui Figueiredo, MeiYii Lim, and Ruth Aylett</td>
<td></td>
</tr>
<tr>
<td>Varying Personality in Spoken Dialogue with a Virtual Human</td>
<td>541</td>
</tr>
<tr>
<td>Michael Rushforth, Sudeep Gandhe, Ron Artstein, Antonio Roque, Sarrah Ali, Nicolle Whitman, and David Traum</td>
<td></td>
</tr>
<tr>
<td>Agent-Assisted Navigation for Virtual Worlds</td>
<td>543</td>
</tr>
<tr>
<td>Fahad Shah, Philip Bell, and Gita Sukthankar</td>
<td></td>
</tr>
<tr>
<td>A Real-Time Transfer and Adaptive Learning Approach for Game Agents in a Layered Architecture</td>
<td>545</td>
</tr>
<tr>
<td>Yingying She and Peter Grogono</td>
<td></td>
</tr>
<tr>
<td>Intelligent Tutoring Games with Agent Modeling</td>
<td>547</td>
</tr>
<tr>
<td>D.W.F. van Krevelen</td>
<td></td>
</tr>
<tr>
<td>The Impact of Different Embodied Agent-Feedback on Users’ Behavior</td>
<td>549</td>
</tr>
<tr>
<td>Astrid von der Pütten, Christian Reipen, Antje Wiedmann, Stefan Kopp, and Nicole C. Krämer</td>
<td></td>
</tr>
<tr>
<td>Web-Based Evaluation of Talking Heads: How Valid Is It?</td>
<td>552</td>
</tr>
<tr>
<td>Benjamin Weiss, Christine Kühnel, Ina Wechsung, Sebastian Möller, and Sascha Fagel</td>
<td></td>
</tr>
<tr>
<td>GALA Papers</td>
<td></td>
</tr>
<tr>
<td>Gérard: Interacting with Users of French Sign Language</td>
<td>554</td>
</tr>
<tr>
<td>Charly Awad, Kyle Duarte, and Thibaut Le Naour</td>
<td></td>
</tr>
<tr>
<td>Method for Custom Facial Animation and Lip-Sync in an Unsupported Environment, Second Life™</td>
<td>556</td>
</tr>
<tr>
<td>Eric Chance and Jacki Morie</td>
<td></td>
</tr>
<tr>
<td>Spectators, a Joy to Watch</td>
<td>558</td>
</tr>
<tr>
<td>Ionut Damian, Kathrin Janowski, and Dominik Sollfrank</td>
<td></td>
</tr>
<tr>
<td>IVAN – Intelligent Interactive Virtual Agent Narrators</td>
<td>560</td>
</tr>
<tr>
<td>Ivan Gregor, Michael Kipp, and Jan Miksatko</td>
<td></td>
</tr>
<tr>
<td>CREATeR – An Authoring Framework for Virtual Actors</td>
<td>562</td>
</tr>
<tr>
<td>Ido A. Iurge, Rogério E. da Silva, Pedro R. Ribeiro, Abel B. Soares, and Manuel Filipe dos Santos</td>
<td></td>
</tr>
</tbody>
</table>
The Multi-modal Rock-Paper-Scissors Game .......................... 564
   György Kovács, Csaba Makara, and Attila Fazekas

A Gesture Analysis and Modeling Tool for Interactive Embodied
Agents .................................................................................. 566
   Quan Nguyen and Michael Kipp

Author Index .............................................................................. 569