

# Table of Contents

## Keynote Speech

Interactive Pedagogical Drama: Carmen's Bright IDEAS Assessed.....1	
<i>S.C. Marsella</i>	

## Interface Agents and Conversational Agents

Happy Chatbot, Happy User.....5	
<i>G. Tatai, A. Csordás, Á. Kiss, A. Szaló, L. Laufer</i>	

Interactive Agents Learning Their Environment.....13	
<i>M. Hildebrand, A. Eliëns, Z. Huang, C. Visser</i>	

Socialite in derSpittelberg: Incorporating Animated Conversation into a Web-Based Community-Building Tool.....18	
<i>B. Krenn, B. Neumayr</i>	

FlurMax: An Interactive Virtual Agent for Entertaining Visitors in a Hallway.....23	
<i>B. Jung, S. Kopp</i>	

When H.C. Andersen Is Not Talking Back.....27	
<i>N.O. Bernsen</i>	

## Emotion and Believability

Emotion in Intelligent Virtual Agents: The Flow Model of Emotion.....31	
<i>L. Morgado, G. Gaspar</i>	

The Social Credit Assignment Problem.....39	
<i>W. Mao, J. Gratch</i>	

Adding the Emotional Dimension to Scripting Character Dialogues.....48	
<i>P. Gebhard, M. Kipp, M. Klesen, T. Rist</i>	

Synthetic Emotension.....57	
<i>C. Martinho, M. Gomes, A. Paiva</i>	

FantasyA – The Duel of Emotions.....62	
<i>R. Prada, M. Vala, A. Paiva, K. Hook, A. Bullock</i>	

Double Bind Situations in Man-Machine Interaction under Contexts of Mental Therapy.....67	
<i>T. Nomura</i>	

## **Expressive Animation**

Happy Characters Don't Feel Well in Sad Bodies!.....	72
<i>M. Vala, A. Paiva, M.R. Gomes</i>	
Reusable Gestures for Interactive Web Agents .....	80
<i>Z. Ruttkay, Z. Huang, A. Eliëns</i>	
A Model of Interpersonal Attitude and Posture Generation .....	88
<i>M. Gillies, D. Ballin</i>	
Modelling Gaze Behaviour for Conversational Agents .....	93
<i>C. Pelachaud, M. Bilvi</i>	
A Layered Dynamic Emotion Representation for the Creation of Complex Facial Expressions.....	101
<i>E. Tanguy, P. Willis, J. Bryson</i>	
Eye-Contact Based Communication Protocol in Human-Agent Interaction .....	106
<i>H. Nonaka, M. Kurihara</i>	

## **Embodiment and Situatedness**

Embodied in a Look: Bridging the Gap between Humans and Avatars .....	111
<i>N. Courty, G. Breton, D. Pelé</i>	
Modelling Accessibility of Embodied Agents for Multi-modal Dialogue in Complex Virtual Worlds .....	119
<i>D. Sampath, J. Rickel</i>	
Bridging the Gap between Language and Action.....	127
<i>T. Takenobu, K. Tomofumi, S. Suguru, O. Manabu</i>	
VideoDIMs as a Framework for Digital Immortality Applications .....	136
<i>D. DeGroot</i>	

## **Motion Planning**

Motion Path Synthesis for Intelligent Avatar .....	141
<i>F. Liu, R. Liang</i>	
"Is It Within My Reach?" – An Agents Perspective.....	150
<i>Z. Huang, A. Eliëns, C. Visser</i>	
Simulating Virtual Humans Across Diverse Situations .....	159
<i>B. Mac Namee, S. Dobbyn, P. Cunningham, C. O'Sullivan</i>	
A Model for Generating and Animating Groups of Virtual Agents .....	164
<i>M. Becker Villamil, S. Raupp Musse, L.P. Luna de Oliveira</i>	

Scripting Choreographies .....	170
<i>S.M. Grünvogel, S. Schwichtenberg</i>	
Behavioural Animation of Autonomous Virtual Agents Helped by Reinforcement Learning .....	175
<i>T. Conde, W. Tambellini, D. Thalmann</i>	
<b>Modells, Architectures, and Tools</b>	
Designing Commercial Applications with Life-like Characters .....	181
<i>A. Reinecke</i>	
Comparing Different Control Architectures for Autobiographic Agents in Static Virtual Environments .....	182
<i>W.C. Ho, K. Dautenhahn, C.L. Nehaniv</i>	
KGBot: A BDI Agent Deploying within a Complex 3D Virtual Environment .....	192
<i>I.-C. Kim</i>	
Using the BDI Architecture to Produce Autonomous Characters in Virtual Worlds .....	197
<i>J.A. Torres, L.P. Nedel, R.H. Bordini</i>	
Programmable Agent Perception in Intelligent Virtual Environments .....	202
<i>S. Vosinakis, T. Panayiotopoulos</i>	
Mediating Action and Music with Augmented Grammars .....	207
<i>P. Casella, A. Paiva</i>	
Charisma Cam: A Prototype of an Intelligent Digital Sensory Organ for Virtual Humans .....	212
<i>M. Bechinie, K. Grammer</i>	
<b>Mobile and Portable IVAs</b>	
Life-like Characters for the Personal Exploration of Active Cultural Heritage .....	217
<i>A. Krüger</i>	
Agent Chameleons: Virtual Agents Real Intelligence .....	218
<i>G.M.P. O'Hare, B.R. Duffy, B. Schön, A.N. Martin, J.F. Bradley</i>	
A Scripting Language for Multimodal Presentation on Mobile Phones .....	226
<i>S. Saeyor, S. Mukherjee, K. Uchiyama, M. Ishizuka</i>	

## Narration and Storytelling

Interacting with Virtual Agents in Mixed Reality Interactive Storytelling .....	231
<i>M. Cavazza, O. Martin, F. Charles, S.J. Mead, X. Marichal</i>	
An Autonomous Real-Time Camera Agent for Interactive Narratives and Games .....	236
<i>A. Hornung, G. Lakemeyer, G. Trogemann</i>	
Solving the Narrative Paradox in VEs – Lessons from RPGs .....	244
<i>S. Louchart, R. Aylett</i>	
That’s My Point! Telling Stories from a Virtual Guide Perspective .....	249
<i>J. Ibanez, R. Aylett, R. Ruiz-Rodarte</i>	
Virtual Actors in Interactivated Storytelling .....	254
<i>I.A. Iurgel</i>	
Symbolic Acting in a Virtual Narrative Environment .....	259
<i>L. Schäfer, B. Bokan, A. Oldroyd</i>	
Enhancing Believability Using Affective Cinematography .....	264
<i>J. Laaksolathi, N. Bergmark, E. Hedlund</i>	
Agents with No Aims: Motivation-Driven Continuous Planning .....	269
<i>N. Avradinis, R. Aylett</i>	

## Evaluation and Design Methodologies

Analysis of Virtual Agent Communities by Means of AI Techniques and Visualization .....	274
<i>D. Kadleček, D. Řehoř, P. Nahodil, P. Slavík</i>	
Persona Effect Revisited .....	283
<i>H. Prendinger, S. Mayer, J. Mori, M. Ishizuka</i>	
Effects of Embodied Interface Agents and Their Gestural Activity .....	292
<i>N.C. Krämer, B. Tietz, G. Bente</i>	
Embodiment and Interaction Guidelines for Designing Credible, Trustworthy Embodied Conversational Agents .....	301
<i>A.J. Cowell, K.M. Stanney</i>	
Animated Characters in Bullying Intervention .....	310
<i>S. Woods, L. Hall, D. Sobral, K. Dautenhahn, D. Wolke</i>	
Embodied Conversational Agents: Effects on Memory Performance and Anthropomorphisation .....	315
<i>R.-J. Beun, E. de Vos, C. Witteman</i>	

Agents across Cultures .....	320
<i>S. Payr, R. Trappl</i>	
<b>Education and Training</b>	
Steve Meets Jack: The Integration of an Intelligent Tutor and a Virtual Environment with Planning Capabilities .....	325
<i>G. Méndez, J. Rickel, A. de Antonio</i>	
Machiavellian Characters and the Edutainment Paradox.....	333
<i>D. Sobral, I. Machado, A. Paiva</i>	
Socially Intelligent Tutor Agents.....	341
<i>D. Heylen, A. Nijholt, R. op den Akker, M. Vissers</i>	
Multimodal Training Between Agents.....	348
<i>M. Rehm</i>	
<b>Posters</b>	
Intelligent Camera Direction in Virtual Storytelling.....	354
<i>B. Bokan, L. Schäfer</i>	
Exploring an Agent-Driven 3D Learning Environment for Computer Graphics Education .....	355
<i>W. Hu, J. Zhu, Z.G. Pan</i>	
An Efficient Synthetic Vision System for 3D Multi-character Systems .....	356
<i>M. Lozano, R. Lucia, F. Barber, F. Grimaldo, A. Lucas, A. Fornes</i>	
Avatar Arena: Virtual Group-Dynamics in Multi-character Negotiation Scenarios.....	358
<i>M. Schmitt, T. Rist</i>	
Emotional Behaviour Animation of Virtual Humans in Intelligent Virtual Environments .....	359
<i>Z. Liu, Z.G. Pan</i>	
Empathic Virtual Agents.....	360
<i>C. Zoll, S. Enz, H. Schaub</i>	
Improving Reinforcement Learning Algorithm Using Emotions in a Multi-agent System.....	361
<i>R. Daneshvar, C. Lucas</i>	
<b>Author Index.....</b>	<b>363</b>



<http://www.springer.com/978-3-540-20003-1>

Intelligent Virtual Agents

4th International Workshop, IVA 2003, Kloster Irsee,

Germany, September 15-17, 2003, Proceedings

Rist, Th.; Aylett, R.; Ballin, D.; Rickel, J. (Eds.)

2003, XVI, 372 p., Softcover

ISBN: 978-3-540-20003-1