Preface

After the huge success of the first German Conference on Multiagent System Technologies (MATES) last year in Erfurt the German Special Interest Group on Distributed Artificial Intelligence together with the steering committee of MATES proudly organized and conducted this international conference for the second time.

The goal of the MATES conference is to constitute a high-quality platform for the presentation and discussion of new research results and system developments. It provides an interdisciplinary forum for researchers, users, and developers, to present and discuss the latest advances in research work, as well as prototyped or fielded systems of intelligent agents. The conference covers the complete range from theory to application of agent and multiagent technologies.

MATES 2004 was conducted
– as an integral part of the 5th International Conference Net.Object Days 2004 along with the
– 8th International Workshop on Cooperative Information Agents (CIA) 2004
– Autumn meeting of FIPA (Foundation for Intelligent Physical Agents)
– Prototype and Product Exhibition of Agent Related Platforms, Frameworks, Systems, Applications, and Tools

As such all these events together may have formed the biggest agent-related event of this year in Europe and one of the biggest worldwide.

The call-for-papers attracted about 60 submissions from all over the world. After a careful reviewing process, the international program committee accepted 22 high-quality papers of particular relevance and quality. The selected contributions cover a wide range of exciting topics, in particular agent analysis and security, agent negotiation and control, agents and software engineering, simulation and agents, and agent policies and testing. Exciting highlights of the conference were the invited talks, by Jim Odell on Agent UML 2.0: Too Radical or Not Radical Enough?, and Cristiano Castelfranchi on Emergence and Cognition: Towards a Synthetic Paradigm in AI and Cognitive Science. Moreover, several agent-related tutorials were conducted.

As editors of this volume, we would like to thank all the authors for their contributions and, especially, the program committee members and the external reviewers who sacrificed their valuable time to review the papers. Their careful, critical, and thoughtful reviews helped not only the authors but also us in putting together a truly convincing program.

There were also some sponsors that helped to conduct this conference in these difficult times. Our highest gratitude goes to the Ministry for Business, Work, and Infrastructure of the state Thuringia (Thüringer Ministerium für Wirtschaft, Arbeit und Infrastruktur), which provided all the support needed to conduct such a big and successful event. A big supporter of MATES was also the Foundation for Intelligent Physical Agents (FIPA), which not only sponsored
this event but also conducted its 2004 autumn meeting in Erfurt at the same time as MATES and Net.ObjectDays.

We would also like to thank Alfred Hofmann from Springer for his support and cooperation in putting this volume together.

Calgary, Berlin, Bremen, Essen
July 2004

Jörg Denzinger
(Program Committee Co-chair)
Gabriela Lindemann
(Program Committee Co-chair)
Ingo J. Timm
(Program Committee Co-chair)
Rainer Unland
(Program Committee Co-chair)
Members of the International Program Committee

Elisabeth Andre (University of Augsburg, Germany)
Bernhard Bauer (University of Augsburg, Germany)
Wolfgang Benn (Chemnitz University of Technology, Germany)
Michael Berger (Siemens AG, Germany)
Cherif Branki (University of Paisley, UK)
Wilfried Brauer (Technische Universität München, Germany)
Hans-Dieter Burkhard (Humboldt University Berlin, Germany)
Monique Calisti (Whitestein AG, Switzerland)
Cristiano Castelfranchi (NRC Rome, Italy)
Elizabeth Chang (Curtin Business School, Perth, Australia)
En Hong Chen (University of Science and Technology, Hefei, P.R. China)
Thomas Christaller (FhG AIS Bonn, Germany)
Paolo Ciancarini (Università di Bologna, Italy)
Rosaria Conte (NRC Rome, Italy)
Stephen Cranefield (University of Otago, New Zealand)
Hanz Czap (University of Trier, Germany)
Ashok Deshpande (Indian Institute of Environment Management, India)
Tharam Dillon (University of Technology, Sydney, Australia)
Mohamed Elammari (Garyounis University, Benghazi, Libya)
Torsten Eymann (University of Freiburg, Germany)
Klaus Fischer (DFKI Saarbrücken, Germany)
Norbert Fuhr (University of Dortmund, Germany)
Ulrich Fuhrbach (University of Koblenz-Landau, Germany)
Ottheim Herzog (University of Bremen, Germany)
Michael N. Huhns (University of South Carolina, USA)
Heinrich Hussmann (Technische Universität Dresden, Germany)
Matthias Jarke (RWTH Aachen, Germany)
Catholijn Jonker (Vrije Universiteit Amsterdam, Netherlands)
Liz Kendall (Monash University, Australia)
Stefan Kirn (University of Hohenheim, Germany)
Franziska Klügl (University of Würzburg, Germany)
Jürgen Klüver (University of Duisburg-Essen, Germany)
Matthias Klusch (DFKI, Germany)
Ryszard Kowalczyk (Swinburne University of Technology, Australia)
Wolfgang Kreutzer (University of Canterbury, New Zealand)
Karl Kurbel (University of Frankfurt/Oder, Germany)
Winfried Lamersdorf (Hamburg University, Germany)
Jürgen Lind (Iteratec GmbH, Germany)
Jiming Liu (Hong Kong Baptist University, China)
Mike Luck (University of Southampton, UK)
Vladimir Marik (Czech Technical University, Prague, Czech Republic)
Jörg Müller (Siemens AG, Germany)
Heinz-Jürgen Müller (BA Mannheim, Germany)
Masoud Nikravesh (University of Berkeley, USA)
VIII Members of the International Program Committee

Marian Nodine (Telcordia, USA)
James J. Odell (Agentis Software, USA)
Gregory O’Hare (University College Dublin, Ireland)
Lin Padgham (RMIT, Australia)
Michal Pechoucek (Czech Technical University, Prague, Czech Republic)
Anna Perini (Istituto Trentino di Cultura, Italy)
Paolo Petta (Vienna University of Technology, Austria)
Stefan Poslad (Queen Mary University, UK)
Frank Puppe (University of Würzburg, Germany)
Alois Reitbauer (PROFACTOR, Austria)
Michael M. Richter (University of Kaiserslautern, Germany)
Giovanni Rimassa (FRAMeTech s.r.l., Italy)
Michael Schillo (DFKI, Germany)
Christoph Schlieder (Bamberg University, Germany)
John Shepherdson (British Telecom, UK)
Christina Stoica (University of Duisburg-Essen, Germany)
Frieder Stolzenburg (Hochschule Harz, Germany)
Huaglory Tianfield (Glasgow Caledonian University, UK)
Robert Tolksdorf (Technische Universität Berlin, Germany)
Thomas Uthmann (University of Mainz, Germany)
Georg Weichhart (PROFACTOR, Austria)
Gerhard Weiss (Technische Universität München, Germany)
Danny Weyns (Katholieke Universiteit Leuven, Belgium)
Mike Wooldridge (University of Liverpool, UK)
Lotfi A. Zadeh (University of Berkeley, USA)

External Reviewers

Ralf Berger  
Tibor Bosse  
Lars Brauchbach  
William Gardner  
Andreas Gerber  
Jan Hoffmann  
Sven Jakobi  
Matthias Jüngel  
Helmut Myrritz  
Nicoleta Neagu  
Ralf Neubert  
Alexander Pokahr  
Viara Popova  
Thorsten Scholz  
Amandeep S. Sidhu  
Angelo Susi  
Jim Juan Tan  
Ingo Zinnikus  
Ahmed K. Zohdy
MATES Steering Committee

Hans-Dieter Burkhard (HU Berlin, Germany)
Stefan Kirn (TU Ilmenau, Germany)
Matthias Klusch (DFKI, Germany)
Jörg Müller (Siemens AG, Germany)
Rainer Unland (Universität Duisburg-Essen, Germany)
Gerhard Weiss (TU München, Germany)
Multiagent System Technologies
2004, XIII, 340 p., Softcover
ISBN: 978-3-540-23222-3