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Andreas Günter
HITeC e. V.
Universität Hamburg
Fachbereich Informatik
Vogt-Kölln-Str. 30, 22527 Hamburg, Germany
E-mail: guenter@informatik.uni-hamburg.de

Rudolf Kruse
OvG-Universität Magdeburg
Fakultät für Informatik
Universitätsplatz 2, 39106 Magdeburg, Germany
E-mail: kruse@iws.cs.uni-magdeburg.de

Bernd Neumann
Universität Hamburg
Fachbereich Informatik
Vogt-Kölln-Str. 30, 22527 Hamburg, Germany
E-mail: neumann@informatik.uni-hamburg.de

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Preface

The German Conference on Artificial Intelligence is a traditional and unique yearly event which brings together the German AI community and an increasing number of international guests. While not as old as IJCAI (which first took place in 1969), KI 2003 marks a tradition which officially began in 1975 with a workshop of the working group "Künstliche Intelligenz" of GI. Actually, there was one important AI conference in Germany before this, the "Fachtagung Cognitive Verfahren und Systeme" (Cognitive Methods and Systems) held in Hamburg in April 1973.

This volume contains the proceedings of the 26th Annual German Conference on Artificial Intelligence. For the technical program we had 90 submissions from 22 countries. Out of these contributions 18 papers were accepted for oral presentation and 24 papers for poster presentation. The acceptance criteria were set to meet high international standards. Poster presenters were given the additional opportunity to summarize their papers in three minute spotlight presentations. Oral, spotlight as well as the poster presentations were then scheduled in an interesting conference program, summarized in the book you have before you.

The contributions in this volume reflect the richness and diversity of artificial intelligence research and represent several important developments in the field. As a first highlight, we would like to mention work on multimodal information processing. Multimodal aspects are addressed in several contributions, for example, on information fusion, vision-language integration, dialogue control with integrated gesture, and facial expression analysis. The interest in multimodal information processing is a positive indicator for integration efforts across subfield boundaries. Another interesting development is the integration of cognitive modeling with AI engineering tasks. Advanced user interfaces provide an important motivation, as human cognitive mechanisms and constraints have to be considered when shaping human-computer interactions. The interest in cognitive modeling may also reflect a certain amount of frustration about more formal approaches to human-type reasoning. More and more advanced applications – for example in robotics, decision making, high-level vision, diagnosis, planning – ask for some sort of common-sense integration, which is still difficult to provide in a strictly formal framework. Hence, high-level cognitive empiricism is enjoying a revival. In addition to application-oriented work, this volume also features excellent contributions on formal foundations – one of the traditional strengths of German AI. As the Semantic Web and the demand for ontologies increase in importance, progress in formal knowledge representation, in particular in description logics, is quite appreciated.

The paper "Applied Connectionistic Methods in Computer Vision to Compare Segmented Images" by S. Bischoff (Fraunhofer Institute "Heinrich Hertz" in Berlin), D. Reuss, and F. Wysotzki (both Technical University of Berlin) was selected for the Springer Best Paper Award by the program committee. Congratulations to the authors for their excellent contribution.

This volume also contains contributions corresponding to the five invited talks at KI 2003. We were delighted that Nick Jennings (University of Sout-

hampton), Daniel Keim (University of Konstanz), Erik Sandewall (University of Linköping), Rudi Studer (University of Karlsruhe), and Wolfgang Wahlster (DFKI Saarbrücken) accepted our invitation to present keynote lectures on important AI topics.

Organizing a conference such as this one is not possible without the support of many individuals. As for the technical program, we thank all the authors who submitted papers to the conference. We are most grateful to the members of the program committee and all the additional reviewers for providing timely, qualified reviews and participating in the discussion during the paper selection process. We are very grateful to Christopher Habel, who served as the Workshop Chair, Wolfgang Menzel, who helped to organize the poster sessions, Bärbel Mertsching who was responsible for the industrial exhibition, and Thorsten Krebs who created the website.

Christian Döring has been the backbone on several electronic issues, starting from the electronic paper submission with the ConfMan system all the way to the assembly of the final proceedings.

July 2003 Andreas Günter, Rudolf Kruse, and Bernd Neumann

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