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Preface

KI 2008 was the 31st Annual German Conference on Artificial Intelligence held September 23–26 at the University of Kaiserslautern and the German Research Center for Artificial Intelligence DFKI GmbH in Kaiserslautern, Germany. The conference series started in 1975 with the German Workshop on AI (GWAI), which took place in Bonn, and represents the first forum of its type for the German AI Community. Over the years AI has become a major field in computer science in Germany involving a number of successful projects that received much international attention. Today KI conferences are international forums where participants from academia and industry from all over the world meet to exchange their recent research results and to discuss trends in the field. Since 1993 the meeting has been called the "Annual German Conference on Artificial Intelligence," designated by the German acronym KI.

This volume contains the papers selected out of 77 submissions, including a number of submissions from outside German-speaking countries. In total, 15 submissions (19%) were accepted for oral and 30 (39%) for poster presentation. Oral presentations at the conference were single track. Because of this, the choice of presentation form (oral, poster) was based on how well reviews indicated that the paper would fit into one or the other format. The proceedings allocate the same space to both types of papers.

In addition, we selected six papers that show high application potential describing systems or prototypical implementations of innovative AI technologies. They are also included in this volume as two-page extended abstracts.

All papers cover important areas such as pattern recognition, multi-agent systems, machine learning, natural language processing, constraint reasoning, knowledge representation and management, planning, and temporal reasoning. In the afternoon of September 25, we organized a session in which the best papers selected by the Program Committee were presented. Congratulations to the authors for their excellent contribution. The best paper selected for the Springer Best Paper Award was honored by a special ceremony during the conference dinner.

In addition to the technical papers, this volume contains an abstract and a paper of the two invited presentations of the conference:

- Randy Goebel (University of Alberta, Edmonton, Canada): Folk Reducibility and AI-Complete Problems
- Yuzuru Tanaka (Hokkaido University, Sapporo, Japan): Meme Media and Knowledge Federation

A large number of people were involved in making this conference a success. As for the technical program, we thank all those authors who submitted papers to the conference and provided the basis from which we could select a

high-quality technical program. The members of the Program Committee and the additional reviewers helped us in this process by providing timely, qualified reviews and participating in the discussion during the paper selection process. Many thanks to all of you! We also wish to acknowledge the generosity of our sponsors, namely, Microsoft Deutschland, Deutsche Telekom Laboratories, IDS Scheer, SAP, Living-e, Springer, and DFKI, which invited us to its 20th anniversary dinner in the historical Fruchthalle in downtown Kaiserslautern.

Last but not least, we are especially very grateful to Stefan Zinsmeister who did a tremendous job as the Local Arrangements Chair and the communication hub between all of us. We would also like to thank Jane Bensch and Brigitte Selzer as members of the team taking care of the many important but time-consuming details that made up KI 2008.

This volume has been produced using the EasyChair system[1]. We would like to express our gratitude to its author Andrei Voronkov. Finally, we thank Springer for its continuing support in publishing this series of conference proceedings.

July 2008

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[1] http://www.easychair.org

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