The Twenty-Fifth Annual German Conference on Artificial Intelligence (KI- 2002)

Jana Koehler and Gerhard Lakemeyer

■ The Twenty-Fifth Annual German Conference on Artificial Intelligence (KI-2002) was held 16 to 20 September 2003 in Aachen (Aix-La-Chapelle), Germany. KI is the main German national conference in AI, but it addresses an international audience by adopting English as the conference language and having the proceedings published in the Springer Lecture Notes in AI series.

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Of the 58 submissions from 17 countries, 20 were selected for presentation by the program committee, chaired by Jana Koehler, IBM Zurich, and Gerhard Lakemeyer, RWTH Aachen. Matthias Jarke, RWTH Aachen, was the general chair. The papers covered a broad range of areas, including multiagent systems, machine learning, natural language processing, constraint reasoning, knowledge representation, planning, and temporal reasoning. The paper by Franz Baader and Anni-Yasmin Turhan, TU Dresden, "On the Problem of Computing Small Representations of Least Common Subsumers," received the best paper award, sponsored by Springer-Verlag. This description logic paper showed, among other things, how lazy unfolding of concept definitions can dramatically speed up the computation of least common subsumers in practice.

Other highlights of the conference were the three invited talks by Elisabeth André, Augsburg; Michael Wooldridge, Liverpool; and Dieter Fensel, Innsbruck. André gave an overview of her recent work on intelligent user interfaces that use adaptable teams of virtual actors. Wooldridge presented a new temporal and epistemic logic and its applications to multiagent systems. Among other things, the logic can express statements such as "group G can cooperate to bring about if it is common knowledge in G that." Fensel shared his vision that web services will transform the web into a distributed device of computation. He spoke, among other things, about ongoing efforts to develop a modeling framework for web services, which could help turn this vision into reality. For those interested in more details, the slides of all the invited presentations are available at the conference web site.[1]

The fact that two of the invited talks were concerned with the theory and practice of multiagents was no accident because multiagent systems were a special focus of the conference. In this regard, the presentation of the three priority programs on agent technology, sponsored by the German Science Foundation (DFG), deserve special mention. Priority programs are coordinated six-year research efforts with 10 to 20 partners across Germany. In the first program, Socionics—Investigating and Modeling Artificial Societies, AI researchers and sociologists have joined forces to apply sociological theories to the design of large-scale multiagent systems, use computer models to test and better understand sociological theories, and gain new insights into hybrid human-computer systems. In the second program, Intelligent Agents and Realistic Commercial Application Scenarios, researchers from management science, information systems, and AI collaborate to apply agent technology to large commercial application scenarios in the information and material goods logistics domain. Finally, the third program, Cooperating Teams of Mobile Robots in Dynamic Environments, aims at advancing the state of the art in multirobot systems. By focusing on the soccer domain, this research is perhaps the largest funded effort in the context of RoboCup. At the conference, overviews of all three programs were given, followed by a lively discussion on the power and limits of agent technology. This event also marked the first time that members of the three priority programs actually met, perhaps leading to fruitful interactions in the future between the groups.

Two of the three programs also held meetings concurrent with other workshops preceding the main conference. Except for the workshop on applications of description logics, fitting with the special focus of KI-2002, all others were concerned with multiagent systems. The topics were

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IEA/AIE-2004 continues the tradition of emphasizing applications of artificial intelligence and expert/knowledge-based systems to engineering and industrial problems as well as application of intelligent systems technology to solve real-life problems. Numerous related topics are considered and are listed on the conference URL http://www.iea-aie2004.org.

Authors are invited to submit electronically (1) a key word listing, and (2) their paper, written in English, of up to 10 single spaced pages, presenting the results of original research or innovative practical applications relevant to the conference. Practical experiences with state-of-the-art AI methodologies are also acceptable when they reflect lessons of unique value. Shorter works, up to 6 pages, may be submitted as "short papers" representing work in progress or suggesting research directions. Submissions are due by **October 31, 2003**, as indicated in the instructions on the conference web site http://www.iea-aie2004.org. Additional details may be obtained from the web site or Dr. Bob Orchard, IEA/AIE Program Chair, Institute for Information Technology, National Research Council of Canada, 1500 Montreal Road, M-50, Ottawa, Ontario K1A 0R6, Canada; FAX +1 613-993-7250.

General conference information can be sought from the General Chair at the following address: Dr. Moonis Ali, General Chair of IEA/AIE-2004, Southwest Texas State University, Department of Computer Science, 601 University Drive, San Marcos TX 78666-4616 USA; E-mail: ma04@swt.edu.

cognitive agents, conflict resolution among agents, models of artificial and hybrid societies, multiagent interoperability, and foundations of multiagent systems from an economic theory perspective.[2]

The next German AI conference will take place in Hamburg, Germany, on 15 to 18 September.[3]

Notes

1. ki2002.rwth-aachen.de.

2. Links to the workshops and papers presented can be found at the conference web site, ki2002.rwth-aachen.de.

3. For details, see ki2003.de.

Reference

Jarke, M.; Koehler, J.; and Lakemeyer, G. 2002. *KI- 2002: Advances in Artificial Intelligence*. Lecture Notes in Artificial Intelligence 2479. Heidelberg, Germany: Springer-Verlag.

Jana Koehler is a research staff member at the IBM Research Lab in Zurich where she works on new middleware technology for the integration and automation of business processes based on webservices. Her current research interests are centered on work-flow technology, the synthesis of intelligent controllers, and architectures for autonomic systems. Previously, she worked at the German Research Center for AI, was an assistant professor at the University of Freiburg, and a project leader at Schindler Elevators R&D.

Gerhard Lakemeyer received his Ph.D. from the University of Toronto in 1990. He then moved to the University of Bonn, and since 1997, he has been an associate professor in the Department of Computer Science at RWTH Aachen, Germany, where he heads the Knowledge-Based Systems Group. His research interests include tractable forms of reasoning and the high-level control of robots. He has been on numerous program committees and is currently an associate editor of the *Journal of Artificial Intelligence Research*.