

Lecture Notes in Artificial Intelligence 5803

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Bärbel Mertsching Marcus Hund
Zaheer Aziz (Eds.)

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Jörg Siekmann, University of Saarland, Saarbrücken, Germany

Wolfgang Wahlster, DFKI and University of Saarland, Saarbrücken, Germany

Volume Editors

Bärbel Mertsching

Marcus Hund

Zaheer Aziz

University of Paderborn, GET Lab

Pohlweg 47-49, 33098 Paderborn, Germany

E-mail: {mertsching, hund, aziz}@get.uni-paderborn.de

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Preface

The 32nd Annual German Conference on Artificial Intelligence, KI 2009 (KI being the German acronym for AI), was held at the University of Paderborn, Germany on September 15–18, 2009, continuing a series of successful events. Starting back in 1975 as a national meeting, the conference now gathers researchers and developers from academic fields and industries worldwide to share their research results covering all aspects of artificial intelligence. This year we received submissions from 23 countries and 4 continents. Besides the international orientation, we made a major effort to include as many branches of AI as possible under the roof of the KI conference. A total of 21 area chairs representing different communities within the field of AI selected further members of the program committee and helped the local organizers to acquire papers. The new approach appealed to the AI community: we had 126 submissions, which constituted an increase of more than 50%, and which resulted in 14 parallel sessions on the following topics

agents and intelligent virtual environments
AI and engineering
automated reasoning
cognition
evolutionary computation Robotics
experience and knowledge management
history and philosophical foundations
knowledge representation and reasoning
machine learning and mining
natural language processing
planning and scheduling
spatial and temporal reasoning
vision and perception

offering cutting edge presentations and discussions with leading experts. Thirty-one percent of the contributions came from outside German-speaking countries.

This volume contains the papers and the posters selected for presentation after a thorough review process (three reviews per paper). Sixty-one percent of the submissions could be accepted for oral presentation. The best papers selected for the Springer Best Paper Award were honored in a special ceremony during the conference dinner.

As in previous years, priority was given to workshops and tutorials, for which an entire day was reserved. To our great pleasure 12 workshops and 5 tutorials could be offered, which constituted a new record of active (and passive)

participation at the KI conference. These are covered in a separate volume. The conference website <http://ki2009.upb.de> provides information and references to their contents.

While the parallel sessions of the main conference and the workshops encouraged the exchange of recent research results and the discussion of trends in the field, 11 invited talks addressed all participants of the conference and helped to bridge the gaps between the different branches of AI research.

In addition to the scientific program of the conference, three further layers were addressed:

- AI and automation
- AI in the current excellence clusters, collaborative research centers and graduate schools, and
- AI at the universities of applied sciences.

This year's major theme was the impact of AI methods and theories on the engineering domain. Nowadays, AI can be found everywhere in this field, in the production process as well as in smart products, although very often the influence of AI research remains hidden. The special focus on AI and automation presented state-of-the-art topics in the main conference as well as in the accompanying exhibition and helped to close the gap between academia and industrial applications.

We are proud that we could host the first AI mashup challenge at a KI conference, enabling all participants of the conference to experience new forms of interactive user participation and vote for the best mashups, a new breed of web-based data integration application that is sprouting up all across the Internet. Further information may be found by following the link: <http://ki09.de/>.

Last but not least, the conference offered ample opportunity to talk to colleagues and friends. Coffee breaks and an interesting social program provided lots of opportunities for networking and made a conference a community event.

Such a big conference is not possible without the help of many people. First of all we would like to thank all colleagues who submitted contributions in the form of papers, workshops, tutorials or other input. Additionally, we thank all those who helped to organize KI 2009 and who are listed on the following pages. The conference management software ConfTool Pro proved very helpful, and its author, Harald Weinreich, gave valuable support. As the conference benefited so much from their generosity, we wish to thank our partners and sponsors. Furthermore, we are especially grateful to our local colleagues, who did a tremendous job in making the conference possible.

August 2009

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