Artificial General Intelligence

Volume Editors

Ben Goertzel
Novamente & Biomind LLC
1405 Bernerd Place
Rockville MD 20851, USA
Email: ben@goertzel.org
www: http://www.goertzel.org

Pascal Hitzler
AIFB
Universität Karlsruhe (TH)
Kollegiengebäude am Ehrenhof 11.40, Room 224
Englerstraße 11 76131 Karlsruhe, Germany
Email: pascal@pascal-hitzler.de
www: http://www.pascal-hitzler.de

Marcus Hutter
CSL@RSISE and SML@NICTA
Australian National University
Room B259, Building 115
Corner of North and Daley Road
Canberra ACT 0200, Australia
Email: marcus.hutter@gmx.net
www: http://www.hutter1.net
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**Aims and scope of the series**

During the past decade computer science research in understanding and reproducing human intelligence has expanded from the more traditional approaches like psychology, logics and artificial intelligence into multiple other areas, including neuroscience research. Moreover, new results in biology, chemistry, (surface) physics and gene technology, but also in network technology are greatly affecting current research in computer science, including the development of intelligent systems. At the same time, computer science’s new results are increasingly being applied in these fields allowing for important cross-fertilisations. This series aims at publishing proceedings from all disciplines dealing with and affecting the issue of understanding and reproducing intelligence in artificial systems. Also, the series is open for publications concerning the application of intelligence in networked or any other environment and the extraction of meaningful data from large data sets.

Research fields covered by the series include: * Fuzzy sets * Machine learning * Autonomous agents * Evolutionary systems * Robotics and autonomous systems * Semantic web, incl. web services, ontologies and grid computing * Biological systems * Artificial Intelligence, incl. knowledge representation, logics * Neural networks * Constraint satisfaction * Computational biology * Information sciences * Computer vision, pattern recognition * Computational neuroscience * Datamining, knowledge discovery and modelling for e.g. life sciences.

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Preface

Artificial General Intelligence (AGI) research focuses on the original and ultimate goal of AI – to create broad human-like and transhuman intelligence, by exploring all available paths, including theoretical and experimental computer science, cognitive science, neuroscience, and innovative interdisciplinary methodologies. Due to the difficulty of this task, for the last few decades the majority of AI researchers have focused on what has been called narrow AI – the production of AI systems displaying intelligence regarding specific, highly constrained tasks. In recent years, however, more and more researchers have recognized the necessity – and feasibility – of returning to the original goals of the field. Increasingly, there is a call for a transition back to confronting the more difficult issues of human level intelligence and more broadly artificial general intelligence.

The Conference on Artificial General Intelligence is the only major conference series devoted wholly and specifically to the creation of AI systems possessing general intelligence at the human level and ultimately beyond. Its second installation, AGI-09, in Arlington, Virginia, March 6-9, 2009, attracted 67 paper submissions, which is a substantial increase from the previous year. Of these submissions, 33 (i.e., 49%) were accepted as full papers for presentation at the conference. Additional 13 papers were included as position papers. The program also included a keynote address by Jürgen Schmidhuber on The New AI, a post-conference workshop on The Future of AI, and a number of pre-conference tutorials on various topics related to AGI.

Producing such a highly profiled program would not have been possible without the support of the community. We thank the organising committee members for their advise and their help in all matters of actually preparing and running the event. We thank the program committee members for a very smooth review process and for the high quality of the reviews – despite the fact that due to the very high number of submissions the review load per PC member was considerably higher than originally expected. And we thank all participants for submitting and presenting interesting and stimulating work, which is the key ingredient needed for a successful conference. We also gratefully acknowledge the support of a number of sponsors:

- Artificial General Intelligence Research Institute
- Association for the Advancement of Artificial Intelligence (AAAI)
- The University of Memphis
- Enhanced Education (Platinum Sponsor and Keynote Address)
- KurzweilAI.net (Gold Sponsor and Kurzweil Best AGI Paper 2009)
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