

ECAI 2002

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including
Prestigious Applications of Intelligent Systems (PAIS 2002)

Proceedings

Edited by

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Vrije Universiteit Amsterdam

Organised by the European Coordinating Committee on Artificial Intelligence (ECCAI)
and the Association Francaise pour l'Intelligence Artificielle (AFAI),
hosted by Claude Bernard University and INSA, Lyon

ECCAI member societies

ACIA (Spain)	Catalan Association for Artificial Intelligence (<i>Associació Catalana d'Intelligència Artificial</i>)
ADUIS (Ukraine)	Association of Developers and Users of Intelligent Systems.
AEPIA (Spain)	Spanish Association for Artificial Intelligence (<i>Asociación Española para la Inteligencia Artificial</i>)
AFIA (France)	French Association for Artificial Intelligence (<i>Association Française pour l'Intelligence Artificielle</i>)
AIAI (Ireland)	Artificial Intelligence Association of Ireland
AIIA (Italy)	Italian Association for Artificial Intelligence (<i>Associazione Italiana per l'Intelligenza Artificiale</i>)
AISB (United Kingdom)	Society for the Study of Artificial Intelligence and the Simulation of Behaviour
APPIA (Portugal)	Portuguese Association for Artificial Intelligence (<i>Associação Portuguesa para a Inteligência Artificial</i>)
BAIA (Bulgaria)	Bulgarian Artificial Intelligence Association
BCS-SGES (United Kingdom)	British Computer Society Specialist Group on Knowledge Based Systems and Applied Artificial Intelligence
BNVKI (Belgium/Netherlands)	Belgian-Dutch Association for Artificial Intelligence (<i>Belgisch- Nederlandse Vereniging voor Kunstmatige Intelligentie</i>)
CSKI (Czech Republic)	Czech Society for Cybernetics and Informatics (<i>Ceská společnost pro kybernetiku a informatiku</i>)
DAIS (Denmark)	Danish Artificial Intelligence Society
EETN (Greece)	Hellenic Artificial Intelligence Association
FAIS (Finland)	Finnish Artificial Intelligence Society (<i>Suomen Tekoälyseura ry</i>)
GI/KI (Germany)	German Informatics Association (<i>Gesellschaft für Informatik; Sektion KI e.V.</i>)
IAAI (Israel)	Israeli Association for Artificial Intelligence
LANO (Latvia)	Latvian National Organisation of Automatics (<i>Latvijas Automatikas Nacionāla Organizācija</i>)
LIKS-AIS (Lithuania)	Lithuanian Computer Society--Artificial Intelligence Section (<i>Lietuvos Kompiuterininku Sąjunga</i>)
NAIS (Norway)	Norwegian Artificial Intelligence Society
NJSZT (Hungary)	John von Neumann Society for Computing Sciences (<i>Neumann János Számítógéptudományi Társaság</i>)
ÖGAI (Austria)	Austrian Association for Artificial Intelligence (<i>Österreichische Gesellschaft für AI</i>)
RAAI (Russia)	Russian Association for Artificial Intelligence
SAIS (Sweden)	Swedish Artificial Intelligence Society
SGAICO (Switzerland)	Swiss Group for Artificial Intelligence and Cognitive Science (<i>Schweizer Informatiker Gesellschaft</i>)
SLAIS (Slovenia)	Slovenian Artificial Intelligence Society (<i>Slovensko društvo za umetno inteligenco</i>)
SSKI SAV (Slovak Republic)	Slovak Society for Cybernetics and Informatics at Slovak Academy of Sciences (<i>Slovenská spoločnosť pre kybernetiku a informatiku pri Slovenskej akadémii vied</i>)

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Awards

Best scientific paper

An Incremental Algorithm for Tree-shaped Bayesian Network Learning

Josep Roure Alcobé

Escola Universitària Politècnica de Mataró
Spain

Best application paper

Personalized Adaptive Navigation for Mobile Portals

Barry Smyth

University College Dublin, Ireland

Paul Cotter

ChangingWorlds Ltd., Ireland

Most valuable reviewer

Jérôme Lang

Université Paul Sabatier, France

Programme Chair's Foreword

In front of you are the proceedings of the 15th European Conference on Artificial Intelligence. This edition of ECAI continues to uphold both the depth and breadth of the ECAI conferences over the past decades. With papers submitted from 55 countries, ECAI engages AI researchers in every country in Europe, and many more besides.

One of the small pleasures of being conference chair is to play with statistics in order to assess what's hot and what's not. First of all, AI is alive and well: this year's ECAI had 505 submitted papers, which is a significant increase over those in previous years, as shown below:

year	submissions	accepted	% accepted
1994	450	150	33%
1996	450	133	30%
1998	456	158	35%
2000	443	139	31%
2002	505	140	28%

It is perhaps noteworthy that the marked increase in submissions to this year's ECAI has been mirrored by a similar effect at AAI (taking place in Edmonton, the week immediately after ECAI). This seems to indicate that AI is doing very well. It also indicates that, contrary to what is sometimes heard, broad conferences that cover the whole spectrum of AI are *not* losing out to the increasing number of specialised conferences. On the contrary, the general conferences (ECAI, AAI, IJCAI, PRICAI) remain the most selective events in our field.

Looking in somewhat more detail at the distribution of accepted papers, we can see which fields are currently highly active:

Agents & Distributed AI	15
Reasoning about uncertainty	7
Knowledge Engineering	10
Nonmonotonic Reasoning	7
PAIS	12
Machine Learning, KDD	16
Philosophical Foundations	2
Constraint Satisfaction, Search	12
Planning	6
Knowledge Representation	13
Robotics	3
Vision	5
Model-based Reasoning	5
Case-based Reasoning	2
Cognitive Modelling	3
Natural Language Processing	11
Neural Networks	4
Genetic Algorithms	6

Agents and Machine Learning are both apparently very active. Not only do they have the highest number of accepted papers, together these fields alone accounted for 30% of all submitted papers! People who know my interests will not be surprised that I am happy to see a healthy representation of Knowledge Engineering papers. This field seems to have found its way back to ECAI again.

I am also particularly pleased that the success of the separate subconference on Prestigious Applications of Intelligent Systems (PAIS), started at ECAI'00 in Berlin, has been continued at this conference. Boi Faltings and his Programme Committee have done an excellent job at acquiring and selecting high quality papers, which prove that AI is "worth its money".

A very important innovation at this ECAI is STAIRS, the "STarting AI Researchers Symposium". STAIRS aims to give young AI researchers a first experience of submitting and presenting a paper in an international congress with a large scope and a thorough selection process, and to give them the opportunity to exchange their research problems and approaches (and no doubt swap complaints about their supervisors :-). Thierry Vidal and Paolo Liberatore have done an excellent job as STAIRS co-chairs, and the interest in STAIRS has been overwhelming. This event, which started as an initiative of the local organisers, is certainly set to become a permanent feature of future ECAI conferences.

The larger the conference, the more people a Programme Chair must find to do the real work. I was assisted by 15 very capable Area Chairs, who took most of the hard decisions concerning acceptance or rejection. All 35 members of the Programme Committee have been very efficient at recruiting no less than 476 reviewers who wrote more than 1000 reviews. As a token of our appreciation, we have awarded a prize for the "most valuable reviewer". The prize can only be given to a single individual, but it really signifies the importance of all those many reviewers: the capacity of a conference to select the highest quality research relies entirely on your work. Special thanks go to Alun Preece for organizing the workshop programme, and to Jean-François Boulicaut for the tutorial programme. As special "Central and Eastern Europe Chair", Michael Beetz has run our experiment of strengthening the ties between ECAI and the newer members of the ECCAI family.

A special word of appreciation is due for Werner Horn. As Programme Chair of ECAI 2000 he wrote excellent Web server software to manage the entire conference process. Many people (authors, reviewers and PC members alike) have complimented on the excellent support they got for their work from his Web server. Besides his software, the advice and suggestions I got from Werner were invaluable.

Last, but not least, a final very big **thank you** is due to the team of local organisers, headed by the Local Chair Alain Mille. In particular, Luc Damas (webmaster), Yannick Prié and Marc Ayel have been very helpful. A local organiser as efficient as Alain is the wish of any Programme Chair.

Chairing a conference is not unlike attending one: reading lots of papers, interacting with many people, and having some fun in the process. Let me express the hope that you will find attending ECAI'02 as pleasurable, stimulating and educational as I found the task of helping to organise it.

Frank van Harmelen
ECAI'02 Programme Chair

Prestigious Applications of Intelligent Systems

(PAIS subconference)

PAIS Programme Chair Foreword

It is often said that once researchers in Artificial Intelligence have figured out how to solve a problem, it is no longer considered Artificial Intelligence. In spite of this fact, this year's Prestigious Applications of AI (PAIS) conference has again attracted a significant number of working applications that are still recognized as AI. The papers in this conference are only the tip of the iceberg of successful AI applications: I personally know of several other impressive applications that unfortunately could not be published for confidentiality reasons.

It is my sincere hope that the papers in this volume will contribute to a better understanding of the potential of AI technology, and motivate other successful applications in the future.

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