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Progress in Artificial Intelligence

Knowledge Extraction, Multi-agent Systems,
Logic Programming, and Constraint Solving

10th Portuguese Conference on Artificial Intelligence, EPIA 2001
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Proceedings



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Preface

The tenth Portuguese Conference on Artificial Intelligence, EPIA 2001 was held in Porto and continued the tradition of previous conferences in the series. It returned to the city in which the first conference took place, about 15 years ago. The conference was organized, as usual, under the auspices of the Portuguese Association for Artificial Intelligence (APPIA, <http://www.appia.pt>). EPIA maintained its international character and continued to provide a forum for presenting and discussing research on different aspects of Artificial Intelligence.

To promote motivated discussions among participants, this conference strengthened the role of the thematic workshops. These were not just satellite events, but rather formed an integral part of the conference, with joint sessions when justified. This had the advantage that the work was presented to a motivated audience. This was the first time that EPIA embarked on this experience and so provided us with additional challenges.

A word of appreciation must be given to those who actively promoted and organized each of the thematic workshops:

- Fernando Moura Pires and Gabriela Guimarães, for organizing the workshop on Extraction of Knowledge from Data Bases (EKDB 2001);
- Eugénio Oliveira, for organizing the workshop on Multi Agent Systems: Theory and Applications (MASTA 2001);
- José Alferes and Salvador Abreu, for organizing the workshop on Logic Programming for Artificial Intelligence and Information Systems (LPAI);
- Pedro Barahona, for organizing the workshop on Constraint Satisfaction and Operational Research Techniques for Problem Solving (CSOR);
- Luís Torgo, for organizing the workshop on Artificial Intelligence Techniques for Financial Time Series Analysis (AIFTSA);

The organization of this volume reflects the thematic threads described above with some exceptions.

We would also like to thank all the authors who submitted the 88 articles to the conference. From these, 21 (24%) were selected as long papers for this volume. A further 18 (about 20%) were accepted as short papers.

Regarding the geographical origin, the first authors of submitted papers come from Portugal (32), Spain (17), Brazil (7), France (5), Slovenia (4), Korea (4), USA (3), Germany (3), UK (3), Sweden (3), Austria (2), and also Chile, The Netherlands, Turkey, Australia, and Poland with one submission each.

In terms of scientific areas, there were 27 submissions on knowledge extraction (10 accepted for this volume), 16 on multi-agents (9 accepted), 12 on logic programming (6 accepted), 10 on constraint solving (3 accepted), 8 on financial time series (2 accepted), and 15 on other areas (7 accepted).

Some articles not included in this volume were selected for oral presentation at the conference and/or at the thematic workshops. More information can be

found at the conference site (<http://www.niaad.liacc.up.pt/Events/EPIA01/>). Special thanks to all members of the Program Committee who took upon most of the burden of reviewing. Thanks also to all other reviewers for their commitment and collaboration.

We would also like to gratefully acknowledge the support of the Portuguese Government through FCT (Fundação da Ciência e Tecnologia), University of Porto, Faculty of Economics of Porto, LIACC (Laboratório de Inteligência Artificial e Ciência de Computadores), the company Enabler, and other sponsors whose support is acknowledged at the conference site.

Finally, we thank Luís Paulo Reis for organizing the activities related to robosoccer, Rui Camacho, our Publicity Chair, Rodolfo Matos for technical support and local organization in collaboration with Rui Leite, Vera Costa, Filipa Ribeiro and Joel Silva.

October 2001

Pavel Brazdil and Alípio Jorge

EPIA'01

10th Portuguese Conference on Artificial Intelligence
Porto, Portugal, December 2001

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