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Christian Lemaître
Carlos A. Reyes
Jesús A. González (Eds.)

Advances in Artificial Intelligence – IBERAMIA 2004

9th Ibero-American Conference on AI
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Preface

The 9th Ibero-American conference on Artificial Intelligence IBERAMIA 2004 took place in Mexico for the third time in 16 years, since the first conference organized in Barcelona in January 1988. It was also the second time that the conference was held in the state of Puebla. The first time, in 1996, it was the Universidad de la Américas Puebla that was in charge of the local organization of the conference, this year it was the turn of the Instituto Nacional de Astrofísica, Óptica y Electrónica, INAOE, to do it.

The 1996 conference was the last conference where all the papers were presented in Spanish or Portuguese. Since then the proceedings have been published in English by Springer in the LNAI series. This linguistic change was a sign of the scientific maturity of the Ibero-American artificial intelligence community and the best way for it to share with the international artificial intelligence community the best results of many of its research groups. It was also the way to open this forum to researchers of other countries to enrich the scientific content of the conferences.

One relevant feature of the last four conferences with the proceedings published in English by Springer is that, besides the participation of people from many countries, the majority of papers came from Ibero-American researchers. We can state that IBERAMIA has consolidated itself as the main scientific forum where the Ibero-American artificial intelligence researchers meet together every other year. In 2004 we received 304 papers, 97 of which were accepted; this comes up to an acceptance rate of 31%. The figures are similar to those of the 2002 Sevilla conference with 316 received papers and 97 accepted papers. The numbers of submitted and accepted papers per country are shown in the following table:

<i>Country</i>	<i>Submitted</i>	<i>Accepted</i>	<i>Country</i>	<i>Submitted</i>	<i>Accepted</i>
Argentina	3	2	India	2	0
Austria	4	0	Iran	4	1
Belgium	1	1	Israel	1	0
Brazil	54	18	Korea	12	2
Canada	4	1	Mexico	103	28
Cuba	6	1	Portugal	17	5
Chile	6	4	Spain	56	26
China	2	1	Tunisia	4	1
France	7	1	USA	2	2
Germany	2	0	Venezuela	12	3
UK	2	0			

The AI topics covered by the submitted and accepted papers can be seen in the following table:

<i>Topic</i>	<i>Submitted</i>	<i>Accepted</i>
Distributed artificial intelligence and multi-agent systems	28	7
Knowledge engineering and case-based reasoning	21	4
Planning and scheduling	18	8
Machine learning and knowledge acquisition	23	6
Natural language processing	34	8
Knowledge representation and reasoning	20	10
Knowledge discovery and data mining	23	4
Robotics	24	8
Computer vision	32	13
Uncertainty and fuzzy systems	11	4
Genetic algorithms and neural networks	45	15
AI in education	14	4
Miscellaneous topics	11	5
Total	304	97

IBERAMIA 2004 was organized as an initiative of the Executive Committee of IBERAMIA. This committee is in charge of the planning and supervision of IBERAMIA conferences. Its members are elected by the IBERAMIA board which itself is made up of representatives from the following Ibero-American associations: AEPIA (Spain) APPIA (Portugal), SBC (Brazil), SMIA (Mexico). This book contains revised versions of the 97 papers selected by the program committee for presentation and discussion during the conference. The volume is structured into 13 thematic groups according to the topics addressed by the papers.

Acknowledgements

We would like to express our sincere gratitude to all the people who helped to bring about IBERAMIA 2004. First of all thanks to the contributing authors, for ensuring the high scientific standard of the conference and for their cooperation in the preparation of this volume.

Special thanks are due to the members of the program committee and auxiliary reviewers for their professionalism and their dedication in selecting the best papers for the conference. Thanks also to the IBERAMIA Executive Committee for their guidance and their continuous support.

We owe particular gratitude to the invited speakers for sharing with us their experiences and their most recent research results.

Nothing would have been possible without the initiative and dedication of the Organizing Committee, and the support of INAOE. We are very grateful to all the people who helped in the large variety of organizing tasks, namely Hector Lopez our web manager, Gabriela López Lucio and Luis Villaseñor Pineda our publicity managers, Josué Pedroza for his great job with the management of the CyberChair system during the submission and evaluation processes, Jesus A. Gonzalez, Oscar E. Romero A. and Ivan Olmos for their help in the preparation of this book, Angélica Muñoz, Guillermo de Ita, and Olac Fuentes, for their contribution to the management of the tutorials and workshops, Gorgonio Cerón Benítez and Carmen Meza Tlalpan for their help in the management of local arrangements and financial issues, Dulce Millan and Nidia Lara for their useful support in the administrative duties, and Lupita Rivera for the contacts with the media. All the members of the local committee headed by Carlos Alberto Reyes did a great job.

Thanks to the invited speakers, the tutorial instructors and workshops chairs for giving more relevance to the Conference General Program.

The French-Mexican Laboratory of Informatics, LAFMI, supported part of the travel expenses of the Program Chair between Xalapa and Tonantzintla.

We would like to thank the Benemérita Universidad Autónoma de Puebla, for its support of the inaugural session and first invited speech held in the beautiful and historical conference hall Salon Barroco. We want to thank also the Universidad de la Américas Puebla for their logistics support during the conference. We are also grateful to Microsoft Mexico, and especially to Luis Daniel Soto, for its financial support and for its contribution of an invited speaker and a tutorial. Our gratitude to Francisco Soto, Research and Graduate Studies Director of INAOE, and Aurelio López, Head of the Computer Science Department of the INAOE, for their continuous support throughout this year.

Tonantzintla, Puebla,
November 2004

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Table of Contents

IBERAMIA 2004

Distributed AI and Multi-agent Systems

Checking Social Properties of Multi-agent Systems with Activity Theory <i>Rubén Fuentes, Jorge J. Gómez-Sanz, Juan Pavón</i>	1
MARCS Multi-agent Railway Control System <i>Hugo Proença, Eugenio Oliveira</i>	12
Dynamic Quality Control Based on Fuzzy Agents for Multipoint Videoconferencing <i>Jesús Bobadilla, Luis Mengual</i>	22
A Component and Aspect-Based Architecture for Rapid Software Agent Development <i>Mercedes Amor, Lidia Fuentes, José María Troya</i>	32
Formalization of Cooperation in MAS: Towards a Generic Conceptual Model <i>Monia Loulou, Ahmed Hadj Kacem, Mohamed Jmaiel</i>	43
Web-Enabling MultiAgent Systems <i>Eduardo H. Ramírez, Ramón F. Brena</i>	53
Gaining Competitive Advantage Through Learning Agent Models <i>Leonardo Garrido, Ramón Brena, Katia Sycara</i>	62

Knowledge Engineering and Case Based Reasoning

Towards an Efficient Rule-Based Coordination of Web Services <i>Eloy J. Mata, Pedro Álvarez, José A. Bañares, Julio Rubio</i>	73
Applying Rough Sets Reduction Techniques to the Construction of a Fuzzy Rule Base for Case Based Reasoning <i>Florentino Fdez-Riverola, Fernando Díaz, Juan M. Corchado</i>	83
Dynamic Case Base Maintenance for a Case-Based Reasoning System <i>Maria Salamó, Elisabet Golobardes</i>	93
A Case Base Seeding for Case-Based Planning Systems <i>Flavio Tonidandel, Márcio Rillo</i>	104

Planning and Scheduling

Handling Numeric Criteria in Relaxed Planning Graphs
Oscar Sapena, Eva Onaindía 114

Constrainedness and Redundancy by Constraint Ordering
Miguel A. Salido, Federico Barber 124

To Block or Not to Block?
Alejandro González Romero, René Alquézar 134

Adaptive Penalty Weights When Solving Congress Timetabling
Daniel Ángel Huerta-Amante, Hugo Terashima-Marín 144

Decomposition Approaches for a Capacitated Hub Problem
Inmaculada Rodríguez-Martín, Juan-José Salazar-González 154

An Efficient Method to Schedule New Trains on a Heavily Loaded
Railway Network
*Laura Ingolotti, Federico Barber, Pilar Tormos, Antonio Lova,
M. A. Salido, M. Abril* 164

Studs, Seeds and Immigrants in Evolutionary Algorithms for
Unrestricted Parallel Machine Scheduling
E. Ferretti, S. Esquivel, R. Gallard 174

An Investigation on Genetic Algorithms for Generic STRIPS Planning
*Marcos Castilho, Luis Allan Kunzle, Edson Lecheta, Viviane
Palodeto, Fabiano Silva* 185

Machine Learning and Knowledge Acquisition

Improving Numerical Reasoning Capabilities of Inductive Logic
Programming Systems
Alexessander Alves, Rui Camacho, Eugenio Oliveira 195

Enhanced ICA Mixture Model for Unsupervised Classification.
Patrícia R. Oliveira, Roseli A. F. Romero 205

Analysis of Galactic Spectra Using Active Instance-Based Learning and
Domain Knowledge
Olac Fuentes, Thamar Solorio, Roberto Terlevich, Elena Terlevich ... 215

Adapting Evolutionary Parameters by Dynamic Filtering for Operators
Inheritance Strategy
Xavier Bonnaire, María-Cristina Riff 225

Collaborative Filtering Based on Modal Symbolic User Profiles:
Knowing You in the First Meeting
Byron Bezerra, Francisco Carvalho, Gustavo Alves 235

Machine Learning by Multi-feature Extraction Using Genetic Algorithms <i>Leila S. Shafiti, Eduardo Pérez</i>	246
Natural Language Processing	
Assignment of Semantic Roles Based on Word Sense Disambiguation <i>Paloma Moreda Pozo, Manuel Palomar Sanz, Armando Suárez Cueto</i>	256
Multi-session Management in Spoken Dialogue System <i>Hoá Nguyen, Jean Caelen</i>	266
Semantically-Driven Explanatory Text Mining: Beyond Keywords. <i>John Atkinson-Abutridy</i>	275
An Electronic Assistant for Poetry Writting <i>Nuno Mamede, Isabel Trancoso, Paulo Araújo, Céu Viana</i>	286
Improving the Performance of a Named Entity Extractor by Applying a Stacking Scheme <i>José A. Troyano, Víctor J. Díaz, Fernando Enríquez, Luisa Romero</i> ..	295
Automatic Text Summarization with Genetic Algorithm-Based Attribute Selection <i>Carlos N. Silla Jr., Gisele L. Pappa, Alex A. Freitas, Celso A. A. Kaestner</i>	305
Coordination Revisited – A Constraint Handling Rule Approach <i>Dulce Aguilar-Solis, Veronica Dahl</i>	315
Question Answering for Spanish Based on Lexical and Context Annotation <i>Manuel Pérez-Coutiño, Thamar Solorio, Manuel Montes-y-Gómez, Aurelio López-López, Luis Villaseñor-Pineda</i>	325
Knowledge Representation and Reasoning	
A Max-SAT Solver with Lazy Data Structures <i>Teresa Alsinet, Felip Manyà, Jordi Planes</i>	334
Three Valued Logic of Lukasiewicz for Modeling Semantics of Logic Programs <i>Mauricio Osorio, Verónica Borja, José Arrazola</i>	343
Answer Set Programming and S4 <i>Mauricio Osorio, Juan Antonio Navarro</i>	353
A Rippling-Based Difference Reduction Technique to Automatically Prove Security Protocol Goals <i>Juan Carlos López, Raúl Monroy</i>	364

On Some Differences Between Semantics of Logic Program Updates <i>João Alexandre Leite</i>	375
Towards CNC Programming Using Haskell <i>G. Arroyo, C. Ochoa, J. Silva, G. Vidal</i>	386
Well Founded Semantics for Logic Program Updates <i>F. Banti, J. J. Alferes, A. Brogi</i>	397
A First Order Temporal Logic for Behavior Representation <i>Carlos Rossi, Manuel Enciso, Ángel Mora</i>	408
Improved Tupling for Optimizing Multi-paradigm Declarative Programs <i>Soledad González, Ginés Moreno</i>	419
Polynomial Classes of Boolean Formulas for Computing the Degree of Belief <i>Guillermo De Ita Luna</i>	430
Knowledge Discovery and Data Mining	
Combining Quality Measures to Identify Interesting Association Rules. <i>Edson Augusto Melanda, Solange Olivera Rezende</i>	441
Two Partitional Methods for Interval-Valued Data Using Mahalanobis Distances <i>Renata M.C.R. de Souza, Francisco A.T. de Carvalho, Camilo P. Tenorio</i>	454
A Classifier for Quantitative Feature Values Based on a Region Oriented Symbolic Approach <i>Simith T. D'Oliveira Junior, Francisco A.T. de Carvalho, Renata M.C.R. de Souza</i>	464
The Protein Folding Problem Solved by a Fuzzy Inference System Extracted from an Artificial Neural Network <i>Eduardo Battistella, Adelmo Luis Cechin</i>	474
Robotics	
A Multi-robot Strategy for Rapidly Searching a Polygonal Environment <i>Alejandro Sarmiento, Rafael Murrieta-Cid, Seth Hutchinson</i>	484
Internet-Based Teleoperation Control with Real-Time Haptic and Visual Feedback <i>Fernando D. Von Borstel, José L. Gordillo</i>	494
Representation Development and Behavior Modifiers <i>Carlos R. de la Mora B, Carlos Gershenson, V. Angélica García-Vega</i>	504