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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 Autonoma 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,
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