

Guest-editorial

The 8th Ibero-American Conference on Artificial Intelligence (IBERAMIA'02)

This Special Issue of the *Journal of Intelligent & Fuzzy Systems* contains extended versions of the ten best rated papers selected by the Program Committee for presentation during The 8th Ibero-American Conference on Artificial Intelligence, IBERAMIA'02. The conference was held in November 2002 in Seville, Spain.

IBERAMIA is the international forum where the Ibero-American AI community meets together for presenting and discussing the research and development carried out in South and Central America countries, Spain, and Portugal.

The organizational structure of IBERAMIA is similar to other international scientific conferences. The backbone of the conference is the scientific program, which is complemented by tutorials, workshops, and open debates on the principal topics of AI. The proceedings are published by Springer-Verlag as part of the LNAI series.

Three hundred seventeen papers were submitted to IBERAMIA'02 from 28 different countries. Of these papers, only 97 papers were selected for publication in the proceedings. The AI topics covered by the submitted papers and the papers accepted are shown in Table 1.

The evaluation of this unexpected great amount of papers was a challenge both in terms of evaluating the papers, and maintaining the high quality of preceding IBERAMIA conferences. All these goals were successfully achieved by the PC and the auxiliary reviewers. The acceptance rate was a very selective 30.5%.

The correlation between theoretical research and applications seems unbalanced. In IBERAMIA'02 most of papers selected for presentation are devoted to theoretical aspects of AI. There is no doubt about the need for theoretical research on the modeling and understanding of the mechanisms of intelligence, however

the usefulness and the validity of theoretical models might be demonstrated outside of academic labs. It is necessary to go beyond simulated solutions to real engineering solutions which incorporate the scientific and technological knowledge into useful systems, which are able to pass successfully the Turing test some day.

Bridging the gap between theory and practice, and incorporating theoretical results into useful products are still key-issues for industrialized countries. In the context of Ibero-America, it seems essential that AI researchers accept the challenge of solving real world problems, making the science and technology based on AI contribute to the progress of our developing communities.

The papers selected for this Special Issue address research topics in a wide range of AI fields such as supervised learning and clustering, natural language processing and environment of e-learning, theoretical and application of different models of neural networks, planning and autonomous agents. A brief summary of each follows.

In the paper "Adaptive modelling of student diagnosis and material selection for on-line language learning" of T. Read et al. an on-line environment in distance learning denominated I-PETER is presented. O. Sapena and E. Onaindía present in their work "A planning and monitoring system for dynamic environments" an integrated tool for planning and execution-monitoring called SimPlanner which allows to interleave planning and execution. E. Mérida-Casermeiro and J. Muñoz-Pérez in the paper "MREM: An associative autonomous recurrent network" show a new type Hopfield recurrent neural model and some of its learning capabilities. R. Ruiz et al. introduce in their work "Projection-based measure for efficient feature selection" a new measure based on projections to guide the selection of the attributes in problems of supervised

Table 1

Topic	Submitted	Accepted
Knowledge Representation and Reasoning	66	19
Machine Learning	18	6
Uncertainty and Fuzzy Systems	23	7
Genetic Algorithms	31	9
Neural Nets	38	15
Knowledge Engineering and Applications	3	0
Distributed Artificial Intelligence and Multi-Agent Systems	42	9
Natural Language Processing	33	9
Intelligent Tutoring Systems	13	5
Control and Real time	23	8
Robotics	19	6
Computer Vision	8	4
Total	317	97

learning. In the paper “On-line event and topic detection by using the compact sets clustering algorithm”, A. Pons-Porrata et al. propose a new incremental clustering algorithm for *Event Detection*, which is used to measure the similarity between documents texts according to the events that they describe. In the following paper “A negotiation model for autonomous computational agents: Formal description and empirical evaluation” F. Lopes et al. present an application over autonomous agents, concretely a generic negotiation model for them that handles multi-party, multi-issue and single or repeated rounds. C.J. García-Orellana et al. in their applied paper “A comparison of PCA, ICA and GA selected feature for cloud field classification” use a back propagation neural network for the segmentation of satellite images and cloud field classification. In the following work “Website Term Browser: Overcoming language barriers in text retrieval” A. Peñas et al. present a tool of web terminology retrieval, WTB an interactive multilingual search system through the browsing of phrases after being automatically extracted from the text collection. J.R. Cano et al. in the work “A

greedy randomized adaptive search procedure applied to the clustering problem as an initialization process using K-Means as a local search procedure” present a new approach for cluster analysis based on a GRASP with the objective of overcoming the convergence to a local solution. Finally, H.H. Avilés-Arriaga and L.E. Sucar in “Dynamic Bayesian networks for visual recognition of dynamic gestures” describe an online visual recognition system for a set of five dynamic gestures executed with the user’s right hand oriented to command mobile robots.

At last we would like to express our sincere gratitude to all the people who helped to bring about IBERAMIA'02: contributing authors, members of the Program Committee and reviewers, the Organizing Committee, plenary speakers, etc.

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