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Innovations in Hybrid Intelligent Systems

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Preface

The 2nd International Workshop on Hybrid Artificial Intelligence Systems (HAIS 2007) combines symbolic and sub-symbolic techniques to construct more robust and reliable problem solving models. Hybrid intelligent systems are becoming popular due to their capabilities in handling many real world complex problems, involving imprecision, uncertainty and vagueness, high-dimensionality. They provide us with the opportunity to use both, our knowledge and raw data to solve problems in a more interesting and promising way. This multidisciplinary research field is in continuous expansion in the artificial intelligence research community and we believe that CAEPIA 2007 is an excellent forum to run this event. HAIS 2007 provides an interesting opportunity to present and discuss the latest theoretical advances and real-world applications in this multidisciplinary research field.

This volume of *Advances in Soft Computing* contains accepted papers presented at HAIS 2007 held in University of Salamanca, Salamanca, Spain, November 2007.

The global purpose of HAIS conferences has been to provide a broad and interdisciplinary forum for Hybrid Artificial Intelligence Systems and Associated Learning Paradigms, which are playing increasingly important roles in an important number of applications fields.

Since its first edition in Brazil in 2006, HAIS is becoming a reference for researchers on fundamental and theoretical aspects related to Hybrid Artificial Intelligence Systems based on the hybrid use of Agents and Multiagent Systems, Bioinformatics and Bio-inspired Models, Fuzzy Systems, Artificial Vision, Artificial Neural Networks, Optimization Models and so on.

HAIS 2007 received 112 technical submissions and, the International Program Committee selected -after a rigorous peer-review- 62 papers for publication in this volume in the *Advances in Soft Computing* Series.

The large number of submitted papers is certainly a proof of the vitality and attractiveness of the fields related to HAIS, but it also shows a strong interest in the HAIS conferences.

HAIS 07 has also teamed up with *Neurocomputing Journal* for a special issue on Hybrid Artificial Intelligent Systems that has been scheduled for selected papers from HAIS 2007. The extended papers, together with contributed articles received in response to subsequent open calls, will go through further rounds of peer refereeing in the remits of this journal.

We would like to thank the work of our Programme Committee Members who performed admirably under tight deadline pressures. Our warmest special thanks go to our Keynote Speakers: Prof. Ajith Abraham, Norwegian University of Science and Technology, Norway, and Prof. José R. Dorronsoro, Autonomous University of Madrid, Spain.

Particular thanks go to the Organising Committee for his suggestions about organisation and promotion of HAIS 2007.

VI Preface

We wish to thank also Mr. Janusz Kacprzyk, Mr. Heather King, Mrs. Petra Jantzen and Mrs. Carmen Wolf from Springer for their help and collaboration in this demanding scientific publication project.

We thank as well all the authors and participants for their great contributions that made this conference possible and all the hard work worthwhile.

Finally we would to thank CAEPIA local committee Chair, Prof. Juan M. Corchado for his massive guidance, collaboration and support.

In this edition, at the time of writing this document, we were fortunate to receive support from Junta de Castilla y León and Spanish Ministry of Industry.

November 2007

Emilio Corchado
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