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Proceedings of the 9th International Conference on Hybrid Artificial Intelligent Systems - HAIS

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Preface

This volume of *Lecture Notes on Artificial Intelligence* (LNAI) includes the accepted papers presented at the 9th International Conference on Hybrid Artificial Intelligence Systems (HAIS 2014) held in the beautiful and historic city of Salamanca, Spain, in June 2014.

The International Conference on Hybrid Artificial Intelligence Systems has become a unique, established, and broad interdisciplinary forum for researchers and practitioners who are involved in developing and applying symbolic and sub-symbolic techniques aimed at the construction of highly robust and reliable problem-solving techniques and in bringing the most relevant achievements in this field.

Hybridization of intelligent techniques, coming from different computational intelligence areas, has become popular because of the growing awareness that such combinations frequently perform better than the individual techniques such as neurocomputing, fuzzy systems, rough sets, evolutionary algorithms, agents and multiagent systems, etc.

Practical experience has indicated that hybrid intelligence techniques might be helpful for solving some of the challenging real-world problems. In a hybrid intelligence system, a synergistic combination of multiple techniques is used to build an efficient solution to deal with a particular problem. This is, thus, the setting of the HAIS conference series, and its increasing success is the proof of the vitality of this exciting field.

HAIS 2014 received 199 technical submissions. After a rigorous peer-review process, the international Program Committee selected 61 papers, which are published in these conference proceedings.

The selection of papers was extremely rigorous in order to maintain the high quality of the conference and we would like to thank the Program Committee for their hard work in the reviewing process. This process is very important to the creation of a conference of high standard and the HAIS conference would not exist without their help.

The large number of submissions is certainly not only testimony to the vitality and attractiveness of the field but an indicator of the interest in the HAIS conferences themselves.

HAIS 2014 enjoyed outstanding keynote speeches by distinguished guest speakers: Prof. Amparo Alonso Betanzos, University of Coruña (Spain) and President Spanish Association for Artificial Intelligence (AEPIA), Prof. Sung-Bae Cho, Yonsei University (Korea), and Prof. André de Carvalho, University of São Paulo (Brazil).

HAIS 2014 teamed up with the journals *Neurocomputing* (Elsevier) and the *Logic Journal of the IGPL* (Oxford Journals) for a set of special issues including selected papers from HAIS 2014.
Particular thanks go to the conference main Sponsors, IEEE-Sección España, IEEE Systems, Man and Cybernetics-Capítulo Español, AEPIA, Ayuntamiento de Salamanca, University of Salamanca, MIR Labs, The International Federation for Computational Logic, and project ENGINE (7th Marco Program, FP7-316097), who jointly contributed in an active and constructive manner to the success of this initiative.

We would like to thank Alfred Hofmann and Anna Kramer from Springer for their help and collaboration during this demanding publication project.

June 2014

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