Preface

This volume of *Lecture Notes on Artificial Intelligence* (LNAI) includes papers presented at HAIS 2015 held in the beautiful seaside city of Bilbao, Spain, June 2015.

The International Conference on Hybrid Artificial Intelligence Systems (HAIS), has become a unique, established, and broad interdisciplinary forum for researchers an 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 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 proof of the vitality of this exciting field.

HAIS 2015 received 190 technical submissions. After a rigorous peer-review process, the international Program Committee selected 60 papers, which are published in this 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 2015 enjoyed outstanding keynote speeches by distinguished guest speakers: Prof. Enrique Zuazua – Research Professor at Ikerbasque (Basque Country, Spain), Prof. Miguel Angel Sotelo – University of Alcalá (Spain), and Prof. Michal Wozniak – Wroclaw University of Technology (Poland).

HAIS 2015 teamed up with *Neurocomputing* (Elsevier) and the *Logic Journal of the IGPL* Oxford Journals for a suite of special issues including selected papers from HAIS 2015.

Particular thanks go to the conference main sponsors, IEEE-Spanish Section, IEEE Systems, Man and Cybernetics – Spanish Chapter, University of Salamanca, University of Deusto, DeustoTech, and The International Federation for Computational Logic, who jointly contributed in an active and constructive manner to the success of this initiative.

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