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Soft Computing Models in Industrial and Environmental Applications

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Preface

This volume of *Advances in Intelligent and Soft Computing* contains accepted papers presented at SOCO 2012, held in the beautiful and historic city of Ostrava (Czech Republic), in September 2012.

Soft Computing represents a collection or set of computational techniques in machine learning, computer science and some engineering disciplines, which investigate, simulate, and analyze very complex issues and phenomena.

After a thorough peer-review process, the SOCO 2012 International Program Committee selected 76 papers which are published in these conference proceedings, and represents an acceptance rate of 38%. In this relevant edition a special emphasis was put on the organization of special sessions. Three special sessions were organized related to relevant topics as: Soft computing models for Control Theory & Applications in Electrical Engineering, Soft Computing Models for Biomedical Signals and Data Processing and Advanced Soft Computing Methods in Computer Vision and Data Processing.

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

SOCO 2012 enjoyed outstanding keynote speeches by distinguished guest speakers: Prof. Ponnuthurai Nagaratnam Suganthan, Prof. Jeng-Shyang Pan, Prof. Marios M. Polycarpou, Prof. Fanny Klett and Mr. Milan Kladnicek.

For this special edition, as a follow-up of the conference, we anticipate further publication of selected papers in special issues of prestigious international journal as *Neurocomputing* (ELSEVIER), *Journal of Applied Logic* (ELSEVIER) and *Neural Network World* (Institute of Computer Science CAS in cooperation with the Czech Technical University, Prague, Faculty of Transportation Sciences).

Particular thanks go as well to the Conference main Sponsors, IT4Innovations, VŠB-Technical University of Ostrava, IEEE.- Systems, Man and Cybernetics Society CzechoSlovakia, IEEE.- Systems, Man and Cybernetics Society Spain, MIR labs, Spanish Association for Artificial Intelligence, IFCOLOG and MIDAS project supported by

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We would like to thank all the special session organizers, contributing authors, as well as the members of the Program Committees and the Local Organizing Committee for their hard and highly valuable work. Their work has helped to contribute to the success of the SOCO 2012 event.

September 2012

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