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Preface

This Special Issue entitled *Complexity in Sciences and Artificial Intelligence* contains selected papers presented at the *International Symposium on Understanding Intelligent and Complex Systems - UICS 2009*, held on 22-23 October 2009 at Petru Maior University of Targu Mures from Romania. The primary aim of this symposium was bringing together researchers who work in the areas such as Complex Systems, Artificial Intelligence, Intelligent Systems, Natural Computing, Medical Sciences and Pharmaceutical Sciences for presenting their recent results. The secondary purpose was to make some preparative steps in the realization of researches in the frame of certain research projects focused on themes like: Applications in Medical Sciences, Complex Systems and Artificial Intelligence. One of the approved research projects is entitled "*Electronic Health Records for the Next Generation Medical Decision Support in Romanian and Bulgarian National Healthcare Systems*" abbreviated as *NextGenElectroMedSupport. NextGenElectroMedSupport*, a Bilateral Cooperation Research Project between Romania and Bulgaria having as directors of project from Bulgaria Prof. dr. Roumen Kountchev from Technical University of Sofia and from Romania Senior Lecturer dr. Barna Iantovics from Petru Maior University of Targu Mures. The preferred topics of the symposium included developments in theory and practice by analyzing intelligent and complex systems. Particular research interests were the analysis of aspects related to intelligent and complex systems such as various problems dealing with complexity, intelligence, applications in medical sciences and further related aspects.

The papers included in this Special Issue shed light upon some introductory and advanced problems in the following areas: complex systems, natural computing, social insect algorithms, mathematical methods, pattern recognition, graph theory, semantic graphs, intelligent systems, intelligent prediction, modelling group decision processes, pharmaceutical sciences, emergence of life, human consciousness and society, data mining, learning algorithms, categorical ontology of complex systems and highly difficult problems solving.

Editors of the Special Issue & Editor in Chief of the B.R.A.I.N. Journal

This Special Issue contains selected papers presented at the International Symposium on Understanding Intelligent and Complex Systems - UICS 2009, held on 22-23 October 2009 at Petru Maior University of Targu Mures, Romania.

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