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Preface

The emergent field of Intelligent Distributed Computing brings together two well established areas of Computer Science: Distributed Computing and Computational Intelligence. Theoretical foundations and practical applications of Intelligent Distributed Computing set the premises for the new generation of intelligent distributed information systems.

Intelligent Distributed Computing – IDC Symposium Series was started as an initiative of research groups from: (i) *Systems Research Institute, Polish Academy of Sciences in Warsaw, Poland* and (ii) *Software Engineering Department of the University of Craiova, Craiova, Romania*. IDC aims at bringing together researchers and practitioners involved in all aspects of Intelligent Distributed Computing. IDC is interested in works that are relevant for both Distributed Computing and Computational Intelligence, with scientific contribution in at least one of these two areas. IDC'2010 was the fourth event in the series and was hosted by *IEEE Morocco Section* in *Tangier, Morocco* during September 16-18, 2010. IDC'2010 was collocated with: (i) NATO summer school on "Software Agents, Agent Systems and their Applications"; (ii) 2^{nd} International Workshop on Multi-Agent Systems Technology and Semantics, MASTS'2010.

The material published in this book is divided into three main parts: (i) 1 invited contribution; (ii) 28 contributions of IDC'2010 participants; and (iii) 4 contributions of MASTS'2010 participants.

The response to IDC'2010 call for paper was generous. We received 53 submissions from 20 countries (we counted the country of each coauthor for each submitted paper). Each submission was carefully reviewed by at least 3 members of the IDC'2010 Program Committee. Acceptance and publication were judged based on the relevance to the symposium themes, clarity of presentation, originality and accuracy of results and proposed solutions. Finally 17 regular papers and 11 short papers were selected for presentation and were included in this volume, resulting in acceptance rates of 32.07 % for regular papers and 52.83 % for regular and short papers. Additionally, MASTS'2010 workshop received 8 submissions. After the careful review (each submission

was reviewed by at least 3 members of the MASTS'2010 Program Committee), 4 regular papers were selected for presentation and were included in this book.

The 33 contributions published in this book address many topics related to theory and applications of intelligent distributed computing and multiagent systems, including: agent-based e-business, ambient intelligence, bioinformatics, collaborative systems, cryptography and security, distributed algorithms, distributed data mining, distributed simulation, grid computing, image processing, information extraction, knowledge management, logic programming, mobile agents, ontologies, pervasive computing, Petri nets, process modeling, self-organizing systems, semantic web services, service oriented computing, social networks and trust, swarm intelligence, web applications, wireless sensor networks.

We would like to thank to Prof. Janusz Kacprzyk, editor of *Studies in Computational Intelligence* series and member of the Steering Committee for their kind support and encouragement in starting and continuing the IDC Symposium Series. We would like to thank to the IDC'2010 and MASTS'2010 Program Committee members for their work in promoting the event and refereeing submissions and also to all colleagues who submitted papers to IDC'2010 and MASTS'2010. We deeply appreciate the efforts of our invited speaker Prof. Amal EL Fallah Seghrouchni and thank her for the interesting lecture. Special thanks also go to organizers of MASTS'2010: Adina Magda Florea, Amal El Fallah Seghrouchni, and Viorel Negru. Finally, we appreciate the efforts of local organizers on behalf of IEEE Morocco Section for organizing and hosting IDC'2010 and MASTS'2010.

Tangier, Catania, Craiova
June 2010

Mohammad Essaaidi
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