
Preface

Intelligent computing is becoming a mature field of information and communication technology, covering a hybrid palette of methods and techniques derived from classical artificial intelligence, computational intelligence, multi-agent systems etc. Intelligent computing is generally known to be computationally intensive from the point of view of resources required: time, memory, bandwidth. As such high resource consumption is one of its main drawbacks, distributed computing is expected to give an impetus to its practical utilization. Moreover, intelligent techniques have also proved their usefulness to the core distributed computing technologies like planning and scheduling, load balancing, replication, resource allocation and management, and its applications. Therefore, the emerging field of intelligent distributed computing can be expected both, to bring a fruitful cooperation and to pose new challenges of adaptation of both areas.

Intelligent and Distributed Computing 2007 – IDC 2007 was the first International Symposium aimed at bringing together researchers involved in intelligent and distributed computing to allow cross-fertilization and search for synergies of ideas and to enable advancement of research in these exciting sub-fields of computer science. IDC 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 2007 was held in Craiova, Romania during October 18-19, 2007.

This book represents the peer-reviewed proceedings of the IDC 2007. We received 52 submissions from 24 countries. Each submission was carefully reviewed by at least 3 members of the Program Committee. Acceptance and publication was judged based on the relevance to the symposium themes, clarity of presentation, originality and accuracy of results and proposed solutions. Finally 18 regular papers and 11 short papers were selected for presentation and were included in this volume, resulting in acceptance rates of 34,61 % for regular papers and 55.76 % for regular and short papers. The book contains also 5 invited papers authored by well-known researchers and practitioners in the field.

The 34 contributions in this book cover a broad area of topics related to intelligent and distributed computing, systems and applications, including: autonomic

and adaptive computing; constraint satisfaction; cooperation and coordination; data mining and knowledge discovery; distributed problem solving and decision making; e-business, e-health and e-learning; genetic algorithms; image processing; information retrieval; intelligence in mobile and ubiquitous computing; knowledge-based systems; modeling with Petri nets; multi-agent systems; neural networks; ontologies and meta-data; planning; rough sets; rule-based systems; services and processes; software agents; uncertainty; XML technologies.

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 organising the IDC 2007 event. We would like to thank to the Program Committee members for their work in promoting the event and refereeing submissions and also to all colleagues who submitted papers to the IDC 2007. We deeply appreciate the efforts of our invited speakers (in alphabetical order): Prof. Frances Brazier, Prof. Gabriel Ciobanu, Dr. Peter Noerr, Prof. Nikos Vlassis, and Prof. Jacek Zurada and thank them for their interesting lectures. Special thanks also go to Prof. Dan Popescu, Dean of the Faculty of Automation, Computers and Electronics, University of Craiova, to Prof. Dumitru Dan Burdescu, Head of the Software Engineering Department, University of Craiova and Director of the "Multimedia Applications Development" Research Centre and to all the members of the Software Engineering Department, University of Craiova for their help with organizing the IDC 2007 event. Last but not least we are grateful to our sponsors (in alphabetical order): ANCS (Mrs. Veronica Bubulete) CS AEIC SA - Automation, Electronics, Informatics, Consulting (Dr. Mircea Grosu), MuseGlobal, Inc. (Mr. Mihai Popa), NetRom Software SRL (Mr. Han in't Veld), SyncRO Soft Ltd. (Mr. Ștefan Vasile), and TOP EDGE Engineering (Dr. Dorian Dogaru).

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Costin Bădică
Marcin Paprzycki

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