

Contents

Part I Invited Papers

Nature-Inspired Coordination for Complex Distributed Systems	1
---	----------

Andrea Omicini

Information Fusion as Aid for Qualitative Enhancement of Intelligence Extraction in Multi-source Environments - A Panoramic View of Architectures, Algorithms and Applications	7
---	----------

Belur V. Dasarathy

Part II Self-organization and Bio-Inspiration

Using Building Blocks for Pattern-Based Simulation of Self-organising Systems	9
--	----------

Christopher Haubeck, Ante Vilenica, Winfried Lamersdorf

Molecules of Knowledge: Self-organisation in Knowledge-Intensive Environments	17
--	-----------

Stefano Mariani, Andrea Omicini

Emergent Distributed Bio-organization: A Framework for Achieving Emergent Properties in Unstructured Distributed Systems	23
---	-----------

*George Eleftherakis, Ognjen Paunovski, Konstantinos Rousis,
Anthony J. Cowling*

A Self-organized Approach for Detecting Communities in Networks	29
--	-----------

Ben Collingsworth, Ronaldo Menezes

Part III Multi-Agent Systems

Extending Jason with Promises for Concurrent Computation	41
---	-----------

Alex Muscar

Dynamic Case-Based Reasoning Based on the Multi-Agent Systems: Individualized Follow-Up of Learners in Distance Learning	51
<i>Abdelhamid Zouhair, El Mokhtar En-Naimi, Benaissa Amami, Hadhoum Boukachour, Patrick Person, Cyrille Bertelle</i>	
Distributed Paraconsistent Belief Fusion	59
<i>Barbara Dunin-Keplicz, Andrzej Szalas</i>	
A Multi-tiered Recommender System Architecture for Supporting E-Commerce	71
<i>Luigi Palopoli, Domenico Rosaci, Giuseppe M.L. Sarné</i>	
 Part IV Agent-Based Intelligent Applications	
Healthcare Interoperability through a JADE Based Multi-Agent Platform	83
<i>Miguel Miranda, José Machado, António Abelha, José Neves</i>	
An Architectural Pattern for Designing Intelligent Enterprise Systems ...	89
<i>Eugenio Zimeo, Gianfranco Oliva, Fabio Baldi, Alfonso Caracciolo</i>	
MUSE: MULTilinguality and SEMantics for the Citizens of the World	97
<i>Michele Bozzano, Daniela Briola, Diego Leone, Angela Locoro, Lanfranco Marasso, Viviana Mascardi</i>	
Ontology Based Road Traffic Management	103
<i>A.J. Bermejo, J. Villadangos, J.J. Astrain, A. Córdoba</i>	
 Part V Distributed Systems	
Autonomy and Differentiation in Distributed Systems	109
<i>Ichiro Satoh</i>	
Towards Characterizing Distributed Complex Situation Assessment as Workflows in Loosely Coupled Systems	115
<i>Costin Bădică, Claudine Conrado, Franck Mignet, Patrick de Oude, Gregor Pavlin</i>	
A Trust-Based Approach for a Competitive Cloud/Grid Computing Scenario	129
<i>Fabrizio Messina, Giuseppe Pappalardo, Domenico Rosaci, Corrado Santoro, Giuseppe M.L. Sarné</i>	
Data Science and Distributed Intelligence	139
<i>Alfredo Cuzzocrea, Mohamed Medhat Gaber</i>	

Part VI Parallel Computing**Data-Flow Awareness in Parallel Data Processing 149***David Bednárek, Jiří Dokulil, Jakub Yaghob, Filip Zavoral***Efficient Group Communication for Large-Scale Parallel Clustering 155***David Pettinger, Giuseppe Di Fatta***A High Performance Engine for Concurrent CEP in Erlang 165***Bill Karakostas***Part VII Social Computing and Networks****Contextual Synchronization for Efficient Social Collaborations: A Case Study on TweetPulse 171***Jason J. Jung***Crafting Kinship Networks by Exploring Acquaintances Relationships 181***V. Carchiolo, V. Di Martino, A. Longheu, M. Malgeri, G. Mangioni***The Effects of Pre-trusted Peers Misbehaviour on EigenTrust 187***V. Carchiolo, A. Longheu, M. Malgeri, G. Mangioni***Part VIII Agents and Sensor Networks****Sensorization and Intelligent Systems in Energetic Sustainable Environments 199***Fábio Silva, David Cuevas, Cesar Analide, José Neves, José Marques***Intelligent Evacuation System for Flood Disaster 205***Sefrioui Imane, Cherrat Loubna, Ezziyyani Mostafa, Essaaidi Mohammed***Integrating Jade and MAPS for the Development of Agent-Based WSN Applications 211***Mariusz Mesjasz, Domenico Cimadoro, Stefano Galzarano, Maria Ganzha, Giancarlo Fortino, Marcin Paprzycki***Part IX Collaborative Computing, Mobile Networks and Intelligence****A Collaborative Bayesian Watchdog for Detecting Black Holes in MANETs 221***Manuel D. Serrat-Olmos, Enrique Hernández-Orallo, Juan-Carlos Cano, Carlos T. Calafate, Pietro Manzoni***A Distributed Allocation Strategy for Data Mining Tasks in Mobile Environments 231***Carmela Comito, Deborah Falcone, Domenico Talia, Paolo Trunfio*

Adaptive Patterns for Intelligent Distributed Systems: A Swarm Robotics Case Study 241
Mariachiara Puviani, Giacomo Cabri, Letizia Leonardi

Maximal Component Detection in Graphs Using Swarm-Based and Genetic Algorithms 247
Antonio González-Pardo, David Camacho

Part X A4C 2012

How to Monitor QoS in Cloud Infrastructures: The QoSMONaaS Approach 253
Giuseppe Cicotti, Salvatore D'Antonio, Rosario Cristaldi, Antonio Sergio

Simulation-Based Performance Evaluation of Cloud Applications 263
Antonio Cuomo, Massimiliano Rak, Umberto Villano

Vendor Agents for IAAS Cloud Interoperability 271
Alba Amato, Luca Tasquier, Adrian Copie

Agents Layer to Support Cloud Applications 281
Calin Sandru, Salvatore Venticinque

Part XI MASTS 2012

Policy-Based Instantiation of Norms in MAS 287
Andreea Urzică, Cristian Gratie

A Multi-Agent System for Service Acquiring in Smart Environments 297
Irina Mocanu, Lorina Negreanu, Adina Magda Florea

Newtonian Emotion System 307
Valentin Lungu

Author Index 317