International Journal on

Advances in Intelligent Systems





2013 vol. 6 nr. 1&2

Printed from e-media with permission by:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2013) by International Academy, Research, and Industry Association (IARIA) Please refer to the Copyright Information page.

Printed by Curran Associates, Inc. (2013)

International Academy, Research, and Industry Association (IARIA) 412 Derby Way Wilmington, DE 19810

Phone: (408) 893-6407 Fax: (408) 527-6351

petre@iaria.org

Additional copies of this publication are available from:

Curran Associates, Inc. 57 Morehouse Lane Red Hook, NY 12571 USA Phone: 845-758-0400 Fax: 845-758-2634 Email: curran@proceedings.com Web: www.proceedings.com

CONTENTS

pages: 1 - 15 **The Activity Circle: Visualizing the Coordination Aspects of User Resistance Toward Workflow Technology** Marcello Sarini, Department of Psychology - University of Milano-Bicocca, Italy

pages: 16 - 26

A Framework for Exploratory Analysis of Extreme Weather Events Using Geostatistical Procedures and 3D Self-Organizing Maps

Jorge Gorricha, CINAV, Portugal Victor Lobo, CINAV, Portugal Ana Costa, ISEGI-UNL, Portugal

pages: 27 - 40

Distributed Evolutionary Optimisation for Electricity Price Responsive Manufacturing using Multi-Agent System Technology

Tobias Küster, DAI-Labor, Technische Universität Berlin, Germany Marco Lützenberger, DAI-Labor, Technische Universität Berlin, Germany Daniel Freund, DAI-Labor, Technische Universität Berlin, Germany Sahin Albayrak, DAI-Labor, Technische Universität Berlin, Germany

pages: 41 - 52

Estimating Disaggregated Employment Size from Points-of-Interest and Census Data: From Mining the Web to Model Implementation and Visualization

Filipe Rodrigues, Department of Informatics Engineering, University of Coimbra, Portugal Ana Alves, Department of Informatics Engineering, University of Coimbra, Portugal Evgheni Polisciuc, Department of Informatics Engineering, University of Coimbra, Portugal Shan Jiang, Massachusetts Institute of Technology, USA Joshep Ferreira, Massachusetts Institute of Technology, USA Francisco Pereira, Singapore-MIT Alliance for Research and Technology, Singapore

pages: 53 - 65

Inverse Kinematics with Dual-Quaternions, Exponential-Maps, and Joint Limits Ben Kenwright, Newcastle University, United Kingdom

pages: 66 - 78

Dynamics and Control of Modular and Self-Reconfigurable Robotic Systems

Eugen Meister, University of Stuttgart, Institute of Parallel and Distributed Systems, Germany Alexander Gutenkunst, University of Stuttgart, Institute of Parallel and Distributed Systems, Germany Paul Levi, University of Stuttgart, Institute of Parallel and Distributed Systems, Germany

pages: 79 - 88

Horizon Line Detection in Marine Images: Which Method to Choose?

Evgeny Gershikov, Braude Academic College of Engineering, Israel

Tzvika Libe, Braude Academic College of Engineering, Israel Samuel Kosolapov, Braude Academic College of Engineering, Israel

pages: 89 - 101

More on MCS Ontology for Cognition: Revising Selected Concepts, Including Cognition and Time, Considering Cognition Links with Philosophy and Implementing Automated Cognition in the Real World

Jean-Daniel Dessimoz, HES-SO.HEIG-VD, Western Switzerland University of Applied Sciences, Switzerland Pierre-François Gauthey, HES-SO.HEIG-VD, Western Switzerland University of Applied Sciences, Switzerland

pages: 102 - 111

Reducing Requirements Defect Density by Using Mentoring to Supplement Training John Terzakis, Intel Corporation, USA

pages: 112 - 123

Provenance Framework for the Cloud Infrastructure: Why and How?

Muhammad Imran, Research Group Entertainment Computing, University of Vienna, Austria Helmut Hlavacs, Research Group Entertainment Computing, University of Vienna, Austria

pages: 124 - 135

Multidimensional Adaptiveness in Multi-Agent Systems

Nadia Abchiche-Mimouni, IBISC Laboratory, university of Evry, France Antonio Andriatrimoson, IBISC Laboratory, university of Evry, France Etienne Colle, IBISC Laboratory, university of Evry, France Simon Galerne, IBISC Laboratory, university of Evry, France

pages: 136 - 150

Building a Cultural Intelligence Decision Support System with Soft-Computing

Zhao Xin Wu, Computer Science Department, University of Quebec in Montreal, Canada Roger Nkambou, Computer Science Department, University of Quebec in Montreal, Canada Jacqueline Bourdeau, LICEF, Télé-Université, 100 Sherbrooke, O., Canada

pages: 151 - 164

Modelling of Mechanical Properties for Integrated Casting and Rolling Processes Using Dedicated Extra-High Temperature Solutions Platform

Marcin Hojny, AGH University of Science and Technology, Poland Miroslaw Glowacki, AGH University of Science and Technology, Poland