



**Editors: Vladimir Vasek, Yuriy S. Shmaliy, Denis Trcek,  
Nobuhiko P. Kobayashi, Ryszard S. Choras, Zbigniew Klos**

# **RECENT RESEARCHES IN COMPUTERS AND COMPUTING**

**RECENT RESEARCHES IN COMPUTERS AND COMPUTING**

**International Conference on COMPUTERS and COMPUTING  
(ICCC '11)**

**Lanzarote, Canary Islands, Spain, May 27-29, 2011**

**ISSN: 2223-2753  
ISBN: 978-1-61804-000-8**





# **RECENT RESEARCHES in COMPUTERS and COMPUTING**

**International Conference on COMPUTERS and COMPUTING  
(ICCC '11)**

**Lanzarote, Canary Islands, Spain  
May 27-29, 2011**

# RECENT RESEARCHES in COMPUTERS and COMPUTING

**International Conference on COMPUTERS and COMPUTING  
(ICCC '11)**

**Lanzarote, Canary Islands, Spain  
May 27-29, 2011**

Published by WSEAS Press  
[www.wseas.org](http://www.wseas.org)

**Copyright © 2011, by WSEAS Press**

All the copyright of the present book belongs to the World Scientific and Engineering Academy and Society Press. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the Editor of World Scientific and Engineering Academy and Society Press.

All papers of the present volume were peer reviewed by two independent reviewers. Acceptance was granted when both reviewers' recommendations were positive.  
See also: <http://www.worldses.org/review/index.html>

ISBN: 978-1-61804-000-8  
ISSN: 2223-2753



World Scientific and Engineering Academy and Society



European Society for Environmental Research  
and Sustainable Development

# **RECENT RESEARCHES in COMPUTERS and COMPUTING**

**International Conference on COMPUTERS and COMPUTING  
(ICCC '11)**

**Lanzarote, Canary Islands, Spain  
May 27-29, 2011**



**Editors:**

Prof. Vladimir Vasek, Tomas Bata University in Zlin, Czech Republic  
Prof. Yuriy Shmaliy, Guanajuato University, Mexico  
Prof. Denis Trcek, University of Ljubljana, Slovenia  
Prof. Nobuhiko P. Kobayashi, University of California Santa Cruz, USA  
Prof. Ryszard S. Choras, University of Technology & Life Sciences, Poland  
Prof. Zbigniew Klos, Poznan University of Technology, Poland

**International Program Committee Members:**

Joseph Sifakis, FRANCE  
Lotfi A. Zadeh, USA  
Leon O. Chua, USA  
K. R. Rao, USA  
Dimitri Bertsekas, USA  
Biswa N. Datta, USA  
Irwin Sandberg, USA  
P. Pardalos, USA  
A. Manikas, UK  
T. Kaczorek, POLAND  
Wlodzislaw Duch, POLAND  
Sidney Burrus, USA  
Leonid G. Kazovsky, USA  
Georgios B. Giannakis, USA  
Nikolaos G. Bourbakis, USA  
Brian A. Barsky, USA  
Ryszard S. Choras, POLAND  
Wasfy B. Mikhael, USA  
M. Kostic, USA  
A. Venetsanopoulos, Canada  
K. Benra, GERMANY  
S. Sohrab, USA



## Table of Contents

<b>Clustering Concepts into Higher-Level Entities Using Neural Network-Like Structures</b> <i>Kieran Greer</i>	9
<b>e-Application for ICT Enhanced Learning</b> <i>Ivana Simonova, Petra Poulova</i>	15
<b>Soft Computing Techniques for Issues in Existing RFID Systems</b> <i>Chetna Dabas, J. P. Gupta</i>	22
<b>A Reputation Based Trust Model for Grid Security</b> <i>Vivekananth P.</i>	28
<b>Post Review of E-Education System Performance</b> <i>Noor Habibah Arshad, Saadiah Yahya, Noridah Abu Bakar</i>	33
<b>Enhanced Reliable Trust Model for Grid Computing Based on Reputation</b> <i>Vivekananth P.</i>	39
<b>Traditional Versus ICT-supported Instruction of IT English: Comparative Study</b> <i>Ivana Simonova</i>	46
<b>A Genetic Algorithm for Classification</b> <i>Raul Robu, Stefan Holban</i>	52
<b>Concurrency Control for Mobile Transactions in Presence of Bandwidth Variability</b> <i>Ahmad Alqerem</i>	57
<b>A Preliminary Study on Ancestral Voting Algorithm for Availability Improvement of Mutual Exclusion in Partitioned Distributed Systems</b> <i>Faraneh Zarafshan, Abbas Karimi, S. A. R. Al-Haddad, M. Iqbal Saripan, Shamala Subramaniam</i>	61
<b>Introduction a new Mobile Network for Language Translation, namely TNET</b> <i>Mohammad Sazavar</i>	70
<b>An Improved Model and Feature Set for Signature Recognition</b> <i>Monica Carfagni, Matteo Nunziati</i>	75
<b>Technology of Computer-Aided Adaptive Camouflage</b> <i>Jiri F. Urbanek, Theodor Balaz, Jiri Barta, Jaroslav Prucha</i>	81
<b>A Novel Watermarking Scheme Based on Two Dimensional Cellular Automata</b> <i>Omar Adwan, Aiman Ayyal Awwad, Azzam Sleit, Abdel Latif Abu Alhoum</i>	88



<b>The Design of a Steganographic System Based on the GOP Structure in the Video Standard MPEG-4</b> <i>Matus Jokay</i>	95
<b>Simulation of Cellular Aggregate Seeding of Porous Scaffolds</b> <i>Andreea Robu, Lacramioara Stoicu-Tivadar, Adrian Neagu</i>	100
<b>Classification of the Incorrect Speech Signals</b> <i>Dzenana Donko, Ismet Traljic</i>	106
<b>Forming Buyer Coalition with Bundles of Items by Ant Colony Optimization</b> <i>Anon Sukstrienwong</i>	111
<b>eTracer: An Innovative Object Tracking and Tracing Platform</b> <i>Efi Papatheocharous, Andreas S. Andreou, Vasileios Konstantinidis</i>	119
<b>Designing a 3D Desktop Virtual Environment for Teaching</b> <i>Benjamin Zayas, Jesus Vazquez Bustos</i>	125
<b>On Implementation of the Gentry-Halevi Somewhat Homomorphicscheme</b> <i>Michal Mikus</i>	131
<b>Noise Wavelet Evaluating Near to Zero by Thresholding Method Analyzing</b> <i>Amin Daneshmand Malayeri, Nikos E. Mastorakis</i>	135
<b>The Use of Web 2.0 Innovations on Education and Training</b> <i>Mchichi Tarik, Afdel Karim</i>	140
<b>Divide-and-Conquer Based IPv6 Address LPR in BD-SIIT IPv4/IPv6 Transition Using a Novel Reduced Segment Table(RST) Algorithm</b> <i>Hanumanthappa J, Manjaiah D. H.</i>	146
<b>Evaluation and Visualization of 3D Models Using COLLADA Parser and WebGL Technology</b> <i>Miroslav Milivojevic, Igor Antolovic, Dejan Rancic</i>	153
<b>Authors Index</b>	159

## Authors Index

Adwan, O.	88	Mastorakis, N. E.	135
Al-Haddad, S. A. R.	61	Mikus, M.	131
Alhoum, A. L. A.	88	Milivojevic, M.	153
Alqerem, A.	57	Neagu, A.	100
Andreou, A. S.	119	Nunziati, M.	75
Antolovic, I.	153	Papatheocharous, E.	119
Arshad, N. H.	33	Poulova, P.	15
Awwad, A. A.	88	Prucha, J.	81
Bakar, N. A.	33	Rancic, D.	153
Balaz, T.	81	Robu, A.	100
Barta, J.	81	Robu, R.	52
Bustos, J. V.	125	Saripan, M. I.	61
Carfagni, M.	75	Sazavar, M.	70
Dabas, C.	22	Simonova, I.	15, 46
Donko, D.	106	Sleit, A.	88
Greer, K.	9	Stoicu-Tivadar, L.	100
Gupta, J. P.	22	Subramaniam, S.	61
Hanumanthappa, J.	146	Sukstrienwong, A.	111
Holban, S.	52	Tarik, M.	140
Jokay, M.	95	Traljic, I.	106
Karim, A.	140	Urbanek, J. F.	81
Karimi, A.	61	Vivekananth, P.	28, 39
Konstantinidis, V.	119	Yahya, S.	33
Malayeri, A. D.	135	Zarafshan, F.	61
Manjaiah, D. H.	146	Zayas, B.	125