

2014 International Conference on Development and Application Systems

(DAS 2014)

**Suceava, Romania
15-17 May 2014**



**IEEE Catalog Number: CFP1465Y-POD
ISBN: 978-1-4799-5095-9**

CONTENTS

SECTION A - Systems, Process Control and Automations

<i>Embedded Networked Monitoring and Control for Renewable Energy Storage Systems</i> Grigore STAMATESCU, Iulia STAMATESCU, Nicoleta ARGHIRA, Ioana FAGARASAN, Sergiu Stelian ILIESCU	1
<i>PID-Controller Application in the System for Variable Technological Process</i> Simion BARANOV, Irina COJUHARI, Ion FIODOROV, Leonid GORCEAC	7
<i>Improving Interrupt Handling in the nMPRA</i> Nicoleta Cristina GAITAN, Vasile Gheorghita GAITAN, Elena-Eugenia (CIOBANU) MOISUC	11
<i>Fuzzy Decision Support System for Solar Tracking Optimization</i> Iulia STAMATESCU, Grigore STAMATESCU, Nicoleta ARGHIRA, Ioana FAGARASAN, Sergiu Stelian ILIESCU	16
<i>Real-Time Reconfiguration of Distributed Control System Based on Hard Petri Nets</i> Victor ABABII, Viorica SUDACEVSCHI, Marin PODUBNII, Irina COJUHARI	21
<i>On Quick-Change Detection based on Process Adaptive Modelling and Identification</i> Dorel AIORDACHIOAIE	25
<i>Experimental Analysis on a Self Excited Induction Generator for Standalone Wind Electric Pumping Stations</i> Mohamed BARARA, Ahmed ABOU, Mohamed AKHERRAZ, Abderrahim BENNASSAR, Silviu IONITA, Emilian LEFTER, Bogdan ENACHE	29
<i>Optimal Estimation of Parameters in Systems with the Phase Space Variable Measurability</i> Mykola ILASHCHUK, Eugene SOPRONIUK	N/A
<i>Principle of Maximum to Control Systems with Delay and Change of Phase Space Measurability</i> Tetiana HABUZA, Fedir SOPRONIOUK	N/A
<i>Robotic Arm Control in 3D Space Using Stereo Distance Calculation</i> Roland SZABO, Aurel GONTEAN	50

SECTION B - Communications and Computer Networks

<i>Matlab Based Platform for the Evaluation of Modulation Techniques Used in VLC</i> Steven De LAUSNAY, Lieven De STRYCKER, Jean-Pierre GOEMAERE, Nobby STEVENS, Bart NAUWELAERS	57
<i>Optimization of an Improved Nyquist Filter With Piece-Wise Polynomial Frequency Characteristic</i> Nicolae Dumitru ALEXANDRU, Alexandra Ligia BALAN	62

Hardware Event Treating in nMPRA

Elena-Eugenia (CIOBANU) MOISUC, Alexandru-Bogdan LARIONESCU, Vasile Gheorghita GAITAN..... 66

Sensors Network Based on Mobile Robots

Victor ABABII, Viorica SUDACEVSCHI, Marin PODUBNII, Irina COJUHARI..... 70

Using dual priority scheduling to improve the resource utilization in the nMPRA microcontrollers

Nicoleta Cristina GAITAN, Lucian ANDRIES..... 73

Introducing aceMote: an energy efficient 32 bit mote

Andrei STAN, Nicolae BOTEZATU 79

Evaluation of the noise effects on Visible Light Communications using Manchester and Miller coding

Alin-Mihai CAILEAN, Barthelemy CAGNEAU, Luc CHASSAGNE, Valentin POPA, Mihai DIMIAN..... 85

Implementation and Performance Analysis of Zero Forcing MIMO Detection Algorithm

Vakulabharanam RAMAKRISHNA, Tipparti Anil KUMAR.....N/A

Design of a Multi-Input-Multiple-Output Visible Light Communication System for Transport

Infrastructure to Vehicle Communication

Lucian-Nicolae COJOCARIU, Valentin POPA 93

SECTION C - Electronics and Computer Aided Engineering

Eddy Current Nondestructive Evaluation – the Challenge of Accurate Modeling

Nathan IDA 97

Using a Decision Tree for Real-Time Distributed Indoor Localization in Healthcare Environments

Jeroen WYFFELS, Jos De BRABANTER, Jean-Pierre GOEMAERE, Bart NAUWELAERS,
Lieven De STRYCKER, Piet VERHOEVE, Pieter CROMBEZ..... 103

A 2.4 GHz Phase Locked Loop for a Linear Phased Antenna Array

Anneleen Van NIEUWENHUYSE, Frederic TORREELE, Jean-Pierre GOEMAERE,
Lieven De STRYCKER, Bart NAUWELAERS 110

A Comparison between Coded-Decoded Mode Signals on Multifunctional Registers

Mihai TIMIS, Alexandru VALACHI, Petru CASCAVAL, Radu SILIONN/A

Size, Shape and Temperature Effects on Ferro/Antiferro-electric Hysteresis Loops from Monte Carlo

Simulations on 2D Ising Model

Daniel CHIRUTA, Christian CHONG, Pierre-Richard DAHOO, Yasser ALAYLI, Mihai DIMIAN,
Jorge LINARES..... 122

A Study on Light Energy Harvesting from Indoor Environment

Aurel CHIRAP, Valentin POPA, Eugen COCA, Alin Dan POTORAC 127

The Temperature Dependence of Magnetostatic Interactions in Nanowire Systems

Andrei DIACONU, Ioan DUMITRU, Alexandru STANCU, Leonard SPINU 132

Multi-Inverter Six-Phase Motor Drive with Two DC Sources and Voltage Waveform Symmetries

Valentin OLESCHUK, Vladimir ERMURATSKII, Vladimir BERZAN..... N/A

<i>LabVIEW used for Modelling of Hysteresis for Soft Magnetic Materials</i> Septimiu MOTOASCA	143
--	-----

<i>CSLC: The Infrastructure Compiler for SoC Design</i> Cristian-Gyozo HABA, Derek PAPPAS	149
--	-----

<i>Harmonic Analysis of Power Quality Indices Based on DWT using Three-Phase Modern Converters</i> Viorel APETREI, Constantin FILOTE, Adrian GRAUR.....	155
--	-----

SECTION D - Software Engineering and Information Technologies

<i>A Black Box Approach to Physical Layer Validation for 3G/4G Base Stations</i> Mihai BARBULESCU, Mihnea IONESCU, Andrei Alexandru ENESCU.....	161
--	-----

<i>Using Neural Networks for a Discriminant Speech Recognition System</i> Daniela SCHIOPU, Mihaela OPREA.....	165
--	-----

<i>Production Scheduling by Using ACO and PSO Techniques</i> Florentina Alina TOADER.....	170
--	-----

<i>Automatic Fury Recognition in Audio Records</i> Adrian CIOBANU, Mihaela LUCA, Elena MUSCA, Ioan PAVALOI.....	176
--	-----

<i>Color Feature Vectors Based on Optimal LAB Histogram Bins</i> Adrian CIOBANU, Ioan PAVALOI, Mihaela LUCA, Elena MUSCA.....	180
--	-----

<i>A Parallel Accelerated Approach of HMM Forward Algorithm for IBM Roadrunner Clusters</i> Stefania-Iuliana SOIMAN, Ionela RUSU, Stefan-Gheorghe PENTIUC.....	184
---	-----

<i>A Second Order-Cone Programming Relaxation for Facility Location Problem</i> Vasile MORARU, Sergiu ZAPOROJAN, Adrian GROZA	189
--	-----

<i>Organization of High-Performance Parallel-Hierarchical Computing Processes for Classification of Laser Beam Images</i> Andriy A. YAROVYY, Leonid I. TIMCHENKO, Nataliya I. KOKRIATSKAIA, Svitlana V. NAKONECHNA, Maksym S. MATEICHUK.....	P 10
---	------

<i>From Classical Computing to Quantum Computing</i> Adina BARILA	198
--	-----

<i>Romanian2SPARQL: A Grammatical Framework approach for querying Linked Data in Romanian language</i> Anca MARGINEAN, Adrian GROZA, Radu Razvan SLAVESCU, Ioan Alfred LETIA	204
---	-----

<i>Spectral Analysis of Fetal Heart Rate Variability Associated with Fetal Acidosis and Base Deficit Values</i> Cristian ROTARIU, Alexandru PASARICA, Hariton COSTIN, Dragos NEMESCU	210
---	-----

<i>Index of Authors</i>	214
-------------------------------	-----