

2010 IEEE 14th International Conference on Intelligent Engineering Systems

(INES 2010)

**Las Palmas, Spain
5-7 May 2010**



**IEEE Catalog Number: CFP10IES-PRT
ISBN: 978-1-4244-7650-3**

TABLE OF CONTENTS

Evolving, Training and Designing Neural Network Ensembles	1
<i>Xin Yao</i>	
Analysis of the Dynamics of Allele Distribution for Some Selected GA-variants	2
<i>Michael Affenzeller, Stefan Wagner, Stephan Winkler, Andreas Beham</i>	
Portfolio Selection Based on Technical Trading Rules Optimized with a Genetic Algorithm	8
<i>J. F. Kotowski, E. Szlachcic, P. M. Wantowski</i>	
Parallel Batch Pattern BP Training Algorithm of Recurrent Neural Network	14
<i>Volodymyr Turchenko, Lucio Grandinetti</i>	
Three Step Bacterial Memetic Algorithm	20
<i>L. Gal, L. T. Koczy, R. Lovassy</i>	
Self-Organizing and Fault-Tolerant Behaviors Approach in Bio-Inspired Hardware Redundant Network Structures	26
<i>Cs. Szasz, V. Chindris</i>	
Host-Based Intrusion Detection System	32
<i>L. Vokorokos, A. Balaž</i>	
Emergence of Creativity in Man-Machine Systems – Three Examples from the Interactive Art	37
<i>J. Horakova, J. Kelemen</i>	
Smart Metering for Monitoring Domestic Utilities	43
<i>M. Popa, H. Ciocarlie, A. S. Popa, M. B. Racz</i>	
A New Pattern of Knowledge Based on Experimenting the Causality Relation	49
<i>C. Pozna, V. Prahovean, R.-E. Precup</i>	
HUMANN-Based Systems for Differential Diagnosis of Dementia Using Neuropsychological Tests	55
<i>P. Garcia Baez, C. Fernandez Viadero, M. A. Perez del Pino, A. Prochazka, C. P. Suarez Araujo</i>	
New Content Behind the Concept Intelligent Engineering	61
<i>Laszlo Horvath, Imre J. Rudas, Gerhard Hancke</i>	
Architecture of Distributed Intrusion Detection System Based on Anomalies	67
<i>A. Balaž, J. Trelova, M. Kostrab</i>	
Induction Motor Control Using Genetic Algorithms and Graphic-Analytical Methods	72
<i>M. I. Toderici, Simona N. Toderici, Maria Imecs</i>	
Effective Computing by Interval-Values	78
<i>Benedek Nagy</i>	
Computational Complexity in Logic Testing	84
<i>Jozsef Sziray</i>	
Antenna Beamwidth Control for Improving Signal-to-Noise Ratio in Wireless Sensor Networks	90
<i>K. Staniec, G. Debita</i>	
A Comparative Analysis of Different Infection Strategies of Bacterial Memetic Algorithms	95
<i>Mark Farkas, Peter Foldesi, Janos Botzheim, L. T. Koczy</i>	
Soft Computing-based Signal Processing Approaches for Supporting Modeling and Control of Engineering Systems – A Case Study	102
<i>Terez A. Varkonyi</i>	
New Aspects in Modeling of Internet-Based Courses for Engineers	108
<i>Jozsef Gati, Gyula Kartyas</i>	
An Intelligent Approach for Improved Predictive Control of Spray Drying Process	112
<i>A. Azadeh, N. Neshat, M. Saberi</i>	
On a Consistent Fuzzy Operator System	122
<i>Jozsef Dombi</i>	
Security Issues of Service Installation on a Multi Application NFC Environment	129
<i>B. Benyo, B. Sodor, L. Kovacs, J. Homlok, G. Fordos</i>	
Towards Self-Organizing Maps Based Computational Intelligent System for Denial of Service Attacks Detection	134
<i>M. A. Perez del Pino, P. Garcia Baez, P. Fernandez Lopez, C. P. Suarez Araujo</i>	
People Detection and Stereoscopic Analysis Using MAS	141
<i>S. Rodriguez, O. Gil, F. de la Prieta, C. Zato, J. M. Corchado, P. Vega, M. Francisco</i>	
Differential Evolution for Multi-Objective Optimization with Self Adaptation	147
<i>A. Cichon, E. Szlachcic, J. F. Kotowski</i>	
A New Path Generation Method for Autonomous In-Door and Out-Door Robots	152
<i>Annamaria R. Varkonyi-Koczy, Attila L. Bencsik</i>	

Construction of a Corporative Information System for an Electric Power Company	158
<i>Manuel Mejia-Lavalle, Gustavo Arroyo-Figueroa</i>	
Influence of Particle Filter Parameters on Error Correction Accuracy in Traffic Surveillance Using Sensor Networks	164
<i>Florica Naghiu, Dan Pescaru, Victor Gavriila, Ionel Jian, Daniel Curiaac</i>	
Model-Based Analysis of Traffic Flow in Signalized Intersections	170
<i>Katalin Kovacs, J. Homlok</i>	
A Solution Method for Solving I/O and O/D Tables	176
<i>Andras Bako, Istvan Szuts, Peter Foldesi</i>	
Automatic Bioindicator Images Evaluation	180
<i>P. Slavikova, M. Mudrova, A. Prochazka</i>	
Robust Identification of Persons by Lips Contour using Shape Transformation	184
<i>Juan C. Briceno, Carlos M. Travieso, Jesus B. Alonso, Miguel A. Ferrer</i>	
Security Threats in Cognitive Radio Applications	189
<i>Zenon Chaczko, Ruckshan Wickramasooriya, Ryszard Klempous, Jan Nikodem</i>	
Middleware Integration Model for Smart Hospital System Using the Open Group Architecture Framework (TOGAF)	195
<i>Zenon Chaczko, Aytar S. Kohli, Ryszard Klempous, Jan Nikodem</i>	
Architecture Analysis and Optimization of Reconfigurable, Complex Systems	201
<i>Frank Lohse, Volker Zerbe, Thomas Luetzelberger</i>	
Interactive Contour Deformation of an Object Using Graph Cut	206
<i>P. Karch, I. Zolotova</i>	
Replacement of Lyapunov's Direct Method in Model Reference Adaptive Control with Robust Fixed Point Transformations	210
<i>Jozsef K. Tar, Janos F. Bitó, Imre J. Rudas</i>	
Double-Field Orientation of Unity Power Factor Synchronous Motor Drive	215
<i>Cs. Szabo, Maria Imecs, I. I. Incze</i>	
A Layered Architecture for Ad Hoc Networks of Mobile Embedded Systems	221
<i>M. Popa, A. S. Popa, H. Ciocarlie</i>	
Constrained Optimal Direct Power Control of Voltage-Source PWM Rectifiers	227
<i>Andras Kelemen, Nimrod Kutasi, Maria Imecs, Ioan Iov Incze</i>	
Hardware Implementation of the Reed-Solomon Decoder	233
<i>J. Biernat, T. Serafin, W. Kulikowski</i>	
Tensor Product Model Transformation Based Friction Compensation of a Mechatronic System	236
<i>Bela Takarics, Peter Korondi, Peter Baranyi</i>	
Determination of the Stability Parameter Space of a Two Dimensional Aeroelastic System, A TP Model-based Approach	242
<i>Patricia Grof, Peter Baranyi, Peter Korondi</i>	
An Interaction-Based Model for Auditory Substitution of Tactile Percepts	248
<i>Adam B. Csapo, Peter Baranyi</i>	
Embedded Hybrid Controller with Programmable Analog Circuit	254
<i>Gyorgy Gyorok</i>	
Autonomous Advertising Mobile Robot Development	258
<i>E. Horvath, P. Kucsera</i>	
New Trends in Optimization	262
<i>Czeslaw Smutnicki</i>	
Discrete Event Dynamic Systems Framework for Analysis and Modeling of Real Manufacturing System	263
<i>J. Zelenka</i>	
Advanced Technology Benefits Evaluation: Expectations and Attained Experience	268
<i>J. Hynek, V. Janecek</i>	
3D Visualization the Results of Complicated Grid and Cloud-Based Applications	274
<i>Eva Pajorova, Ladislav Hluchy</i>	
FPGA-based BLAST Prefiltering	278
<i>P. Laczko, B. Feher, B. Benyo</i>	
Development of a CPLD-based Novel Open Loop Stepper Motor Controller for High Performance Using VHDL	282
<i>Zoonubiya Ali, R. V. Kshirsagar</i>	
WebService-Based Solution for an Intelligent TeleCare System	288
<i>V. Stoicu-Tivadar, L. Stoicu-Tivadar, D. Berian, V. Topac</i>	
Multi-Channel EEG Signal Segmentation and Feature Extraction	292
<i>A. Prochazka, M. Mudrova, Oldrich Vyšata, Robert Hava, C. P. Suarez Araujo</i>	

A Simulation Study of Mechanisms of Group Selection of the Slime Mold Dictyostelium Discoideum	296
<i>Matthias Becker</i>	
ANFIS Regulated Type 1 Diabetic Model for Different Glucose Absorption Scenarios.....	302
<i>A. Gyorgy, P. Szalay, Z. Benyo, B. Benyo, A. Kovacs, L. Kovacs</i>	
Analytic Model of MPM 20 Engine Depicted within Characteristics of its Compressor	308
<i>L. Fozo, R. Andoga, L. Madarasz, T. Karoly</i>	
From Cognitive Binary Logic to Cognitive Intelligent Agents.....	312
<i>N. Popescu-Bodorin, V. E. Balas</i>	
Author Index	