2009 7th International Symposium on Intelligent Systems and Informatics

(SISY 2009)

Subotica, Serbia
25 – 26 September 2009

IEEE Catalog Number: CFP0984C-PRT
ISBN: 978-1-4244-5348-1

TABLE OF CONTENTS

A Concept of Universal Integral Based on Measures of Level Sets 1
Erich Peter Klement, Radko Mesiar, Endre Pap

Some Criteria for Equality of Possibilistic Variables 7
Robert Fuller

Generation of Bipedal Gait Suitable for Use in Unstructured Environments 11
Miomir Vukobratovic, Branislav Borovac, Mirko Rakovic

Elastic Robotic System with Analysis of Collision and Jamming 22
Mirjana Filipovic

Ambient Intelligent Robot-Sensor Networks for Environmental Surveillance and Remote Sensing 28
Aleksandar Rodic, Dusko Katic, Gyula Mester

Mobile Robot Control Using Self-Learning Neural Network 34
Branko Markoski, Sasa Vukosavljev, Dragan Kukolj, Szilveszter Pletl

Determination of the Acting Point of Contact Force in a Foot of Humanoid Robot Using Inductive Displacement Sensor 38
Snezana Djuric, Laszlo Nagy, Mirjana Damnjanovic

Greedy Extension of Localized Auction Based Protocols for Wireless Robot-Robot Coordination 42
I. Mezei, V. Malbasa, I. Stojmenovic

Model Predictive Control Solutions for an Electromagnetic Actuator 47
C. -A. Dragos, S. Preitl, R. -E. Precup

Fractal and Structural Entropy Calculations on the Epitaxially Grown Fulleren Structures with the Help of Image Processing 53
Akos Nemcsics, Szilvia Nagy, Imre Mojzes, Peter Turmezei

Application of Continuous-Time Markov Chains by Reliability Analysis 56
Gyula Zsigmond, Szilvia Homolya, Marianna Lendvay

Transaction in Object Oriented Programming 60
Aleksandar Almazan, Biljana Radulovic, Zlatko Covic

A Characterization of Ceramic SMD Inductors for PCB Applications 63
A. B. Menicanin, M. S. Damnjanovic, Lj. D. Zivanov

Wireless Sensor-Based Control of Mobile Robots Motion 67
Gyula Mester

Discrete Tomographic Reconstruction of Binary Matrices Using Branch and Bound Method 71
Poth Miklos, Galifi Csongor

The State Regulation of Tax Policies and Subventions - Microeconomic Aspects 75
Andras Sagi, Eva Pataki

Common Fixed Point Theorem in Fuzzy Metric Spaces 80
Tatjana Dosenovic

New Milestone in NATO Logistic Information Management System 84
Bela Reger

Web-Based Exercises for Educating Basis of Fuzzy Logic 88
P. M. Stanic, V. Delic

Sugeno and Shilkret Integrals, and T- and S-Evaluators 93
Slavka Bodjanova, Martin Kalina

Absolutely Monotone Real Set Functions 99
Biljana Mihailovic, Endre Pap, Ljubo Nedovic

A New Variant of Newton's Method Based on Power Mean 103
Nebojsa M. Ralevic, Tibor Lukic

Generalization of the Chebyshev Inequality for Pseudo-Integral 107
Endre Pap, Mirjana Strboja

Expansion of the Relational Algebra 111
Piroska B. Kis, Antal Buza

Modeling a Submission Phase of Change Request Process in Context of a Running Application 115
Z. Stojanov, D. Dobrilovic, B. Perisic

Application of Fuzzy Sets in Emerging Markets: An Empirical Treatment 121
Goran Andjelic, Vladimir Djakovic, Nebojsa M. Ralevic

Fuzzy Reasoning Approach for a Postal Company Restructuring Project 124
N. Glisovic, N. Bojovic, M. Milenkovic

Generalised Prioritised Fuzzy Constraint Satisfaction Problem 128
Aleksandar Takaci, Srdjan Skrbic, Aleksandar Perovic
Development of a Fuzzy Sets Based Prototype Expert System for Financial Applications 132
D. Z. Saletic, A. Zurovac
Advantages of Wireless Sensor Networks in Greenhouse Environment 138
Istvan Matijevics
The Contribution of Administrative Management Theorethician in Developing the Classical School of Organization 143
Eva Pataki, Andras Sagi
Web Based Distant Monitoring and Control for Greenhouse Systems Using the Sun SPOT Modules 147
Simon Janos, Goran Martinovic
True/False Questions Analysis Using Computerized Certainty-Based Marking Tests 152
Sanja Maravic Cisar, Petar Cisar, Robert Pinter
3-D Reconstruction System 156
O. E. Cseri, A. Kerti, Z. Vamossy
SCADA Automation System Laboratory, Elements and Applications 161
Cristina Anita Bejan, Mihai Iacob, Gheorghe-Daniel Andreescu
Realization of School Library Software Application 167
Zdravko Ivankovic, Branko Markoski, Ivana Berkovic, Dragan Ivetic
Modeling of the Thyristor Controlled Rectifiers for Control of Ward – Leonard System 172
Gabor A. Biacs, Milan S. Adzic
Wireless Sensory Control for Mobile Robot Navigation 176
M. Popa, M. Marcu, A. S. Popa
Real – Time Monitoring and Processing of Human Physiological Parameters 181
M. Popa, V. Argesanu, A. S. Popa, A. Crista
A Search Method of Inputs to Target Outputs on Qualitative and Quantitative Hybrid Simulation Using Neighbor Selection by Sensitivity Analysis 187
Masaki Samejima, Goro Shida, Masanori Akiyoshi, Norihisa Komoda
Full Kinematic and Dynamic Modeling of "Szabad(ka)-Duna" Hexapod 193
Istvan Kecskes, Peter Odry
Foot Force Sensor – Error Analysis of the ZMP Position Measurement 198
D. Krkljes, L. Nagy, M. Nikolic, B. Kalman
Calibration Machine for Linear Scales 204
Gyula Hermann
One Solution for Detecting Human Faces in Real Time Environment 208
Pletl Szilveszter, Galifi Csongor, Gogolak Laslo
Model of Image Decomposition Presentation with a Quadtree 213
Dragan Rastovac, Vladimir Majski, Dragan Cvetkovic
Convergence Properties of Some Random Networks 217
M. Banyai, T. Nepusz, L. Negyessy, F. Bazso
Multiscale and Moving Average Entropy: Statistical Dependence in Stressed Subjects 222
T. Loncar Turukalo, O. Sarenac, N. Japundzic-Zigon, D. Bajic
Web Based Intelligent Product Configurator for Thermal Insulation and Decoration of Buildings 228
Zlatko Covic, Igor Furstner, Zoran Anisic, Robert Freund
Uncertainty in Agricultural Production Planning 234
Zoltan Pap
KNX Based Lighting Control Solutions with Gira Homeserver 3 238
Emil Matijevics
Concurrent Programming Method for Digital Signal Processing 242
Anita Sabo, Norbert Schramm
Modeling Supported Course Programs for Engineers 247
J. Gati, Gy. Kartyas
A Note on Absolute Continuity for the Interval-Valued Measures Based on Pseudo-Integral of Interval-Valued Function 252
Ivana Stajner-Papuga, Tatjana Grbic, Mirjana Strboja
Performance and Power Consumption Investigation for Execution of Integer Operations on CPU and GPU Processors for Multimedia Applications 258
A. Iovanovici, C. Visan, M. Marcu
Educational Software for Preschool Children 263
Dijana Karuovic, Dragica Radosav
Examples of Adaptive Web-Based Educational Systems 268
Pinter Roberts, Szedmina Livia, Sanja Maravic Cisar

Accurate Position Control of PAM Actuator in LabVIEW Environment 272
J. Sarosi, J. Gyeviki, A. Veha, P. Toman
An Implementation of AI for Distant Management of Electro-Energetic Systems 277
Gogolak Laslo, Pletl Szilveszter, Onozo Viktor
Performance Scorecards for Electric Power Distribution 281
Imre Petkovic, Djerdji Petkovic, Armin Petkovics
An Expert System for Tourists Using Google Maps API 286
Pejic Aleksandar, Pletl Szilveszrter, Pejic Bojan
Iterative Learning Control Experimental Results for Inverted Pendulum Crane Mode Control 292
R. -E. Precup, C. Gavriluta, M. -B Radac, S. Preitl, C. -A. Dragos, J. K. Tar, E. M. Petriu
Introducing Unique Names into the Semantic Web 298
Dmitry V. Levshin
Application for Network Node Configuration Based on NNDL (Network Node Desription Language) 303
Dalibor Dobrilovic, Zeljko Stojanov, Milan Duka, Borislav Odadzic
Realization of Protocol Conversion for High Speed Data Acquisition System 308
Szakall Tibor, Bojan Kuljic, Peter Dukan, Kalman Mathe, Odry Peter
Practical Implementation of RFID Technology in Education 312
Bojan Kuljic, Tibor Szakall, Zlatko Covic, Lehel Nyers
Learning Style Based Personalization of SCORM E-Learning Courses 316
Goran Savic, Zora Konjovic
Computer Modelling in Mathematics Education 321
Valerija Pinter Krekic, Zolt Namestovski
Difficulties and Possibilities of Distance Learning 327
Marjana Pardanjac, Dragica Radosav, Snezana Jokic
The Cognitive Conflict in the Extended RED – PiE Model 332
Elenora Brtka, Vladimir Brtka, Dragica Radosav
Superposition of Critical Paths Based on Analytical and Numerical Method 336
Jevtic Vesna, Letic Dusko
Influence of Cylinder Leakage on Dynamic Behavior of Electrohydraulic Servo System 340
Attila Kovari
Some Applications of the Interpretation Method 345
Z. Djordjevic, M. Borovcanin, A. Jovanovic, A. Perovic
Indirect Communication between Engineers through Product Model 347
L. Horvath, I. J. Rudas
Evasion of Instabilities Caused by Neglected Subsystems and Saturations in the Control of a Cart of Asynchronous Electric Drives 353
Jozsef K. Tar, Csaba Rati, Imre J. Rudas, Janos F. Bito, Jose A. Tenreiro Machado
The Survey Measuring the Informatics Skills of the Entering Students at Budapest Tech, Bánki Donát Faculty of Mechanical and Safety Engineering 359
Gabor Kiss
The Contribution Of Administrative Management Theoretician In Developing The Classical School Of Organization 362
Eva Pataki, Andras Sagi
The State Regulation of Tax Policies and Subventions – Microeconomic Aspects 367
Andras Sagi, Eva Pataki
Author Index