3rd International Workshop on Soft Computing Applications
SOFA2009
29 July – 1 August

Szeged (Hungary) – Arad (Romania)

PROGRAM

Wednesday, July 29

12:00 Registration – Hotel Tisza, Szeged (Széchenyi square 3)

14:00 Opening
14:30 – 15:30 Invited Lecture: **Neurodynamic Optimization with Its Application for Model Predictive Control -** Jun Wang
Chair: Valentina E. Balas

15:30 – 16:00 Coffee break

16:00 – 17:20 **Sensors and Intelligent systems** – Chair: Ioan Dzitac

Probabilistic model for a distributed feature selection method
Zs. Berényi, I. Vajk

The Physical Sensor for Pressure Measurement
A.Stanci

Preliminary Issues on Brain – Machine Contextual Communication Structure Development
T. Vesselenyi, I. Dzitac, S. Dzitac, C. Hora, C. Porumb

Wear Simulation through Cellular Automata Method,
C. Hora, T. Vesselenyi, S.Dzitac, I.Dzitac, H. Hora

18:00 – Departure for Dinner - meeting in the lobby of Hotel Tisza

Thursday, July 30

9:00 – 10:00 Invited Lecture: **"The 60 years old "Information Theory" and the fuzzy Concept of Information" –** Rudolf Seising
Chair: Marius M. Balas

10:00 – 11:40 **Signal processing and Applications** - Chair: Viorel Ariton

Automatic image classification from Cherenkov telescopes using Bayesian ensemble of neural networks.
C. Malagón, J. A. Barrio, D. Nieto

Some aspects about 3D objects recognition and distance approximation
T. Pătruşel, E.Rovenţa, C.Barna

An Integrated Monitoring System for the Human Robot Collaborative Workspace
O. O. Ogorodnikova

Histogram Intersection based Image Retrieval Technique using Relevance Feedback

T. Barbu, M. Costin, A. Ciobanu

New Attempts in Sound Diarization
C. Costin, M. Costin

11:40 – 12:00 Coffee, sandwiches

12:00 – Transfer to Arad (Romania) – meeting in the lobby of Hotel Tisza

15:00 – 16:00 Registration – Hotel Continental, Arad (Bd. Revolutiei, no. 79-81)
16:00 – 17:00 Invited Lecture: **New control algorithm and defuzzification –** József Dombi
                                    Chair: János C. Fodor

18:00 – Welcome drink (Hotel Continental, Arad)

Friday, July 31

9:00 – 10:00 Invited Lecture: **Application of Paraconsistent Annotated Logic Program EVALPSN
                    to Intelligent Control/Safety Verification -** Kazumi Nakamatsu
                    Chair: Gabriela Prostean

10:00 – 10:20 Coffee break

10:20 – 11:40 **Control and Modeling –** Chair: Viorel Nicolau

Adaptive Gain Sliding Mode Control in Uncertain MIMO Systems
M. Roopaei, V. E.Balas

Extension of a Control Structure with PSAIC
V. E. Balas, V. Ceregan, A. Codrean, T. L. Dragomir

Thermal Consumptions: Control and Monitoring
M.C. Popescu, M.M. Balas

Case Based Reasoning Approach for Transaction Outcomes Prediction on Currency Markets
X. Wang, M. D. Sykora, R. Archer, D. Parish, H. E. Bez

11:40 – 11:50 Short break

11:50 – 13:10 **WEB applications and Optimization Algorithms –** Chair Jozsef Dombi

Financial News Content Publishing on Youtube.com
M. D. Sykora, M. Panek

Electronic Mail-based Adaptive Social Graph
G. Tolnai

Advice in Electronic Commerce
F.L. Tache

Testing of a Modified Particle Swarm Optimization Algorithm Using Different Benchmark Functions
S. Hamdan, A. El Zawawi

13:10 – 14:00 Lunch

14:00 – 15:00 Invited Lecture: **A Research Based Approach to Predictive Simulation in Disaster
                    Management -** Pamela McCauley Bush
                    Chair: Valentina E. Balas

15:00 – 15:10 Short break

15:10 – 17:10 **Inteligent Systems and Modeling –** Chair: Daniela E. Popescu

Redundancy method used in PLC related applications
G. Gabor, D. Zmaranda, C. Gyorodi, S. Dale

Some Aspects Related with The Performability of The Sequential Multipliers Units
D. E. Popescu, M. Pater

Market-Basket Problem Solved With Depth First Multi-Level Apriori Mining Algorithm
M. Pater, D. E. Popescu

Fractal Technologies for Image Processing in Biology
I. Sztojanov, V. Voinea, J.-L. Stănică, C. Popescu-Mina

Fuzzy Rules of Sound Speed Influence on Ultrasonic Sensing in Outdoor Environments,
V. Nicolau, C. Miholca, M. Andrei

Heating Monitored and Optimal Control of Electric Drives
M.- C. Popescu, V. E. Balas, L. Popescu

17:10 – 17:30 Coffee break

17:30 – 19:30 **Intelligent Systems and Applications –** Chair: Marius - C. Popescu

System Decentralized for Tracking Control and Data Acquisition Using for Hydroelectric Central
M.- C. Popescu, V. E. Balas, L. Popescu

A Software Solution for Reducing Energy Consumption in Domestic Sector
V. Topac, A. Neaga, A. Stancu, L. Szantho, F. Copil

Towards Cognitive Antenna Systems based on Antenna-Channel Co-evolution
L. C. Cremene, N. Crisan

A Procedure for PLC Programs Validation
E. I. Gergely, Fl. Popentiu-Vladicescu, H. Madsen, G.E. Mang, Z. T. Nagy, D. Spoiala

Dependability Analysis of PLC I/O Modules
E. I. Gergely, H. Madsen, Fl. Popentiu-Vladicescu, V. Spoiala, Z. T. Nagy

Applying a pattern length constraint on the FP-Growth algorithm
C. Györödi, R. Györödi, M. Derşidan, L. Bandici

19:45 – Departure for Workshop Dinner – meeting in the lobby of Hotel Continental

Saturday, August 1

9:00 – 10:00 Invited Lecture: **Fuzzy Communication and Cooperation of Autonomous Robots** – László T. Kóczy
Chair: Pamela McCauley Bush

10:00 – 11:40 **Fuzzy Theory and Logics –** Chair: Dragan Radojevic

Recent results on uninorms
J. C. Fodor

Aggregation operators on the real line
Y.Narukawa, V. Torra

Function decomposition using distending function
J. Dombi, J. D. Dombi

Real-valued Implication as Generalized Boolean Polynomial
D. G. Radojević

The improvement of an existing fuzzy logic rule base for the treatment and simulation of conflicts in the dispositional tasks of a railway traffic control center
M. Farkas, T. Héray, L. T. Kóczy

11:40 – 12:00 Coffee break

12:00 – 14:40 **Soft computing and applications –** Chair: Péter Földesi

Utility of time factor in logistic optimization
P. Földesi, E. Süle

New algorithms used in the phases of automatic classification of products
M.Buzera, G. Prostean

The Diagnosis of some Kidney Diseases in a Small Prolog Expert System
E. Roventa, G. Rosu

Object Labeling Method using Uncertainty measurement
C. Barna

Configurable Fuzzy Logic Coprocessor for Small Scale Food Preparation
V. Thareja, M. Montcalm, M. Bolic

On a Promising Sustainable Energy System and its Control - the Passive Greenhouse
M. M. Balas, C. Mnerie, O. Fălcan, D. Toader, S. Muscă, C. Muscă

Numerical-Logical Processing in Neural Networks for the Decision Support
V. Ariton, D. Ariton

The Fuzzy-Interpolative ADL Matrix
Gy. L. Florian

14:40 – 14:50 Closing, best student paper award

15:00 – Transfer to Hungary