

NEUREL 2008, Conference Program, September 25-27, 2008

Faculty of Electrical Engineering, University of Belgrade, Bulevar Kralja Aleksandra 73

Thursday, 25 Sept. 2008.

08:30 – 10:00 Registration and Coffee

Main Hall

10:00 – 10:30 Opening Session

Main Conference Room (1st floor)

10:30 – 11:20 Tutorial Lecture 1

Main Conference Room (1st floor)

Session Chair: Duško Katić, IEEE SCG CI Chair

TL 1 Lecturer: Srđan Stanković (University of Belgrade, Serbia),
Swarming and Flocking: Cooperative Collective Behavior

11:20 – 13:00 Welcome Cocktail

Main Hall

13:00 – 14:00 IEEE Serbia and Montenegro (SCG) Section

Room 61

CAS-SP Chapter, CI Chapter and WIE Affinity Group Joint Meeting

14:00 – 15:40 Special Session 1:

Room 61

COST 292, Semantic Multimodal Analysis of Digital Media

Session Organizer and Chair: Željko Trpovski

SS1.1 Branimir Reljin, *Brief Review of COST Action 292 Activities*

SS1.2 Zeljen Trpovski, *Content Based Image Retrieval: From Pixels to Semantics*

SS1.3 Graça Almeida, Fernando Melicio, António M. G. Pinheiro, *Multimodal Semantic Characterization of Images using MPEG-7 Descriptors*

SS1.4 Ivan Damjanovic, Chris Landone, Josh Reiss, Ebroul Izquierdo, *Enriched Access to Digital Audiovisual Content*

SS1.5 Vladan Radosavljevic, Nenad Kojic, Goran Zajic, Branimir Reljin, *The Use of Unlabeled Data in Image Retrieval with Relevance Feedback*

SS1.6 Dragan Ristic, Milan Pavlovic, Irini Reljin, *Image Segmentation Method Based on Self-Organizing Maps and K-Means Algorithm*

15:40 – 16:00 Coffee Break

Room 64

16:00 – 17:40 Regular Session 1: Algorithms and Learning Methods

Room 61

Session Chairs: Milan Milosavljević and Branimir Todorović

RS1.1 Milan R. Rapaić, Željko Kanović, Zoran D. Jeličić, Dušan Petrovački, *Generalized PSO Algorithm – an Application to Lorenz System Identification by Means of Neural-Network*

RS1.2 Ivica Marković, Branimir T. Todorović, *Sequential Training of Support Vector Machine*

RS1.3 Branimir T. Todorović, Svetozar R. Rančić, Ivica M. Marković, Edin H. Mulalić, Velimir M. Ilić, *Named Entity Recognition and Classification using Context Hidden Markov Model*

RS1.4 Velimir M. Ilić, Zoran H. Perić, *Kolmogorov Complexity of Spherical Vector Quantizer*

RS1.5 Nikola Burić, Kristina Todorović, Nebojša Vasović, Andreja Samčović, *Synchronization Patterns in Neural Chains based on Hyper-Chaotic Cells*

18:00 City Tour

Friday, 26 Sept. 2008.

09:00 – 10:40 Regular Session 2: Applications of NNs 2: Power Control

Room 61

Session Chairs: Lambros Ekonomou and Mihai Gavrilas

RS2.1 Lambros Ekonomou, Dimitrios Oikonomou, Theodoros Maris, *Outages Calculations for Overhead High Voltage Transmission Lines using artificial Neural Networks*

RS2.2 Mihai Gavrilas, Gilda Gavrilas, Ovidiu Ivanov, *Load Profiling with Fuzzy Self-Organizing Algorithms*

RS2.3 Slobodan Bjelić, Vladimir Mladenović, *Algorithms and Possible Methods of Emergency Control Electrical Network*

RS2.4 Nenad Marković, Slobodan Bjelić, Uroš Jakšić, Zorica Bogičević, *Graphical Zero-Sequence Cut-Offs Method of Determining of Fault to Earth in Electrical Lines*

RS2.5 Milena Petrujković, Milan R. Rapaić, Boris Jakovljević, Vesna Đapić, *Electric Energy Forecasting in Crude Oil Processing using Support Vector Machines and Particle Swarm Optimization*

10:40 – 11:00 Coffee Break

Room 64

11:00 – 11:50 Tutorial Lecture 2**Room 61****Session Chair: Srdjan Stanković****TL 2 Lecturer: Paul Dan Cristea** ("Politehnica" University of Bucharest, Romania)
*Combining PCA and ANN in Nucleotide Genomic Signals Prediction***11:50 – 13:30 Regular Session 3: Gene Analysis and Biology Inspired Networks****Room 61****Session Chairs: Paul Cristea and Valeri Mladenov**

- RS3.1 Paul Cristea, Valeri Mladenov, Georgi Tsenov, Rodica Tuduce, Simona Petrakieva, *Application of Neural Networks, PCA and Feature Extraction for Prediction of Nucleotide Sequences by Using Genomic Signals*
- RS3.2 Nikos E. Mastorakis, Valeri M. Mladenov, M.N.S. Swamy, *Neural Networks for Checking the Stability of Multidimensional Systems*
- RS3.3 Vladislav Mišković, Milan Milosavljević, *Application of Hybrid Symbolic Ensembles to Gene Expression Analysis*
- RS3.4 Vladislav Mišković, Milan Milosavljević, *Application of Symbolic Inductive Learning Methods to Gene Expression Analyses*
- RS3.5 Konstantin Nikolić, Ivan B. Šćepanović, *Stochastic Search-Based Neural Networks Learning Algorithms*
- RS3.6 Dejan Raković, Ana Vasić, *Classical-Neural and Quantum-Holographic Informatics: Psychosomatic-Cognitive Implications*

13:30 – 15:00 Lunch**Club ICEF****15:00 – 17:00 Special Session 2:****Room 61*****External Control of Movement: Use of Artificial Neural Networks*****Session Organizer and Chair: Dejan Popović**

- SS2.1 Dejan Popovic, Mirjana Popovic, *External Control of Movements and Artificial Neural Networks*, Invited Paper
- SS2.2 Milica Djuric, *Automatic Recognition of Gait Phases from Accelerations of Leg Segments*
- SS2.3 Strahinja Došen, Dejan Popović, *Rule-based Control of Walking by Using Decision and Practical Sensors*
- SS2.4 Ivana Milovanovic, *Radial Basis Function (RBF) Networks for Improved Gait Analysis*
- SS2.5 Nebojša Malešević, *ANN for Automatic Shaping of the Multi-Contact Surface Electrodes*
- SS2.6 Lana Popović, Mirjana B. Popović, *Extraction of Tremor for Control of Neural Prostheses: Comparison of Discrete Wavelet Transform and Butterworth Filter*
- SS2.7 Milan Bezbradica, Željko Trpovski, *Principles of Image Reconstruction using Positron Emission Tomography and Maximum Likelihood Estimation Algorithms*

17:00 – 17:20 Coffee Break**Room 64****17:20 – 19:00 Regular Session 4: Applications of NNs 1: Image and Signal Processing****Room 61****Session Chairs: Iri Reljin and Marko Janković**

- RS4.1 Marko Janković, Masashi Sugiyama, Branimir Reljin, *Tensor Based Image Segmentation*
- RS4.2 Hassan Fahmy Hashem, *Ability of Neural Network to Detect and Recognized of Faces Images in Noisy Environment*
- RS4.3 Iolanda Alecsandrescu, Paul Ungureanu, Liviu Goras, *Nonhomogeneous CNN's And Their Use For Texture Classification*
- RS4.4 Pari Jahankhani, Kenneth Revett, Vassilis Kodogiannis, *A Rule Based Approach to Classification of EEG Datasets: A Comparison Between ANFIS and Rough Sets*
- RS4.5 Ana Gavrovska, Dubravka Jevtic, *PVC Scalogram Detection using Neural Network*
- RS4.6 Natasa Reljin, Dragoljub Pokrajac, *Classification of Performers using Support Vector Machines*

20:00**Boat Tour and Conference Dinner**

Saturday, 27 Sept. 2008.

09:00 – 10:40 Regular Session 5: Applications of NNs 3: NNs in Modeling

Room 61

Session Chairs: Vančo Litovski and Vera Marković

RS5.1 Pero Radonja, Srdjan Stankovic, Dragana Drazic, *Neural Networks Based Generalized Profile Function Model*

RS5.2 Jelena Milojković, Vančo Litovski, *Comparison of Some ANN Based Forecasting Methods Implemented on Short Time Series*

RS5.3 Bratislav Milovanovic, Marija Milijic, Zoran Stankovic, *Hybrid Empirical-Neural Approach in Modeling EM Propagation in Urban Environment with Foliage Areas*

RS5.4 Zlatica Marinković, Vera Marković, *ANN for Noise Estimation of Microwave FETs from S-parameters*

RS5.5 Marija Zajeganovic-Ivancic, Irini Reljin, *Video Multicoder with Neural Network Control*

10:40 – 11:00 Coffee Break

Room 64

11:00 – 12:40 Regular Session 6: Applications of NNs 4: Robot and Industry Control

Room 61

Session Chairs: Duško Katić and Dragoljub Pokrajac

RS6.1 Aleksandar Rodić, Duško Katić, *Trajectory Prediction and Path Planning of Intelligent Autonomous Biped Robots – Learning and Decision Making through Perception and Spatial Reasoning*

RS6.2 Branislav T. Jevtović, Miroslav R. Mataušek, Danilo J. Oklobdžija, *Development and Realization of Bucket Wheel Excavator Knowledge-Based Neuro-Fuzzy Control System*

RS6.3 Dragan Matić, Boris Dumnić, Filip Kulić, Veran Vasić, *GA optimization of PI Controller in MRAS Structure for Induction Motor Speed Estimation*

RS6.4 Ljubomir Francuski, Filip Kulić, Boris Dumnić, Đura Oros, *Fuzzy PI Controller for Vector Control of Induction Machines*

RS6.5 Vladimir Bugarski, Perica Nikolić, Filip Kulić, *Realization of Control of Pneumatic System for Positioning of Nozzle Based on Fuzzy Logic*

RS6.6 Mladen Majstorović, Ivan Nikolić, Jelena Radović, Goran Kvaščev, *Neural Network Control Approach for a Two-Tank System*

12:40

NEUREL 2008 delegate picture and Closing Session

Room 61

Enjoy the Symposium NEUREL-2008!

We cordially expect you at the 10th NEUREL-2010!