Tuesday, February 12

Room A
PLENARY LECTURE 1: 8:00-9:00 (to be announced soon)

Room A
Time: 9:00-11:00
SESSION: NNA 1
Chair: L. Khadra
All the papers of this session are published in the pages 7 – 40 of the “Advances in Neural Networks World”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

A Computational Study of Incremental Projection Learning-Based Neural Networks
Hendri Murfi, Benyamin Kusumoputro

Implementation of An Artificial Neural Network Employing Field Programmable Gate Array Technology
Yousry El-Gamal, Magdy Saeb, Nadine El-Mekky

Neural-wavelet analysis of cardiac arrhythmias
L. Khadra, A. Fraiwan, W. Shahab

A Simulation of Hand Written Characters using Neural Networks Techniques
Hamza Ali, Mohamed Hamada

Use of Neural Networks to Forecast Time Series: River Flow Modeling
Richard Chibanga, Jean Berlamont, Joos Vandewalle

Spiking neurons (STANNs) in speech recognition
David Mercier, Renaud Seguier
Room B  
Time: 9:00-11:00  
SESSION: FSFS 1  
Chair: V. Grisales
All the papers of this session are published in the pages 7 – 43 of the “Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

A defuzzification scheme suitable for digital hardware implementation  
Victor Grisales, Miguel Melgarejo

Fuzzy Modeling of the Complexity vs. Accuracy Trade-off in a Sequential Two-Stage Multi-Classifier System  
Mark Last, Horst Bunke, Abraham Kandel

A combined Approach for Outliers Detection in Fuzzy Functional Dependency through the Typology of Fuzzy Rules  
Shaheera Rashwan, Soheir Fouad, Hisham Sewelam

Use of Fuzzy Logic for Data Fusion in a Recognized Maritime Picture  
Eric Lefebvre, Christopher Helleur

An adaptive fuzzy-logic algorithm for measuring and improving autonomous mobile robot sensory performance  
Ofir Cohen, Ephraim Korach, Yael Edan

The Intelligent Simulation in Inhalational Anaesthesia  
Jiann-Shing Shieh, Wen-Long Shi, Shou-Zen Fan

Coffee Break 11:00 – 11:30

Room A  
Time: 11:30-13:30  
SESSION: NNA 2  
Chair: JeongYon Shim
All the papers of this session are published in the pages 41 – 72 of the “Advances in Neural Networks World”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Reconstruction of Vector Fields of Dynamical Systems from Time Series Data: a Neural Network Approach  
Viktor Avrutin, Michael Schanz, Frank Schreiber, Georg Wackenhut

Automatic Modularization of ANNs Using Adaptive Critic Method  
Rudolf Jaksa
Memorising and Forgetting in the Human Brain  
Ales Grmela, Nikos Mastorakis

Stock Market Prediction based on Fundamentalist Analysis with Fuzzy-Neural Networks  
Renato de C. T. Raposo, Adriano J. de O. Cruz

Dynamic Sensory Gating Mechanism in Conditional Reactive Hierarchical Memory  
JeongYon Shim, ChongSun Hwang

Representing 2D objects. Comparison of several self-organizing networks  
Francisco Florez, Juan Manuel Garcia, Jose Garcia, Antonio Hernandez

Room B  
Time: 11:30-13:50  
SESSION: FSFS 2  
Chair: Hugang Han
All the papers of this session are published in the pages 44 – 83 of the “Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Rule Extraction using GA-based Fuzzy Modeling  
Hugang Han, Yoshio Morioka, Kazumi Takano

Production Planning with Fuzzy Due Windows  
Yue Wu, K. K. Lai

Modelling and control of a water gas heater with neuro-fuzzy techniques  
Jose Vieira, Alexandre Mota

Using fuzzy prototypes for software engineering measurement and prediction  
Jose Olivas, Marcela Genero, Mario Piattini, Francisco Romero

Memorizing in Fuzzy Computers  
Mraz Miha, Oseli Damjan, Zimic Nikolaj, Virant Jernej
Genetic Algorithm and Singular Value Decomposition in the Design of Fuzzy Systems for the Modelling of Explosive Cutting Process
A. Darvizeh, N. Nariman-Zadeh, F. Oliaei

A goodness of fit index to reliability analysis in fuzzy model
Bahram Sadeghpour Gildeh, Denis Gien

Room A
Time: 15:00-17:00
SESSION: NNA 3
Chair: A. Grmela
All the papers of this session are published in the pages 73 – 106 of the “Advances in Neural Networks World”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Neural Schemas: A Mechanism for Autonomous Action Selection and Dynamic Motivation
Lee McCauley

Modified Self-Organising Maps Neural Network for Arabic Phonemes Recogniser
Fadel Sukkar, Masun Homsi

Reducing state space exploration in reinforcement learning problems by rapid identification of initial solutions and progressive improvement of them
Kary Framling

Automatic identification for automotives vehicles plates
Bruno C. Guingo, Roberto J. Rodrigues, Antonio Carlos G. Thome

Reductive and Reproductive Neural Networks Predict Enzyme Classification at the Time-of-Reduction-Recovery
Yasuo Kuhara, Junta Doi

Overcoming limited samples and ambiguity in classification using neural networks: A Synergistic Approach
K. Lavangnananda
Room B
Time: 15:00-17:00
SESSION: NNA 4
Chair: L. Carnimeo
All the papers of this session are published in the pages 107 – 140 of the “Advances in Neural Networks World”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Target recognition in mobile robot vision systems via neural networks with local interconnections
Leonarda Carnimeo

Synthesis of neural associative memories for artificial vision systems by fuzzy image segmentations
Leonarda Carnimeo

Oriental Medical Data Mining and diagnosis Based On Binary Independent Factor Model
JeongYon Shim, Lei Xu

Visual Objects Representation by Features Network
Tito Silva, Agostinho Rosa

Prognostic Systems for NPC: A comparison of the Neural Network Model and The Cox Proportional Hazards Model
Sameem Abdul-Kareem, Sapiyan Baba, Yong Zulina Zubairi, U. Prasad, Mohd Ibrahim A. Wahid

Cellular optimal linear associative memories for statistical process control: a preliminary study and proposal
Leonarda Carnimeo, Michele Dassisti

Coffee Break   17:00 – 17:30

Room A
Time: 17:30-19:30
SESSION: NNA 5
Chair: V. S. Kodogiannis
All the papers of this session are published in the pages 141 – 173 of the “Advances in Neural Networks World”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

A New Wave Neural Network Dynamics for Planning Safe Paths of Autonomous Objects in a Dynamically Changing World
Dmitry V. Lebedev, Jochen J. Steil, Helge Ritter
A new vector quantization approach via self-organizing map
Lixin Xu, Wanquan Liu, V. Svetha

An intelligent detection scheme for sonar signal tracking
V. S. Kodogiannis, D. Tomtsis

"Fluidice": Living Information Within Mass Structure
E. Macer-Story

Room B
Time: 17:30-19:30
SESSION: FSFS 3
Chair: P. Salgado
All the papers of this session are published in the pages 84 – 109 of the “Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Optimized Subtractive Clustering for Neuro-Fuzzy Models
Juuso Rantala, Hannnu Koivisto

Three-Dimensional Missile Guidance Laws Design Using Fuzzy Schemes
Y. Z. Elhalwagy, M. Tarbouchi

The Constraint Optimisation in Subband Image Coding using Fuzzy Iterative Algorithm
Peter Planinsic, Dusan Gleich, Zarko Cucej

Hierarchical Fuzzy Model
Paulo Salgado

20:30 - Welcome Drink
Wednesday, February 12

Room A
PLENARY LECTURE 2: 8:00-9:00 (to be announced soon)

Room A
Time: 9:00-11:00
SESSION: FSFS 4
Chair: Izabella V. Lokshina
All the papers of this session are published in the pages 110 – 121 of the “Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation” - except the last one which will be published in a future volume of WSEAS - as well as in the CD-ROM Proceedings.

Fuzzy associative memories for bidimensional pattern segmentation in CNN-based systems
Leonarda Carnimeo, Antonio Giaquinto

SPEED: a Simple Parameterized Environment for Evolutionary Defuzzification
A. Cincotti, V. Cutello, G. Sorace

Expert System Based on the Fuzzy Diagnostic Model to Support Coal Mine Ventilation Operator’s Decisions.
Izabella V. Lokshina

A Lossless Rule Reduction Technique for a Class of Fuzzy Systems
Jayaram Balasubramaniam, C. Jaganmohan Rao

Room B
Time: 9:00-11:00
SESSION: EC 1
Chair: S. Milanovic
All the papers of this session are published in the pages 174 – 210 of the “Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Genetic algorithm based on primal-dual chromosomes for royal road functions
Shengxiang Yang

Securing the Networked e-Business Throughout an Internet Distributed Organization
Stanislav Milanovic, Zoran Petrovic
An Evolutionary Algorithm to Improve Knowledge-Based Decision-making for Automatic Parallelisation  
P. J. P. McMullan, B. McCollum

An evolutionary approach to the school timetabling problem  
Barbara Korousic-Seljak

Hybrid Model to Design Proactivity and Multi-Agent-Systems  
Jean-Dany Vally, Remy Courdier

Solving a Multiple Criteria Decision-Making Problem Under Uncertainty Using Protrade and @RISK 4.0  
Alejandra Duenas, Kim Best, Neil Mort

Coffee Break  11:00 – 11:30

Room A  
Time: 11:30-13:30  
SESSION: NNA 6  
Chair: S. Sureerattanan

Backpropagation networks modelling: appropriate structure and convergence speed  
Songyot Sureerattanan, Huynh Ngoc Phien, Nidapan Sureerattanan, Nikos Mastorakis

Plausible Neural Networks  
Yuan Yan Chen

Non Parametric Learning of Sensory-Motor Mappings Using General Regression Neural Networks  
Pierre-Francois Marteau, Sylvie Gibet

Neural networks-based virtual sensors methodology  
Anna Perez-Mendez, Luis Nava-Puente, Francklin Rivas-Echeverry, Eliezer Colina-Morles

Automatic Clustering with Self-Organizing Maps and Genetic Algorithms  
Angel Fernando, Kuri-Morles
Modelling of Rate-Independent Hysteresis with Feed-Forward Neural Networks  
Dimitre Makaveev, Luc Dupre, Marc De Wulf, Jan Melkebeek

Room B
Time: 11:30-13:30  
SESSION: EC 2
Chair: M. Vrahatis
All the papers of this session are published in the pages 211 – 244 of the "Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation", WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Timetabling with Genetic Algorithms  
Nadia Nedjah, Luiza de Macedo Mourelle

Initializing the particle swarm optimizer using the nonlinear simplex Method  
K. Parsopoulos, M. Vrahatis

A Genetic Algorithm for blind source separation of spectral data  
Naanaa Wady, Nuzillard Jean-Marc

Using Machine Vision To Inspect Oil Palm And White Powder Starch  
M. Z. Abdullah, L. C. Guan, Y. P. Ean, A. M. D. Manan, B. M. N. Mohdazemi

Adaptive Reservoir Genetic Algorithm: Convergence Analysis  
Cristian Munteanu, Agostinho Rosa

Multiple crossover algorithm for constrained optimization problems  
Tomasz Gwiazda

Room A
Time: 15:00-17:00
SESSION: EC 3
Chair: G. Papa, J. Silc
All the papers of this session are published in the pages 245 – 281 of the "Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation", WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Infected Genes Evolutionary Algorithm for School Timetabling  
C. Fernandes, J.P. Caldeira, F. Melicio, A. Rosa
An Optimization Technique for the Solution of an Enhanced Warehouse Location Problem
Lothar Dohmen

Evolutionary Synthesis Algorithm - Genetic Operators Tuning
Gregor Papa, Jurij Silc

Self-Improving Genetic Programming
Roland Olsson

Development of a scheduling tool for constructing a Malaysian school timetable
Raja N. Ainin, Roziati Zainuddin, Salihin F. Shooeb

Generating Training Environment to obtain a Generalized Robot Behavior by means of Classifier Systems
D. Sanchez, J. M. Molina, A. Sanchis

An evolutionary algorithm for the Minimum Hitting Set Problem
V. Cutello, E. Mastriani, F. Pappalardo

Coffee Break 17:00 – 17:30

Thursday, February 14

Room A
PLENARY LECTURE 3: 8:00-9:00 (to be announced soon)

Room A
Time: 9:00-11:00
SESSION: NNA 7
Chair: S. Javadi
All the papers of this session are published in the pages 201 – 227 of the “Advances in Neural Networks World”, WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Fault detection for engine blades using hierarchical neural networks
A. Teranishi, S. Stuberud
Online Short Term Load Forecasting by Fuzzy ARTMAP Neural Network
Shahram Javadi

Adaptive Model for Diseases Number Prediction Based on Neuro-Fuzzy Technique
Alexander Rotshtein, Morton Posner, Hanna Rakytyanska

Modularity: a natural choice of improving generalization
Leonardo Franco, Jose M. Jerez

Performance and Caching Issues in an Integration of Neural Net and Conventional PC
Veerachai Gosasang, Thitipong Tanprasert

Coffee Break  11:00 – 11:30

Room A
Time: 11:30-13:30
SESSION: NNA 8
Chair: S. Milanovic
All the papers of this session are published in the pages 228 – 248 of the “Advances in Neural Networks World”, WSEAS Press Post-Conference Book - except the last one which will be published in a future volume of WSEAS - as well as in the CD-ROM Proceedings.

Model reference neural network control for a variable-speed air conditioner
Wuthisak Thambanchacheep, Suwat Kuntanapreeda

Applying Neural Networks in 3-D vision
Marcio Mendonca, Ivan N. Da Silva, Jose E. C. Castanho

Time series forecasting using ARIMA, Neural Networks and Neo Fuzzy Neurons
Joanna Collantes-Duarte, Francklin Rivas-Echeverria

Probabilistic neural network- based system for nell characterization in oil industry
Francklin Rivas-Echeverria, Marianilca Olivares, Renata Pensa

Application of Artificial Neural Networks in Evaluation and
Identification of Electrical Loss in Transformers According to the Energy Consumption
Andre Nunes de Souza, Jose Alfredo C. Ulson, Ivan Nunes da Silva, Claudia F. L. N. de Souza

Room A
Time: 14:40-17:00
SESSION: FSFS 5
Chair: M. Ulieru
All the papers of this session are published in the pages 122 – 162 of the "Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation", WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Fuzzy Motion Control of the Ball on Beam
Alexandar Djordjevich

Weighted Fuzzy Similarity Classifier in the Lukasiewicz-Structure
Kalle Saastamoinen, Pasi Luukka, Ville Kononen

A Fuzzy Mathematics Approach to Modeling Emergent Holonic Structures
Mihaela Ulieru

Interval Valued Type 2 Fuzzy Sets, Multi-valued Maps and Rough Sets
I. Burhan Turksen

Comparing predictions of SPORAS vs. a Fuzzy Reputation System
Javier Carbo, Jose M. Molina, Jorge Davila

Control for electrical neuromuscular stimulator using Fuzzy Logic
Leonardo Silva, Paulo Pereira, Percy Nohama

A Shape-preserving Affine Takagi-Sugeno Model Based on a Piecewise Constant Nonuniform Fuzzification Transform
Felipe Fernandez, Julio Gutierrez, Juan Carlos Crespo, Gracian Trivino

Coffee Break 17:00 – 17:30
Room A
Time: 17:30-19:30
SESSION: EC 4
Chair: Kostas Psannis, Marios Hadjinicolaou
All the papers of this session are published in the pages 282 – 306 of the "Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation", WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings.

Support Backward Interactive Functions of MPEG-2 Stream
Kostas Psannis, Marios Hadjinicolaou

Determining pareto optimal controller parameter sets of aircraft control systems using genetic algorithm
Can Ozdemir, Ayse Kahvecioglu

A Parameter Study for Differential Evolution
Roger Gaemperle, Sibylle D. Mueller, Petros Koumoutsakos

Evolving Strategies for the Prisoner’s Dilemma
Jennifer Golbeck

20:30 - Banquet