3rd WSEAS International Conferences:
NNA '02 – FSFS '02 - EC '02

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PROGRAM

Interlaken, Switzerland
Feb. 11-14, 2002

Dear Participants,

We are greatly honored to have you with us once again in the 3rd WSEAS Multiconference on NNA, FSFS and EC. Taking this opportunity, we would like to express our appreciation to you and wish you to enjoy the scientific and cultural part of the meeting.

In your conference bag, you can find the following material:

- Conference Proceedings (CD-ROM)
- Two volumes of WSEAS-Press International Editions
- Certification of attendance
- Notebook and pen
- Name Card
- A coupon for our Welcome Cocktail and Banquet

Thank you very much.

Ales Grmela
Nikos Mastorakis
Conferences Co-Chairmen

Joint Program of the
3rd WSEAS International Conferences:
NNA '02 – FSFS '02 - EC '02

Switzerland, Interlaken
February 11-14, 2002

GRAND HOTEL BEAU RIVAGE *****, CH-3800, Interlaken, Switzerland, Tel: 0041 33 8267007

Monday, February 11

09:00-13:00 Distribution of the Conference Material

16:00-20:00 Distribution of the Conference Material

Tuesday, February 12

Room A
PLENARY LECTURE 1: 08:00-09:00

Philosophical Aspects of the Human Brain Research

GRMELA ALEŠ
AGCES Ltd.
AGCES, Levského 3221/1, Praha 4
CZECH REPUBLIC

Abstract: - Research of the human brain is one of the most important tasks solved by the modern science. Before the function of the human brain is found out, we must endeavour to predict possible consequences of that research on our life. Many inventions of science brought positive and negative impact on the life of people. Philosophical prediction of the human behaviour and coexistence with new invention can help us avoid negative impact on the human life or at least to limit the most of negatives in the future life. Developments of the research show that the brain function will not be fully discovered in all details, but we will have sufficient amount of information to use it in the practical life.

Room A
Time: 09:00-11:00
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: 09:00-11:00
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 13

Room A
PLENARY LECTURE 2: 08:00-08:45

On Cellular Neural Networks as Memory Circuits in Automatic Recognition Cases

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Abstract: - The aim of this Lecture consists in the presentation of recent developments and results of the Italian National Research Program 1998-2000 financed by the Ministero della Ricerca Scientifica e Tecnologica in Italy concerning with the design of CNNs as dedicated memory circuits in automatic recognition cases. This Lecture can be viewed as an insight into architectures and behaviours of these particular circuits when synthesized as memories for industrial recognition applications. Fundamentals of Cellular Neural Networks will be given to better illustrate their satisfactory performances for technical applications in the field of circuit design.

Room A
PLENARY LECTURE 3: 08:45-09:30

Type 2 Fuzzy Sets: T - Formalism [Dempster – Pawlak - Zadeh Unification]

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Abstract: - Type 2 fuzzy sets are generated both in membership acquisition experiments and combination of concepts and thus in reasoning. Type 2 membership values are generated either with subjective interviews or with fuzzy clustering algorithms. In combination of concepts, any combination of two fuzzy sets generates a Fuzzy Disjunctive and Fuzzy Conjunctive Canonical Forms. They were derived in the past with

the application of Fuzzy thru Tables. Recently, it was shown that same formulas can be obtained by a modified and restricted interpretation of Dempster's multi-valued maps. In this approach it is also shown that there is a special correspondence to Pawlak's upper and lower sets. These concepts will be discussed and the consequences of Type 2 fuzziness will be demonstrated.

Room A
Time: 09:30-11:30
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 two 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

Fuzzy Sets and Statistics
Reinhard Viertl

Room B
Time: 9:30-11:30
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 except the last one which will be published in a future volume of WSEAS - 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

Memory Economy for Electronic Control Units: Compression of Conventional Look-up Tables
K. Knoedler, J. Poland, A. Mitterer, A. Zell

Coffee Break 11:30 – 12:00

Room A
Time: 12:00-14:00
SESSION: NNA 6
Chair: S. Sureerattanan
All the papers of this session are published in the pages 174 – 200 of the "Advances in Neural Networks World", WSEAS Press Post-Conference Book - except the last three which will be published in a future volume of WSEAS - as well as in the CD-ROM Proceedings.

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-Echeverrva, Eliezer Colina-Morles

Automatic Clustering with Self-Organizing Maps and Genetic Algorithms
Angel Fernando, Kuri-Morales

Modelling of Rate-Independent Hysteresis with Feed-Forward Neural Networks
Dimitre Makaveev, Luc Dupre, Marc De Wulf, Jan Melkebeek

Efficient event-driven simulation of spiking neural networks
Ioana Marian, Ronan G.Reilly, Dana Mackey

Room B
Time: 12:00-14:00
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 except the last one which will be published in a future volume of WSEAS - 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

Language evolution: a natural phenomena
Mark O'brien, Adam Bridgen, Elizabeth Fern, Maria Bagiokou

Room A
Time: 16:00-18:30
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 except the last one which will be published in a future volume of WSEAS - 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. Ainon, Roziati Zainuddin, Salihin F. Shoeeb

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

Evolutionary Optimization of Quadrifilar Helical and Yagi-Uda Antennas
Jason D. Lohn, William F. Kraus, Derek S. Linden, Adrian Stoica

Coffee Break 18:30 – 19:00

Thursday, February 14

Room A
PLENARY LECTURE 4: 08:00-09:00

Soft Computing and the Internet: Enabling Global Collaboration

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Abstract: - The tremendous progress in networking technologies has challenged dramatically the way enterprises do business by replacing traditional off-line information processing methods with on-line real-time connections to the global economy. From E-commerce and marketing intelligence to custom-based product design and ordering, more and more transactions flow over the internet making distances between business partners measurable in "network intelligence power" rather than in thousands of miles. In this talk I will present the concept of Holonic Enterprise as a paradigm shift in global enterprise collaboration that exploits emerging technologies supporting collaborative work in a dynamic distributed environment to create a new kind of infrastructure facilitating strategic partnerships among cyber-highway enabled participants. Embracing several paradigms (among which: the virtual and web-centric enterprise paradigm, the holonics and multi-agent systems models and the novel business perspective of co-opetition) into a versatile, unified business model this new paradigm links the three levels of a global collaborative organization (inter-enterprise; intra-enterprise and basic resource level) to

build a web-centric ecosystem partnering in which the workflow is harmoniously managed. Synergistic merging of these paradigms with most recent advances in soft computing result in a dynamic environment that maintains the optimal configuration of an emergent virtual organization by clustering at every level of resolution the best partners for each activity that contributes towards organization's goal. A look at how the Holonic Enterprise model extends to e-health, e-learning, e-factory and other emerging internet-enabled perspectives concludes the talk.

Room A
Time: 09:00-11:00
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 except the last one which will be published in a future volume of WSEAS - as well as in the CD-ROM Proceedings.

Fault detection for engine blades using hierarchical neural networks
A. Teranishi, S. Stubberud

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

A Comparative Study of Different Machine Learning Approaches for Decision Making
Arpad Kelemen, Yulan Liang, Stan Franklin

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 B
Time: 11:30-13:30
SESSION: FSFS 5
Chair: I. B. Turksen
All the papers of this session are published in the pages 122 – 146 of the "Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation", WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings except the last two which will be published in a future volume of WSEAS - 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

A Comparison of Fuzzy C-means Clustering and Rough Sets Based Classification in Network Data Analysis
Vesa Laamanen, Timo Lampinen, Mikko Laurikkala, Hannu Koivisto

Fuzzy sets and cricket batting
M. Kelly, K. M. Curtis, M. P. Craven

Room A
Time: 15:00-17:00
SESSION: FSFS 6
Chair: M. Ulieru
All the papers of this session are published in the pages 147 – 162 of the "Advances in Intelligent Systems, Fuzzy Systems, Evolutionary Computation", WSEAS Press Post-Conference Book as well as in the CD-ROM Proceedings except the last one which will be published in a future volume of WSEAS - as well as in the CD-ROM Proceedings.

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

A fuzzy-based approach against contradictions and incompleteness within requirement specification
Gerhard H. Schildt, Daniela Kahn

Fuzzy logic-based natural language processing and its application to speech recognition
Jiping Sun, Fakhri Karray, Otman Basir, Mohamed Kamel

Room B
Time: 15:00-17:00
SESSION: NNA 9
Chair: S. Milanovic
All the papers of this session will be published in a future volume of WSEAS - as well as in the CD-ROM Proceedings.

Estimation of non-stationary noise for audio enhancement by means of recurrent neural networks
Rafal Krolikowski

Sund source localization, feedforward & recurrent neural networks
Jacek Czerniawski, Andrzej Czyzewski, Rafal Krolikowski

A Multi-Agent System uses Artificial Neural Networks to Model the Biological Regulation of the Lower Urinary Tract
J. M. Garcia, F. Macia, A. Soriano, F. Florez

Self-Adaptive Artificial Neural Network for Change-Detection of Land Cover: An Unsupervised Approach
Maria Luiza F. Velloso, Margareth Simoes, Thales A. Carneiro

Robust Procedure for Flow Coefficient Calculation
Tomasz Kiczkowiak, Wojciech Tarnowski, Szymon Grymek

A model analysis of temporally asymmetric Hebbian learning
Kiyotoshi Matsuoka

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 except the last one which will be published in a future volume of WSEAS - 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

Use of simulation and visualization in multicriteria scheduling optimization with genetic algorithms
Miroljub Kljajic, Igor Bernik, Mojca Bernik

Efficient DNA Computing Decoding Method
Zhiquan Frank Qiu, Mi Lu

20:30 - Banquet