ISDA’09 PROGRAM

MONDAY – NOVEMBER 30TH

EVOLUTIONARY ALGORITHMS – PART 1
Monday, November 30TH, 10:00 – 11:20 Auditorium
Chair: Carlos A. Coello Coello

- Valley-Adaptive Clearing Scheme for Multimodal Optimization Evolutionary Search
  Mostafa M.H. Ellabaan and Yew Soon Ong

- Handling Box, Linear and Quadratic-Convex Constraints for Boundary Optimization with Differential Evolution Algorithms
  Massimo Spadoni and Luciano Stefanini

- Scaling Genetic Algorithms using MapReduce
  Abhishek Verma, Xavier Llorà, David E. Goldberg and Roy H. Campbell

- Efficiency Enhancement of ECGA Through Population Size Management
  Vinicius V. de Melo, Thyago S.P.C. Duque and Alexandre C.B. Delbem

W1: SOFT COMPUTING IN INTELLIGENT AGENTS AND WEB TECHNOLOGIES – PART 1
Monday, November 30TH, 10:00 – 11:20 Sala Fermi
Chair: Enrique Herrera-Viedma

- RSS-generated Contents through Personalizing e-Learning Agents
  Carmen De Maio, Giuseppe Fenza, Matteo Gaeta, Vincenzo Loià, Francesco Orciuoli and Sabrina Senatore

- Combining Agents and Ontologies to Support Task-Centred Interoperability in Ambient Intelligent Environments
  Gaëtan Pruvost, Achilles Kameas, Tobias Heinroth, Lambrini Seremeti and Wolfgang Minker

- A Web-based Fuzzy Linguistic Tool to Filter Information in a Biomedical Domain
  José Manuel Morales-del-Castillo, Eduardo Peis and Enrique Herrera-Viedma

- Agent-based Web Content Engagement Time (WCET) Analyzer on e-Publication System
  Raymond S.T. Lee, James N.K. Liu, Karo S.Y. Yeung, Alan H.L. Sin and Dennis T.F. Shum

W2: GENETIC FUZZY SYSTEMS: DESIGN AND APPLICATIONS – PART 1
Monday, November 30TH, 10:00 – 11:20 Sala Pacinotti
Chair: Rafael Alcalà

- Effects of Data Reduction on the Generalization Ability of Parallel Distributed Genetic Fuzzy Rule Selection
  Yusuuke Nojima and Hisao Ishibuchi

- Obtaining a Linguistically Understandable Random Sets-based Classifier from Interval-Valued Data with Genetic Algorithms
  Luciano Sánchez and Inés Couso

- Handling High-Dimensional Regression Problems by Means of an Efficient Multi-Objective Evolutionary Algorithm
  Maria José Gacto, Rafael Alcalà and Francisco Herrera

- Exploiting a New Interpretability Index in the Multi-Objective Evolutionary Learning of Mamdani Fuzzy Rule-based Systems
  Michela Antonelli, Pietro Ducange, Beatrice Lazzerini and Francesco Marcelloni
**W3: INTELLIGENT IMAGE PROCESSING AND ARTIFICIAL VISION – PART 1**  
Monday, November 30th, 10:00 – 11:20 Sala Galilei  
Chair: Ángel Sánchez

- Natural Scene Image Recognition by Fusing Weighted Colour Moments with Bag of Visual Patches on Spatial Pyramid Layout  
  *Yousef Alqasrawi, Daniel Neagu and Peter Cowling*

- A Fuzzy System for Impact Analysis of Advertisement Billboards in Soccer Telecast  
  *Suprio Das, Shamik Sural and Arun K. Majumdar*

- GPU-Based Road Sign Detection using Particle Swarm Optimization  
  *Luca Mussi, Stefano Cagnoni and Fabio Daolio*

- Improved Fuzzy Snakes Applied to Biometric Verification Problems  
  *Jose Vélez, Angel Sánchez and Felipe Fernández*

**W4: HYBRID LEARNING FOR ARTIFICIAL NEURAL NETWORKS: ARCHITECTURES AND APPLICATIONS – PART 1**  
Monday, November 30th, 10:00 – 11:20 AulaB  
Chair: César Hervás

- A Sensitivity Clustering Method for Memetic Training of Radial Basis Function Neural Networks  
  *Francisco Fernández-Navarro, Pedro Antonio Gutiérrez and César Hervás-Martínez*

- Hyperbolic Tangent Basis Function Neural Networks Training by Hybrid Evolutionary Programming for Accurate Short-Term Wind Speed Prediction  
  *César Hervás-Martínez, Pedro Antonio Gutiérrez, Juan Carlos Fernández, Sancho Salcedo-Sanz, Antonio Portilla-Figuera, Ángel Pérez-Bellido and Luis Prieto*

- Hybridizing Ensemble Classifiers with Individual Classifiers  
  *Gonzalo Ramos-Jiménez, José del Campo-Ávila and Rafael Morales-Bueno*

- Classification by Evolutionary Generalized Radial Basis Functions  
  *Adiel Castaño, César Hervás-Martínez, Pedro Antonio Gutiérrez, Francisco Fernández-Navarro and M. M. García*

**EVOLUTIONARY ALGORITHMS – PART 2**  
Monday, November 30th, 11:30 – 12:50, Auditorium  
Chair: Manuel Lozano Márquez

- Solving Permutation Problems with Differential Evolution: An Application to the Jobshop Scheduling Problem  
  *Antonín Ponsich, Ma. Guadalupe Castillo Tapia and Carlos A. Coello Coello*

- Speeding up the Genetic Algorithm Convergence Using Sequential Mutation and Circular Gene Methods  
  *Mehdi Baradaran Nia and Yousef Alipouri*

- Performance Analysis of MADO Dynamic Optimization Algorithm  
  *Julien Lepagnot, Amir Nakib, Hamouche Oulhadj and Patrick Siarry*

- Encoding Structures and Operators used in Facility Layout Problems with Genetic Algorithms  
  *Laura Garcia-Hernandez, Antonio Arauzo-Azofra, Henri Pierreval and Lorenzo Salas-Morera*

**W1: SOFT COMPUTING IN INTELLIGENT AGENTS AND WEB TECHNOLOGIES – PART 2**  
Monday, November 30th, 11:30 – 12:50 Sala Fermi  
Chair: Enrique Herrera-Viedma

- CASTALIA: Architecture of a Fuzzy Metasearch Engine for Question Answering Systems  
  *Jesus Serrano-Guerrero, Jose Angel Olivas, Jesus A. Gallego, Francisco P. Romero and Andres Soto*
An Experiment about Using Copulative and Comparative Sentences as Constraining Relations
Andrés Soto, José Angel Olivas, Francisco P. Romero and Jesús Serrano-Guerrero

An Automat for the Semantic Processing of Structured Information
Amed Leiva Mederos, Jose A. Senso, Sandor Dominguez-Velasco and Pedro Hípola

Using Incomplete Fuzzy Linguistic Preference Relations to Characterize User Profiles in Recommender Systems
Enrique Herrera-Viedma and Carlos Porcel

W2: GENETIC FUZZY SYSTEMS: DESIGN AND APPLICATIONS – PART 2
Monday, November 30th, 11:30 – 12:30 Sala Pacinotti
Chair: Rafael Alcalá

On the Combination of Accuracy and Diversity Measures for Genetic Selection of Bagging Fuzzy Rule-based Multiclassification Systems
Krzysztof Trawiński, Arnaud Quirin and Oscar Cordón

Linguistic Modifiers to Improve the Accuracy-Interpretability Trade-off in Multi-Objective Genetic Design of Fuzzy Rule Based Classifier Systems
Alessandro G. Di Nuovo and Vincenzo Catania

Parallel Distributed Two-Level Evolutionary Multiobjective Methodology for Granularity Learning and Membership Functions Tuning in Linguistic Fuzzy Systems
Miguel Angel De Vega, Juan Manuel Bardallo, Francisco Alfredo Márquez and Antonio Peregrín

W3: INTELLIGENT IMAGE PROCESSING AND ARTIFICIAL VISION – PART 1
Monday, November 30th, 11:30 – 12:50 Sala Galilei
Chair: José Santamaría

Multiple Neural Networks System for Dynamic Environments
Aldo Franco Dragoni, Paola Baldassarri, Germano Vallesi and Mauro Mazzieri

A Comparative Study of Clustering Methods for Urban Areas Segmentation from High Resolution Remote Sensing Image
Safaa M. Bedawi and Mohamed S. Kamel

A New Scheme for Vision Based Flying Vehicle Detection Using Motion Flow Vectors Classification
Ali Taimori, Alireza Behrad and Samira Sabouri

Image Contrast Control based on Łukasiewicz’s Operators and Fuzzy Logic
Nashaat M. Hussein Hassan and Angel Barriga

W4: HYBRID LEARNING FOR ARTIFICIAL NEURAL NETWORKS: ARCHITECTURES AND APPLICATIONS – PART 2
Monday, November 30th, 11:30 – 12:50 AulaB
Chair: Pedro Antonio Gutiérrez

Optimization of Neural Networks Weights and Architecture: A Multimodal Methodology
Antonio Miguel F. Zarth and Teresa B. Ludermir

Modeling Environmental Noise using Artificial Neural Networks
Natalía Genaro, Antonio Jose Torija, Angel Ramos, Ignacio Requena, Diego Pablo Ruiz and Montserrat Zamorano

Combining Uncertainty Sampling Methods for Active Meta-Learning
Ricardo B.C. Prudêncio and Teresa B. Ludermir

Echo State Network for Abrupt Change Detections in Non-stationary Signals
Qingsong Song, Zuren Feng, Liangjun Ke and Min Li
**SWARM INTELLIGENCE**
Monday, November 30th, 15:00 – 16:20 Auditorium
Chair: Ajith Abraham

- Heuristic Factors in Ant System Algorithm for Course Timetabling Problem
  *Djasli Djamarus and Ku Ruhana Ku-Mahamud*

- A Multiple Objective Particle Swarm Optimization Approach using Crowding Distance and Roulette Wheel
  *Robson A. Santana, Murilo R. Pontes and Carmelo J. A. Bastos-Filho*

- Hardware Architecture for Particle Swarm Optimization using Floating-point Arithmetic
  *Daniel M. Muñoz, Carlos H. Llanos, Leandro dos S. Coelho and Mauricio Ayalá-Rincón*

- Dynamic Clan Particle Swarm Optimization
  *Carmelo J. A. Bastos-Filho, Danilo F. Carvalho, Elliaick M. N. Figueiredo and Péreices B. C. de Miranda*

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**W5: TAGS AND RECOMMENDATIONS IN WEB 2.0 PART 1**
Monday, November 30th, 15:00 – 16:20 Sala Fermi
Chair: Antonina Dattolo

- Content-based Filtering with Tags: the FIRSt System
  *Pasquale Lops, Marco de Gemmis, Giovanni Semeraro, Paolo Gissi, Cataldo Musto and Fedelucio Narducci*

- Item Recommendation with Veristic and Possibilistic Metadata: a Preliminary Approach
  *Danilo Dell’Agnello, Corrado Mencar and Anna Maria Fanelli*

- Neighbor Selection and Recommendations in Social Bookmarking Tools
  *Antonina Dattolo, Felice Ferrara and Carlo Tasso*

- Using Tag Co-occurrence for Recommendation
  *Christian Wartena, Rogier Brussee and Martin Wibbels*

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**S1: REPRESENTATION AND APPROXIMATION OF FUZZY NUMBERS AND APPLICATIONS**
Monday, November 30th, 15:00 – 16:20 Sala Pacinotti
Chairs: Luciano Stefanini, Przemyslaw Grzegorzewski

- Fuzzy Option Value with Stochastic Volatility Models
  *Gianna Figà-Talamanca and Maria Letizia Guerra*

- Some Parametric Forms for LR Fuzzy Numbers and LR fuzzy Arithmetic
  *Laerte Sorini and Luciano Stefanini*

- Bi-symmetrically Weighted Trapezoidal Approximations of Fuzzy Numbers
  *Przemyslaw Grzegorzewski and Karolina Pasternak-Winiarska*

- Value Function Computation in Fuzzy Real Options by Differential Evolution
  *Maria Letizia Guerra, Laerte Sorini and Luciano Stefanini*

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**W6: INTELLIGENT SYSTEMS DESIGN AND APPLICATIONS IN THE HEALTH DOMAIN PART 1**
Monday, November 30th, 15:00 – 16:20 Sala Galilei
Chairs: Ovidio Salvetti, Ioannis Tollis

- The Virtual Physiological Human NoE and Functional Brain Networks (Project: VPH NoE)
  *Ioannis Tollis (invited talk)"

- CHRONIOUS: An intelligent system for chronic diseases management” (Project: CHRONIOUS)
  *Roberto Rosso (invited talk)"

- Toward Multi-Organs Simulations of Immune-Pathogen Interactions
  *Filippo Castiglione and Francesco Pappalardo*
An Efficient Combinatorial Approach for Solving the DNA Motif Finding Problem
Filippo Geraci, Marco Pellegrini and M. Elena Renda

Using Machine Learning Techniques to Improve the Behaviour of a Medical Decision Support System for Prostate Diseases
Constantinos Koutsojannis, Eman Nabil, Maria Tsimara and Ioannis Hatzilygeroudis

**S2: FROM BUSINESS INTELLIGENCE TO BUSINESS ARTIFICIAL INTELLIGENCE: NEW CHALLENGES FOR INTELLIGENT SYSTEMS**

Monday, November 30TH, 15:00 – 16:20  AulaB
Chair: Alberto Bugarín

- A Genetic Programming-based Algorithm for Composing Web Services
  Manuel Mucientes, Manuel Lama and Miguel I. Couto

- Linguistic Summaries of Time Series using a Degree of Appropriateness as a Measure of Interestingness
  Janusz Kacprzyk and Anna Wilbik

- Evaluating an Intelligent Business System with a Fuzzy Multi-Criteria Approach
  Sinan Apak and Özalp Vayvay

- Support Vector Machines for Insolvency Prediction of Irish Companies
  Anatoli Nachev

**S3: EVOLUTIONARY MULTIOBJECTIVE OPTIMIZATION—DESIGN AND APPLICATIONS (EMODA)**

Monday, November 30TH, 16:40 – 18:20 Auditorium
Chair: Ajith Abraham

- A Multi-objective Evolutionary Approach to Data Compression in Wireless Sensor Networks
  Francesco Marcelloni and Massimo Vecchio

- Design of Artificial Neural Networks using a Memetic Pareto Evolutionary Algorithm using as Objectives Entropy versus Variation Coefficient
  Juan Carlos Fernández, César Hervás, Francisco José Martínez and Manuel Cruz

- Wavelength Converter Allocation in Optical Networks: An Evolutionary Multi-Objective Optimization Approach
  Diego Pinto Roa, Benjamín Barán and Carlos A. Brizuela

- Solving Multi-Objective Reinforcement Learning Problems by EDA-RL – Acquisition of Various Strategies
  Hisashi Handa

**W5: TAGS AND RECOMMENDATIONS IN WEB 2.0 PART 2**

Monday, November 30TH, 16:40 – 18:20 Sala Fermi
Chair: Antonina Dattolo

- A Parametric Architecture for Tags Clustering in Folksonomic Search Engines
  Nicola Raffaele Di Matteo, Silvio Peroni, Fabio Tamburini and Fabio Vitali

- Evaluation Measures for Ordinal Regression
  Stefano Baccianella, Andrea Esuli and Fabrizio Sebastiani

- Improved Search in Tag-Based Systems
  Ruba Awawdeh and Terry Anderson

- Social and Behavioral Aspects of a Tag-based Recommender System
  Frederico Durao and Peter Dolog

- A JADE-based ART-inspired Ontology and Protocols for Handling Trust and Reputation
  Javier Carbo and Jose M. Molina
S4: DESIGNING COMPREHENSIBLE INTELLIGENT SYSTEMS
Monday, November 30th, 16:40 – 18:20 Sala Pacinotti
Chair: Ciro Castiello

An Interpretability-guided Modeling Process for Learning Comprehensible Fuzzy Rule-based Classifiers
José M. Alonso and Luis Magdalena

A Study on Interpretability Conditions for Fuzzy Rule-Based Classifiers
Raffaele Cannone, Ciro Castiello, Corrado Mencar and Anna Maria Fanelli

Qualitative and Task Analytic Methods to Support Comprehensible Intelligent System Design
Melanie C. Wright, Noa Segall, Jonathan B. Mark and Jeffrey M. Taekman

Comprehensible Model of a Quasi-Periodic Signal
Alberto Alvarez and Gracián Triviño

The Impact of Pruning BayesFuzzy Rule Set
I-Hsien Yin, Estevam R. Hruschka Jr and Heloisa de A. Camargo

W6: INTELLIGENT SYSTEMS DESIGN AND APPLICATIONS IN THE HEALTH DOMAIN PART 2
Monday, November 30th, 16:40 – 18:20 Sala Galilei
Chairs: Ovidio Salvetti, Franco Chiarugi

Translating Cancer Research into Clinical Practice: A Framework for Analyzing and Modeling Cancer from Imaging Data
Vangelis Sakkalis, Konstantinos Marias, Alexandros Roniotis and Emmanouil Skounakis

A Decision Support System for Aiding Heart Failure Management
Sara Colantonio, Massimo Martinelli, Davide Moroni, Ovidio Salvetti, Franco Chiarugi and Dimitra Emmanouilidou

Knowledge Discovery Approaches for Early Detection of Decompensation Conditions in Heart Failure Patients
Antonio Candelieri, Domenico Conforti, Angela Sciacqua and Francesco Perticone

On Intelligent Procedures in Medication for Patient Safety: The PSIP Approach
Vassilis Koutkias, Katerina Lazou, Vassilis Kilintzis, Régis Beuscart and Nicos Maglaveras

A Semantic Infrastructure for the Integration of Bioinformatics Services
Giorgos Zacharioudakis, Lefteris Koumakis, Stelios Sfakianakis and Manolis Tsiknakis

Accuracy Improvement of SOM-based Data Classification for Hematopoietic Tumor Patients
Naotake Kamiura, Ayumu Saitoh, Teijiro Isokawa and Nobuyuki Matsui

S5: COMPUTATIONAL INTELLIGENCE IN BUSINESS MANAGEMENT AND RISK ANALYSIS
Monday, November 30th, 16:40 – 18:20 AulaB
Chair: Beatrice Lazzerini

A Hybrid Fuzzy-Promethee Method for Logistic Service Selection: Design of a Decision Support Tool
Davide Aloini, Riccardo Dulmin and Valeria Mininno

Optimizing Allocation in Floor Storage Systems for the Shoe Industry by Constraint Logic Programming
Antonella Meneghetti

Dynamic Representation of a Situation: a Step of a Decision Support Process
Fahem Kebair and Frédéric Serin

Method to Select Effective Risk Mitigation Controls Using Fuzzy Outranking
Kiyoshi Nagata, Michio Amagasa, Yutaka Kigawa and Dongmei Cui

The Fuzzy Probabilistic Weighted Averaging Operator and its Application in Decision Making
José M. Merigó
S6: HYBRID METAHEURISTICS AND THEIR APPLICATIONS
Tuesday, December 1st, 10:00 – 11:20 Auditorium
Chair: Pedro Isasi

- Improved Accuracy Rates of a Prototype Based Classifier Using Evolutionary Computation
  Gustavo Recio, Yago Saez and Pedro Isasi

- Hybrid and Evolutionary Agent-Based Social Simulations Using the PAX Framework
  Fernando B. de Lima Neto, Marcelo Pita and Hugo Serrano B. Filho

- Implementing Metaheuristic Optimization Algorithms with JECOLi
  Pedro Evangelista, Paulo Maia and Miguel Rocha

- Hybrid Evolutionary Algorithms for Sensor Placement on a 3D Terrain
  Haluk Rahmi Topcuoglu, Murat Ermis and Mesut Sifian

W7: INTELLIGENT SYSTEMS FOR DATA REDUCTION PART 1
Tuesday, December 1st, 10:00 – 11:20 Sala Fermi
Chair: José M. Benítez

- A First Approach to Nearest Hyperrectangle Selection by Evolutionary Algorithms
  Salvador García, Joaquín Derrac, Julián Luengo and Francisco Herrera

- Addressing Data-Complexity for Imbalanced Data-sets: A Preliminary Study on the Use of Preprocessing for C4.5
  Julián Luengo, Alberto Fernández, Salvador García and Francisco Herrera

- Context-based Adaptive Filtering of Interest Points in Image Retrieval
  Giang P. Nguyen and Hans Jørgen Andersen

- Clustering-based Feature Selection in Semi-supervised Problems
  Iannis Quinzàn Suarez, José Martínez Sotoca and Filiberto Pla

W8: INTELLIGENT SIGNAL AND IMAGE ANALYSIS IN REMOTE SENSING PART 1
Tuesday, December 1st, 10:00 – 11:20 Sala Pacinotti
Chair: Marco Diani

- Semi-Supervised Kernel Target Detection in Hyperspectral Images
  Luca Capobianco, Andrea Garzelli and Gustavo Camps-Valls

- A Contextual Multiscale Unsupervised Method for Change Detection with Multitemporal Remote-Sensing Images
  Gabriele Moser, Elena Angiati and Sebastiano B. Serpico

- Texture-based Segmentation of Very High Resolution Remote-Sensing Images
  Raffaele Gaetano, Giuseppe Scarpa and Giovanni Poggi

- Towards Interpretable General Type-2 Fuzzy Classifiers
  Luis A. Lucas, Tania M. Centeno and Myriam R. Delgado

W9: HUMAN MONITORING AND MACHINE LEARNING STRATEGIES PART 1
Tuesday, December 1st, 10:00 – 11:20 Sala Galilei
Chair: Giovanni Pioggia

- Applications of Soft Computing to Medical Problems
  Ahmet Yardimci

- An Ontology-driven Multisensorial Platform to Enable Unobtrusive Human Monitoring and Independent Living
  Giovanni Pioggia, Giulia Ricci, Silvio Bonfiglio, Angelos Bekiaris, Gabriele Siciliano and Danilo De Rossi

- Improved Learning of Bayesian Networks in Biomedicine
  Antonella Meloni, Andrea Ripoli, Vincenzo Positano and Luigi Landini
Extraction and Synchronization of BOLD Spontaneous Oscillations using Singular Spectrum Analysis

Danilo Menicucci, Angelo Gemignani, Andrea Piarulli, Remo Bedini, Claudio Gentili, Giacomo Handjaras, Sabrina Danti, Mario Guazzelli, Marco Laurino, Paolo Piaggi and Alberto Landi

INNOVATIVE NETWORKING AND COMMUNICATION TECHNIQUES
Tuesday, December 1\textsuperscript{ST}, 10:00 – 11:20 AulaB
Chair: Ajith Abraham

Efficient Scheduling Algorithms on Bandwidth Reservation Service of Internet using Metaheuristics

Tomoyuki Hiroyasu, Kozo Kawasaki, Michihiro Koibuchi, Shigeo Urushidani, Mitsunori Miki and Masato Yoshimi

Solving a Realistic Location Area Problem Using SUMATRA Networks with the Scatter Search Algorithm

Sónia M. Almeida-Luz, Miguel A. Vega-Rodríguez, Juan A. Gómez-Pulido and Juan M. Sánchez-Pérez

Danger Theory and Multi-agents Applied for Addressing the Deny of Service Detection Problem in IEEE 802.11 Networks

Moisés Danziger, Marcelo Lacerda and Fernando B. de Lima Neto

Design and Implementation of Distributed Intelligent Firewall based on IPv6

Qian Ma, Yingxu Lai and Guangzhi Jiang

INTELLIGENT CONTROL AND AUTOMATION PART 1
Tuesday, December 1\textsuperscript{ST}, 11:30 – 12:50 Auditorium
Chair: Leonardo M. Reyneri

Agent-oriented Intelligent Control Strategies for the Nano-Satellite Autonomous Thermal System

Liu Jia, Li Yunze, Wang Yuying and Wang Jun

Intelligent Lighting Control User Interface through Design of Illuminance Distribution

Tomoyuki Hiroyasu, Akiyuki Nakamura, Sho Shinohara, Masato Yoshimi, Mitsunori Miki and Hisatake Yokouchi

Adaptive Paralleled DMC-PID Controller Design on System with Uncertainties

Ruihua Wei and Lihong Xu

An Efficient Solver for Scheduling Problems on a Class of Discrete Event Systems Using CELL/B.E. Processor

Hiroyuki Goto and Atsushi Kawaminami

W7: INTELLIGENT SYSTEMS FOR DATA REDUCTION PART 2
Tuesday, December 1\textsuperscript{ST}, 11:30 – 12:50 Sala Fermi
Chair: José Salvador García

Empirical Study of Individual Feature Evaluators and Cutting Criteria for Feature Selection in Classification

Antonio Arauzo-Azofra, José L. Aznarte M. and José M. Benítez

Agglomeration and Elimination of Terms for Dimensionality Reduction

Patrick Marques Ciarelli and Elias Oliveira

Automatically Generated Linguistic Summaries of Energy Consumption Data

Albert van der Heide and Gracián Triviño

Measures for Unsupervised Fuzzy-Rough Feature Selection

Neil Mac Parthaláin and Richard Jensen
### W8: INTELLIGENT SIGNAL AND IMAGE ANALYSIS IN REMOTE SENSING PART 2

**Tuesday, December 1ST, 11:30 – 12:50 Sala Pacinotti**  
**Chair: Giovanni Corsini**

- On the Effects of Synthetic-Aperture Length on SAS Seabed Segmentation  
  *David P. Williams and Johannes Groen*
- Fully Unsupervised Learning of Gaussian Mixtures for Anomaly Detection in Hyperspectral Imagery  
  *Tiziana Veracini, Stefania Matteoli, Marco Diani and Giovanni Corsini*
- Performance Assessment of a Mathematical Morphology Ship Detection Algorithm for SAR Images through Comparison with AIS Data  
  *Raffaele Grasso, Sergio Mirra, Alberto Baldacci, Jochen Horstmann, Matthew Coffin, Melanie Jarvis*
- Intelligent Cooperative Tracking in Multi-Camera Systems  
  *Yan Lu and Shahram Payandeh*

### W9: HUMAN MONITORING AND MACHINE LEARNING STRATEGIES PART 2

**Tuesday, December 1ST, 11:30 – 12:50 Sala Galilei**  
**Chair: Alberto Landi**

- Backpropagation-Based Non Linear PCA for Biomedical Applications  
  *Alberto Landi, Paolo Piaggi and Giovanni Pioggia*
- Cluster Analytic Detection of Disgust-Arousal  
  *Masood Mehmood Khan*
- Automatic Detection of Arrhythmias Using Wavelets and Self-Organized Artificial Neural Networks  
  *Sérgio R. Rogal Jr, Alfredo Beckert Neto, Marcus Vinícius Mazega Figueredo, Emerson Cabrera Paraiso and Celso A. Alves Kaestner*
- ENMET: Endothelial Cell Metabolism Mathematical Model  
  *Gianni Orsi, Carmelo De Maria, Federico Vozzi, Mariangela Guzzardi, Arti Ahluwalia and Giovanni Vozzi*

### INTELLIGENT INTERNET MODELING

**Tuesday, December 1ST, 11:30 – 12:50 AulaB**  
**Chair: Umberto Straccia**

- Extending Datatype Restrictions in Fuzzy Description Logics  
  *Fernando Bobillo and Umberto Straccia*
- A Combined Query Expansion Technique for Retrieving Opinions from Blogs  
  *Saeedeh Momtazi, Stefan Kazalski and Dietrich Klakow*
- Novel IPCA-Based Classifiers and Their Application to Spam Filtering  
  *Alessandro Rozza, Gabriele Lombardi and Elena Casiraghi*
- A Fuzzy Decision System Using Shoppers' Preferences for Recommendations in E-Commerce Applications  
  *Zhengping Wu and Hao Wu*
- Evolutionary Shallow Parsing  
  *John Atkinson and Juan Matamala*

### INTELLIGENT CONTROL AND AUTOMATION PART 2

**Tuesday, December 1ST, 15:00 – 16:20 Auditorium**  
**Chair: Antonio Peregrin Rubio**

- Design Based on a Shared Lookup-Table for an Obstacle Avoidance Fuzzy Controller for Mobile Robots  
  *Jinwook Kim, Young-Gu Kim, Young-Duk Kim, Won-Seok Kang and Jinung An*
Acquisition of Image Feature on Collision for Robot Motion Generation
  Taichi Okamoto, Yuichi Kobayashi and Masaki Onishi

Using Fuzzy Techniques for Bounding the Tolerance of GPS-based Speed and Distance Measurements in Taximeter Verification
  Adolfo Otero, José Otero and Luciano Sánchez

Identification of Petri Net Models based on an Asymptotic Approach
  Maria Elena Meda Campaña, Francisco Javier Lopez-Lopez, Cuauhtemoc Lopez-Martin and Arturo Chavoya

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<td>Consensus with Linguistic Preferences in Web 2.0 Communities</td>
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| Optimizing the Method for Building an Extended Linguistic Hierarchy |
  Macarena Espinilla, Rosa M Rodríguez, Luis Martínez, F. Mata and Jun Liu |
| A Preliminary Study of the Effects of Different Aggregation Operators on Consensus Processes |
  Francisco Mata, Luis Martínez and Juan Carlos Martínez |
| Action Rules in Consensus Reaching Process Support |
  Janusz Kacprzyk, Slawomir Zadrozny and Zbigniew W. Raś |

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<td>Cognition and Affectivity: its Influences in Teacher-Student Relation and in the Teaching-Learning Process</td>
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  Ana Letícia Galastri |
| Intelligent Reporting System with e-Training Capabilities |
  Maria Murri, Marco Lupinelli and Luca Onofri |
| Analyzing Online Asynchronous Discussion Using Content and Social Network Analysis |
  Erlin, Norazah Yusof and Azizah Abdul Rahman |
| Improving Academic Performance Prediction by Dealing with Class Imbalance |
  Nguyen Thai-Nghe, Andre Busche and Lars Schmidt-Thieme |

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<td>An FPGA based Arrhythmia Recognition System for Wearable Applications</td>
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  Antonino Armato, Elena Nardini, Antonio Lanatà, Gaetano Valenza, Carlo Mancuso, Enzo Pasquale Scilingo and Danilo De Rossi |
| Postponed Updates for Temporal-Difference Reinforcement Learning |
  Harm van Seijen and Shimon Whiteson |
| Sensor Fusion-oriented Fall Detection for Assistive Technologies Applications |
  Stefano Cagnoni, Guido Matrella, Monica Mordonini, Federico Sassi, and Luca Ascari |
| Event Related Biometrics: Towards an Unobtrusive Sensing Seat System for Continuous Human Authentication |
  Marcello Ferro, Giovanni Pioggia, Alessandro Tognetti, Gabriele Dalle Mura and Danilo De Rossi |
W11: PROVISIONING OF SMART SERVICES IN ONTOLOGY-BASED SYSTEMS
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Tuesday, December 1ST, 15:00 – 16:20  AulaB
Chair: Pierluigi Ritrovato

Using Ontologies to Achieve Semantic Interoperability in the Web: an Approach based on the Semantic Triangle Model
Angelo Chianese, Annarita Fasolino, Vincenzo Moscato and Porfirio Tramontana

Ontology-based System for Enterprise 2.0
Giuseppina Rita Mangione, Sergio Miranda, Stefano Paolozzi, Anna Pierri, Pierluigi Ritrovato and Saverio Salerno

A Business Intelligence Process to Support Information Retrieval in an Ontology-Based Environment
Filippo Sciarrone, Paolo Starace and Tommaso Federici

Combining DHTs and SONs for Semantic-Based Service Discovery
Giuseppe Pirrò, Paolo Missier, Paolo Trunfio, Domenico Talia, Gabriele Falace and Carole Goble

INTELLIGENT CONTROL AND AUTOMATION PART 3
Tuesday, December 1ST, 16:40 – 18:20 Auditorium
Chair: Alberto Landi

Transferring the Progress Control Policy for a Class of Discrete Event Systems
Hiroyuki Goto and Takakazu Tsubokawa

AAFES: An Intelligent Fuzzy Expert System for Realization of Adaptive Autonomy Concept
Alireza Fereidunian, Mohammad-Ali Zamani, Caro Lucas, Hamid Lesani and Matti Lehtonen

The Bi-objective Problem of Distribution of Oil Products by Pipeline Networks Approached by a Particle Swarm Optimization Algorithm
Thatiana C. N. Souza, Elizabeth F. G. Goldbarg and Marco C. Goldbarg

Detection of Similarity of Trajectory of Center of Gravity in Operating Unicycle Uses Motion Capture System
Takahiro Kawasaki, Teruyosho Sadahiro, Masami Iwase and Shoshiro Hatakeyama

Observer Design using T-S Fuzzy Systems for Pressure Estimation in Hydrostatic Transmissions
Horst Schulte and Patrick Gerland

W10: CONSENSUS AND DECISION MAKING PART 2
Tuesday, December 1ST, 16:40 – 18:20 Sala Fermi
Chair: José Luis García-Lapresta

On the Use of the Uncertain Induced OWA Operator and the Uncertain Weighted Average and its Application in Tourism Management
José M. Merigo, Anna M. Gil-Lafuente and Onofre Martorell

Measuring Social Welfare through Location and Consensus Measures
José Luis García-Lapresta and Ricardo Alberto Marques Pereira

Connection among Some Characterizations of Complete Fuzzy Preorders
Susana Díaz, Davide Martinetti, Ignacio Montes and Susana Montes

Definition of a Consensual Drug Selection Process in Hospital Universitario Virgen de la Victoria
Jesus M. Doña, Isabel Moya and Jesus López

Strategic Assessment of Business
Jesus M. Doña, Jose I. Peláez and Luis G. Vargas
### S8: INTELLIGENT E-LEARNING SYSTEMS
**Tuesday, December 1st, 16:40 – 18:20 Sala Pacinotti**

**Chairs:** Ajith Abraham, Norazah Yusof

- **Developing Student Model using Kohonen Network in Adaptive Hypermedia Learning System**
  *Bariah Yusob, Siti Mariyam Hj Shamsuddin and Nor Bahiah Ahmad*

- **OCEAN Project. A Prototype of AIWBES based on Fuzzy Ontology**
  *Francesco Colleoni, Silvia Calegari, Davide Ciucci and Matteo Dominoni*

- **LS-LAB: a Framework for Comparing Curriculum Sequencing Algorithms**
  *Carla Limongelli, Filippo Sciarrone and Giulia Vaste*

- **Concept-based Classification for Adaptive Course Sequencing Using Artificial Neural Network**
  *Norsham Idris, Norazah Yusof and Puteh Saad*

- **A Metrics Suite for Measuring Reusability of Learning Objects**
  *Siti Fadzilah Mat Noor, Norazah Yusof and Siti Zaiton Mohd Hashim*

### S9: INTELLIGENT SYSTEMS FOR INDUSTRIAL PROCESSES
**Tuesday, December 1st, 16:40 – 18:20 Sala Galilei**

**Chairs:** Leonardo Maria Reyneri, Valentina Colla

- **Tutorial: About Industrial Acceptance of Intelligent Systems**
  *Leonardo M. Reyneri*

- **Automatic Diagnosis of Defects of Rolling Element Bearings based on Computational Intelligence Techniques**
  *Marco Cococcioni, Beatrice Lazzerini and Sara Lioba Volpi*

- **GA-Based Solutions Comparison for Storage Strategies Optimization for an Automated Warehouse**
  *Valentina Colla, Gianluca Nastasi, Nicola Matarese and Leonardo M. Reyneri*

- **Profit Forecasting Using Support Vector Regression for Consulting Engineering Firms**
  *Victor Yepes, Eugenio Pellicer and Francesc J. Ferri*

- **On-Line Neural Network Stator Resistance Estimation in Direct Torque Controlled Induction Motor Drive**
  *Yassine Sayouti, Ahmed Abbou, Mohammed Akherraz and Hassane Mahmoudi*

### W11: PROVISIONING OF SMART SERVICES IN ONTOLOGY-BASED SYSTEMS PART 2
**Tuesday, December 1st, 16:40 – 18:20 AulaB**

**Chair:** Filippo Sciarrone

- **Product Configurator: an Ontological Approach**
  *Francesco Colace, Massimo De Santo and Paolo Napoletano*

- **WikiArt: an Ontology-based Information Retrieval System for Arts**
  *Roberto Pirrone, Vincenzo Cannella, Orazio Gambino, Arianna Pipitone and Giuseppe Russo*

- **An Ontology-based Method for Integrating Heterogeneous Itembanks**
  *Chun-Wei Tsai, Shih-Pang Tseng, Yu-Sheng Yang, Ming-Chao Chiang and Chu-Sing Yang*

- **Higher Education in the Twenty-first Century. The Chance of Adaptive Learning Environments**
  *Antonella Pocce*

- **A Probabilistic Method for Text Analysis**
  *Fabio Clarizia, Massimo De Santo and Paolo Napoletano*

- **Ontology Merging and Database Schema Integration: An Approach to Identify Semantic Similarity and Resolve Schematic Heterogeneity in Interoperable GIS Application**
  *Nanna Suryana, Shahrin Sahib, Ridlwan Habibi, Norayu Abdul Ghani, Zahiriah Othman and Ahmad Tajuddin Samsudin*
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### INTELLIGENT DATA MINING

**Wednesday, December 2ND, 10:40 – 12:40  Auditorium**  
Chair: Teresa B. Ludermir

- An Experimental Study on Unsupervised Clustering-based Feature Selection Methods  
  *Thiago Ferreira Covões and Eduardo Raul Hruschka*

- A Penalty Function for Computing Orthogonal Non-Negative Matrix Factorizations  
  *Nicoletta Del Buono*

- Comparison Among Methods for k Estimation in k-means  
  *Murilo C. Naldi, André Fontana and Ricardo J.G.B. Campello*

- A Possibilistic Approach for Building Statistical Language Models  
  *Saeedeh Momtazi and Hossein Sameti*

- A Robust Prediction Method for Interval Symbolic Data  
  *Roberta A.A. Fagundes, Renata M.C.R. de Souza and Francisco José A. Cysneiros*

- Optimizing Linear and Quadratic Transformations for Classification Tasks  
  *José M. Valls and Ricardo Aler*

### W12: COMPUTATIONAL INTELLIGENCE FOR PERSONALIZATION IN WEB CONTENT AND SERVICE DELIVERY

**Wednesday, December 2ND, 10:40 – 12:40 Sala Fermi**  
Chairs: Giovanna Castellano, Maria Alessandra Torsello

- Modeling User Preferences through Adaptive Fuzzy Profiles  
  *Corrado Mencar, Maria Alessandra Torsello, Danilo Dell’Agnello, Giovanna Castellano and Ciro Castiello*

- Situation-aware Mobile Service Recommendation with Fuzzy Logic and Semantic Web  
  *Alessandro Ciaramella, Mario Giovanni C. A. Cimino, Beatrice Lazzerini and Francesco Marcelloni*

- An Heuristic Approach to Page Recommendation in Web Usage Mining  
  *Antonio Maratea and Alfredo Petrosino*

- Recommendations toward Serendipitous Diversions  
  *Leo Iaquinta, Marco de Gemmis, Pasquale Lops and Giovanni Semeraro*

- A Preliminary Experience in Optimizing the Layout of Web Pages by Genetic Algorithms to Fit Mobile Devices  
  *Luigi Troiano, Gennaro Cirillo, Roberto Armenise and Cosimo Birtolo*

- A Recommendation Technique for Cultural Heritage Hypermedial Objects  
  *Pierpaolo Di Bitonto, Teresa Roselli and Veronica Rossano*

### W13: EVOLUTIONARY ALGORITHMS AND OTHER METAHEURISTICS FOR CONTINUOUS OPTIMIZATION PROBLEMS - A SCALABILITY TEST

**Wednesday, December 2ND, 10:40 – 12:40 Sala Pacinotti**  
Chairs: Francisco Herrera, Manuel Lozano

- Memetic Algorithm with Local Search Chaining for Continuous Optimization Problems: A Scalability Test  
  *Daniel Molina, Manuel Lozano and Francisco Herrera*

- Continuous Variable Neighbourhood Search Algorithm Based on Evolutionary Metaheuristic Components: A Scalability Test  
  *Carlos Garcia-Martínez and Manuel Lozano*

- A Memetic Differential Evolution Algorithm for Continuous Optimization  
  *Santiago Muelas, Antonio LaTorre and José María Peña*

- An Adaptive Memory Procedure for Continuous Optimization
Abraham Duarte, Rafael Marti and Fred Glover
A Scalability Test for Accelerated DE Using Generalized Opposition-based Learning
Hui Wang, Zhijian Wu, Shahryar Rahnamayan and Lishan Kang
Unidimensional Search for Solving Continuous High-dimensional Optimization Problems
Vincent Gardeux, Rachid Chelouah, Patrick Siarry and Fred Glover

W14: EDUCATIONAL DATA MINING
Wednesday, December 2nd, 10:40 – 12:40 Sala Galilei
Chair: Sebastián Ventura

Mining Models for Failing Behaviors
Cláudia Antunes

Checking the Reliability of GeSES: Method for Detecting Symptoms of Low Performance
Javier Bravo, Estefania Martin, Alvaro Ortigosa and Rosa M. Carro

From Local Patterns to Global Models: Towards Domain Driven Educational Process Mining
Nikola Trčka and Mykola Pechenizkiy

Predicting Academic Achievement Using Multiple Instance Genetic Programming
Amelia Zafra, Cristóbal Romero and Sebastián Ventura

Discovering Learning Objects Usability Characteristics
Alfredo Zapata, Víctor H. Menendez and Manuel E. Prieto

Time Analysis of Forum Evolution as Support Tool for E-Moderating
Carlo Alberto Bentivoglio

W15: DATA MINING AND ONTOLOGIES MODELS, APPLICATIONS AND SOLUTIONS PART 1
Wednesday, December 2nd, 10:40 – 12:40 AulaB
Chair: Silvio Bortoleto

MAHATMA: A Genetic Programming-Based Tool for Protein Classification
Denise F. Tsunoda, Alex A. Freitas and Heitor S. Lopes

A Strategy for Biodiversity Knowledge Acquisition based on Domain Ontology
Andréa Corrêa Flóres Albuquerque, José Laurindo Campos dos Santos and José Francisco de Magalhães Netto

A Fast Algorithm for Mining Rare Itemsets
Luigi Troiano, Giacomo Scibelli and Cosimo Birtolo

Developing an Implementation through a Modeling of the Database for Cardiovascular Monitoring
Hugo Bulegon, Silvio Bortoleto and Angelmar Constantino Roman

An FCD Information Processing Model under Traffic Signal Control
Weifeng Lv, Leishi Xu, Tongyu Zhu, Dongdong Wu and Bowen Du

Designing a Conceptual Model for Herbal Research Domain using Ontology Technique
Azlida Mamat and Azizah Abdul Rahman

INTELLIGENT KNOWLEDGE MANAGEMENT
Wednesday, December 2nd, 13:50 – 15:30 Auditorium
Chair: Vincenzo Loia

Some Basic Results of Fuzzy Research in the ISI Web of Knowledge
José María Merigó and Ana M. Gil-Lafuente

On the Role of Dialogue and Argumentation in Collaborative Problem Solving
Nadim Obeid and Asma Moubaiddin

Inductive Query Answering and Concept Retrieval Exploiting Local Models
Claudia d’Amato, Nicola Fanizzi, Floriana Esposito and Thomas Lukasiewicz
Order Independent Incremental Evolving Fuzzy Grammar Fragment Learner
  Nurfadhlina Mohd Sharef, Trevor Martin and Yun Shen

Automatic Labeling Of Topics
  Davide Magatti, Silvia Calegari, Davide Ciucci and Fabio Stella

**S10: INTELLIGENT SYSTEMS AND DATA MINING TECHNIQUES FOR BIOINFORMATICS**

**Wednesday, December 2\textsuperscript{nd}, 13:50 – 15:30** Sala Fermi

**Chair:** Raúl Giráldez

- Optimization of Multi-classifiers for Computational Biology: Application to the Gene Finding Problem
  *Rocio Romero-Zaliz, Coral del Val and Igor Zwir*

- An Overlapping Control-Biclustering Algorithm from Gene Expression Data
  *Juan A. Nepomuceno, Alicia Troncoso and Jesús S. Aguilar-Ruiz*

- Similarity Analysis of Protein Binding Sites: A Generalization of the Maximum Common Subgraph Measure Based on Quasi-Clique Detection
  *Imen Boukhris, Zied Elouedi, Thomas Fober, Marco Mernberger and Eyke Hüllermeier*

- Efficient Construction of Multiple Geometrical Alignments for the Comparison of Protein Binding Sites
  *Thomas Fober, Gerhard Klebe and Eyke Hüllermeier*

- Optimizing Multiple Sequence Alignment by Improving Mutation Operators of a Genetic Algorithm
  *Fernando José Mateus da Silva, Juan Manuel Sánchez Pérez, Juan Antonio Gómez Pulido and Miguel A. Vega Rodríguez.*

**W16: NEURAL NETWORKS AND NEURO-FUZZY SYSTEMS PART 1**

**Wednesday, December 2\textsuperscript{nd}, 13:50 – 15:30** Sala Pacinotti

**Chair:** Luis Javier Herrera

- Risk Factor Identification and Classification of Macrosomic Newborns by Neural Networks
  *Alberto Guillen, Andrea Martinez-Trujillo, Gines Rubio, Ignacio Rojas, Hector Pomares and Luis Javier Herrera*

- A Data Mining Approach Based on a Local-Global Fuzzy Modelling for Prediction of Color Change after Tooth Bleaching using Vita Classical Shades
  *Luis J. Herrera, María del Mar Pérez, Janiley Santana, Rosa Pulgar, Jesús González, Héctor Pomares and Ignacio Rojas*

- Trajectory Tracking of Complex Dynamical Network for Recurrent Neural Network Via Control V-Stability
  *José P. Pérez, Joel Pérez, Jorge A. González*

- General Purpose Input Variables Extraction: A Genetic Algorithm based Procedure GIVE A GAP
  *Silvia Cateni, Valentina Colla and Marco Vannucci*

- A Fuzzy Wavelet Neural Network Model for System Identification
  *Sevcan Yilmaz and Yusuf Oysal*

**WORKSHOP W17: SOFT COMPUTING AND IMAGE PROCESSING PART 1**

**Wednesday, December 2\textsuperscript{nd}, 13:50 – 15:30** Sala Galilei

**Chair:** Humberto Bustince

- Assessment of Asymmetry in Pyramidal Tract by Using Fiber Tracking
  *Fatima Tensaouti, Jean Albert Lotterie, Perrine Clarisse and Isabelle Berry*

- A A-IFSs Based Image Segmentation Methodology for Gait Analysis
  *Pedro Couto, Vitor Filipe, Pedro Melo-Pinto, Humberto Bustince and Edurne Barrenechea*

- A 3D Lifting Based Method Augmented by Motion Compensation for Video Coding
  *Sedat Telceken, Sukru Gorgulu and Omer N. Gerek*
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| Equalizing the Structures of Web Communities in Ontology Development Tools  
  *Francesca Arcelli Fontana, Raffaele Ferrante Formato and Remo Pareschi* |
| Searching Common Pattern in Agents Behaviors with Usage of FCA  
  *Petr Gajdoš and Michal Radecký*                             |
| Vertical Mining of Frequent Patterns Using Diffset Groups  
  *Laila A. Abd El-Megid, Mohamed E. El-Sharkawi, Laila M. El-Fangary and Yehia K. Helmy* |

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  *Hiroyuki Mori and Wenjun Jiang*                            |
  *José Luis Aznarte M., Antonio Arauzo-Azofra and José M. Benítez-Sánchez* |
| Efficient Computation Methods for the Kleene Star in Max-Plus Linear Systems  
  *Hiroyuki Goto and Munenori Kasahara*                        |
| Using Smart Sampling to Discover Promising Regions and Increase the Efficiency of Differential Evolution  
  *Vinícius Veloso de Melo and Alexandre C.B. Delbem*         |
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  *Shin Yoshizawa, Satoko Takemoto, Miwa Takahashi, Makoto Muroi, Sayaka Kazami, Hiromi Miyoshi and Hideo Yokota* |
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| Effective Feature Selection for Mars McMurdo Terrain Image Classification  
  *Changjing Shang, Dave Barnes and Qiang Shen*               |
| View-Independent Face Recognition with Biological Features based on Mixture of Experts  
  *Alireza Hajiany, Nina Taheri Makhsoos and Reza Ebrahimpour* |
| Study on Mapping of Basic Elements in the Chinese Character Intelligent Formation without Character Library System  
  *Mingyou Liu, Wenzhi Liao and Youguo Pi*                     |
W16: NEURAL NETWORKS AND NEURO-FUZZY SYSTEMS PART 2
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Chair: Ignacio Rojas

FPGA-Based Recurrent Wavelet Neural Network Control System for Linear Ultrasonic Motor
Ying-Chih Hung and Faa-Jeng Lin

Fitting Multiple Alpha Peaks using Neural Network Techniques
Javier Miranda, Antonio Baëza, Javier Guillén and Rosa M. Pérez Utrero

Computer Vision-Based Eyelid Closure Detection: a Comparison of MLP and SVM classifiers
David González-Ortega, Francisco Javier Díaz-Pernas, Miriam Antón-Rodríguez, Mario Martínez-Zarzuela, José Fernando Díez-Higuera and Daniel Boto-Giralda

A Method to Point Out Anomalous Input-Output Patterns in a Database for Training Neuro-Fuzzy System with a Supervised Learning Rule
Valentina Colla, Nicola Matarrese and Leonardo M. Reyneri

Acquisition of Body and Object Representation Based on Motion Learning and Planning Framework
Takahiro Asamizu and Yuichi Kobayashi

WORKSHOP W17: SOFT COMPUTING AND IMAGE PROCESSING PART 2
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Chair: Pedro Melo-Pinto

On the Use of t-Conorms in the Gravity-based Approach to Edge Detection
Carlos Lopez-Molina, Humberto Bustince, Mikel Galar, Javier Fernandez and Bernard De Baets

Ignorance-based fuzzy clustering algorithm
Aranzazu Jurio, Miguel Pagola, Daniel Paternain, Edurne Barrenechea, Jose Antonio Sanz and Humberto Bustince

THREECOND: An Automated and Unsupervised Three Colour Fuzzy-Based Algorithm for Detecting Nuclei in Cervical Pap Smear Images
Fabio Vaschetto, Eduard Montseny, Pilar Sobrerilla and Enrique Lerma

Fusion of IKONOS Remote Sensing Filtered Images using Shadow Information to Improve the Rate of Building Extraction in Urban Images
Mohammad Jalal Rastegar Fatemi, Seyed Mostafa Mirhassani and Bardia Yousefi

Introducing Type-2 Fuzzy Sets for Image Texture Modelling
Jesus Chamorro-Martínez, Pedro Martinez-Jiménez and Daniel Sánchez

S11: BIOINSPIRED AND EVOLUTIONARY COMPUTATION BASED DATA MINING TECHNIQUES
Wednesday, December 2\textsuperscript{nd}, 15:50 – 17:50 AulaB
Chair: José M. Puerta

Structural Learning of Bayesian Networks by using Variable Neighbourhood Search based on the Space of Orderings
Juan Ignacio Alonso-Barba, Luis delaOssa and Jose M. Puerta

Binary Representation in Gene Expression Programming: Towards a Better Scalability
Jose G. Moreno-Torres, Xavier Llorà and David E. Goldberg

E-tsRBF: Preliminary Results on the Simultaneous Determination of Time-lags and Parameters of Radial Basis Function Neural Networks for Time Series Forecasting
Elisabet Parras-Gutierrez, Victor Rivas and María José del Jesús

Grammatical Concept Representation for Randomised Optimisation Algorithms in Relational Learning
Petr Buryan, Jiří Kubalík and Katsumi Inoue

Fast Evolutionary Algorithms for Relational Clustering
Danilo Horta and Ricardo J.G.B. Campello