



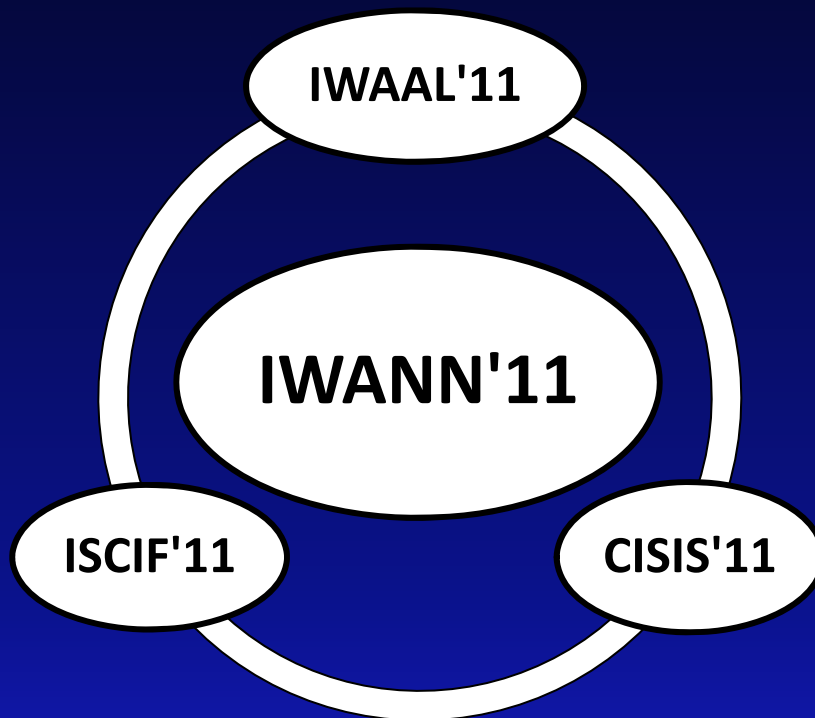
**IWANN**

INTERNATIONAL  
WORK CONFERENCE

ON ARTIFICIAL  
NEURAL  
NETWORKS

8-10 JUNIO 2011

# PROGRAM



Torremolinos-Málaga, Spain; June 8-10, 2011



### Wednesday, June 8

9:00-11:00	<b>IWANN, 8-1A.-</b> Mathematical and theoretical methods in computational intelligence	<b>IWANN, 8-1B.-</b> Learning and adaptation	<b>IWAAL, 8-1C.-</b> Mobile Proposals for AAL	
11:00-11:30	Coffee Break			
11:30-12:50	<b>IWANN, 8-2A.-</b> Data mining in biomedicine	<b>IWANN, 8-2B.-</b> Biometric systems for human-machine interaction	<b>IWAAL 8-2C-</b> A.Applications for Cognitive Impairments (11:30-12:50) <b>IWAAL 8-2C-B.-</b> E-Health (13:00-14:00)	<b>CISIS, 8-2D.-</b> Machine Learning and Intelligence
13:00-14:00	<b>Official Opening and Invited Talk 1</b> ”General Type-2 Fuzzy Logic Systems to enable Better Uncertainty Handling for Real World Application” <b>Prof. Hani Hagra</b>			
14:00-16:00	Lunch at Hotel Melia			
16:00-17:30	<b>IWANN, 8-3A.-</b> Applications of Computational Intelligence. (Part I)	<b>IWANN, 8-3B.-</b> Computational intelligence in multimedia processing	<b>IWAAL, 8-3C.-</b> Smart and Wireless Sensors	<b>CISIS, 8-3D.-</b> Cryptography
17:30-18:00	Coffee Break			
18:00-20:00	<b>IWANN, 8-4A.-</b> Applications of Computational Intelligence. (Part II)	<b>IWANN, 8-4B.-</b> Recent advances on fuzzy logic and soft computing applications	<b>IWANN, 8-4C.-</b> Biological and Bio-inspired Dynamical Systems	<b>CISIS, 8-4D.-</b> Network Security I
20:30	Light dinner at Restaurante Mango			

## Thursday, June 9

9:00-11:00	<b>IWANN, 9-1A.-</b> New applications of Brain-Computer Interfaces	<b>IWANN, 9-1B.-</b> Applying evolutionary computation and nature-inspired algorithms to formal methods	<b>IWAAL, 9-1C.-</b> Applied Technologies, Frameworks and Platforms	<b>CISIS, 9-1D.-</b> Securing Software
11:00-11:45	Coffee Break & Poster Session			
11:45-13:00	<b>IWANN, 9-2A.-</b> Video and image processing. (Part I)	<b>IWANN, 9-2B.-</b> Hybrid Artificial Neural Networks: Models, Algorithms and Data. (Part I)	<b>IWAAL 9-2C-A.-</b> IWAAL Methodologies & Brian Interfaces (11:30-12:30)	<b>CISIS, 9-2D.-</b> Network Security II
			<b>IWAAL 9-2C-B.-</b> Special Session (AAL Platforms). AAL for disabled people. New challenges. (12:45-14:00)	
13:00-14:00	<b>Invited Talk 2</b> ”Dataset Shift in Classification: Approaches and Problems” <b>Prof. Francisco Herrera</b>			
14:00-16:00	Lunch at Hotel Melia			
16:00-17:30	<b>IWANN, 9-3A.-</b> Video and image processing. (Part II)	<b>IWANN, 9-3B.-</b> Hybrid Artificial Neural Networks: Models, Algorithms and Data. (Part II)	<b>ISCIF, 9-3C.-</b> Part I	<b>CISIS, 9-3D.-</b> IEEE Meeting. IEEE Systems, Man and Cybernetics Society. Spain
		<b>IWANN, IEEE Meeting.</b> Spanish Chapter of the Computational Intelligence Society		
17:30-18:00	Coffee Break			
18:00-19:40	<b>IWANN, 9-4A.-</b> Bio-inspired systems and neuro-engineering	<b>IWANN, 9-4B.-</b> Hybrid Intelligent Systems	<b>ISCIF, 9-3C.-</b> Part II	<b>CISIS, 9-4D.-</b> Applications I
21:00	<b>Gala dinner</b> <b>Catering Lepanto at Finca La Herradura</b>			

**Friday, June 10**

9:00-11:00	<b>IWANN, 10-1A.-</b> Computing languages with Bio-inspired Devices and Multi-Agent Systems	<b>IWANN, 10-1B.-</b> Optimization algorithms in Graphic Processing Units	<b>IWANN, 10-1C.-</b> Bio-inspired combinatorial optimization	<b>IWANN, 10-1D.-</b> New advances in theory and applications of ICA-based algorithms
11:00-11:30	Coffee Break			
11:30-13:00	<b>IWANN, 10-2A.-</b> Advances in machine learning for bioinformatics and computational biomedicine	<b>IWANN, 10-2B.-</b> Biologically plausible spiking neural processing	<b>IWANN, 10-2C.-</b> Interactive and cognitive environments	<b>CISIS, 10-2D.-</b> Applications II
13:00-14:00	<b>Invited Talk 3 and Closing Ceremony</b> "Bayesian machine learning for decoding the brain" <b>Prof. Tom Heskes</b>			
14:00-16:00	Lunch at Hotel Melia			



# PROGRAM

Wednesday, June 8

## ***Session 8-1A (9:00-11:00).-Mathematical and theoretical methods in computational intelligence***

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Chairman: Antonio Jesús Rivera

### **Gaze Gesture Recognition with Hierarchical Temporal Memory Networks**

*David Rozado, Francisco Rodriguez and Pablo Varona*

### **Feature Selection for Multi-label Classification Problems**

*Gauthier Doquire and Michel Verleysen*

### **A Novel Grouping Heuristic Algorithm for the Switch Location Problem based on a Hybrid Dual Harmony Search Technique**

*Sergio Gil-Lopez, Itziar Landa-Torres, Javier Del Ser, Sancho Salcedo-Sanz, Diana Manjarres and Jose Antonio Portilla-Figueras*

### **Optimal Evolutionary Wind Turbine Placement in Wind Farms Considering new models of Shape, Orography and Wind Speed Simulation**

*Beatriz Saavedra-Moreno, Sancho Salcedo-Sanz, Arturo Paniagua-Tineo, Jorge Garcón-Moreno and Antonio Portilla-Figueras*

### **Multi-Valued Neurons: Hebbian and Error-Correction Learning**

*Igor Aizenberg*

### **Multi-label testing for CO2RBFN. A first approach to the problem transformation methodology for multi-label classification.**

*Antonio Jesús Rivera Rivas, Francisco Charte Ojeda, María Dolores Pérez Godoy and María Jose Del Jesus*

## ***Session 8-1B (9:00-11:00).- Learning and adaptation***

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Chairman: Kurosh Madani, Guilherme Barreto

### **A Neural Fuzzy Inference based adaptive controller using learning process for nonholonomic robots**

*Ting Wang, Fabien Gautero, Christophe Sabourin and Kurosh Madani*

### **A Multi-objective Evolutionary Algorithm for Network Intrusion Detection Systems**

*Julio Gómez, Consolación Gil, Raúl Baños, Antonio López Márquez, Francisco Montoya and María Montoya*

**A Cognitive Approach for Robots' Vision Using Unsupervised Learning and Visual Saliency**

*Dominik Ramík, Christophe Sabourin and Kurosh Madani*

**Fusing Heterogeneous Data Sources Considering a Set of Equivalence Constraints**

*Manuel Martín-Merino*

**A Novel Heuristic for Building Reduced-Set SVMs Using the Self-Organizing Map**

*Ajalmar Rêgo Da Rocha Neto and Guilherme Barreto*

**An additive decision rules classifier for network intrusion detection**

*Tommaso Pani, Francisco De Toro and Pedro García Teodoro*

***Session 8-1C (9:00-11:00).- III International Workshop of Ambient Assisted Living- IWAAL (Part I). Mobile Proposals for AAL***

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**Remote Monitoring and Fall Detection: Multiplatform Java based Mobile Applications**

*Miguel A. Laguna, Javier Finat*

**Results of mobility and obstacle detection of an experimental three-leg prototype for blind and deafblind people**

*J. Alberto García, Javier Poncela*

**Mobile Augmented Reality based on the Semantic Web applied to Ambient Assisted Living**

*Ramón Hervás, Alberto Garcia-Lillo, José Bravo*

**Using and Applying MobiPattern to Design MoMo Framework Modules**

*Vladimir Villarreal, Jesus Fontecha, Ramon Hervas, Jose Bravo*

**Indoor Navigation and Product Recognition for Blind People Assisted Shopping**

*Diego López-de-Ipiña, Tania Lorida and Unai López*

**Easing the Mobility of Disabled People in Supermarkets Using a Distributed Solution**

*Aitor Gomez-Goiri, Eduardo Castillejo, Pablo Orduna, Xabier Laiseca, Diego López-de-Ipiña, and Sergio Fernandez*



## ***Session 8-2A (11:30-12:50).- Data mining in biomedicine***

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Chairman: Vanessa Aguiar-Pulido

### **SNP-Schizo: A web tool for schizophrenia SNP sequence classification**

*Vanessa Aguiar-Pulido, José Antonio Seoane Fernández, Cristian R. Munteanu and Alejandro Pazos*

### **MicroRNA Microarray Data Analysis in Colon Cancer**

*Guillermo Lopez-Campos, Alejandro Romera-Lopez, Fernando Martin-Sanchez, Eduardo Diaz Rubio, Victoria Lopez-Alonso and Beatriz Perez-Villamil*

### **Automatic Handling of Tissue Microarray Cores in High-Dimensional Microscopy Images**

*Gloria Bueno, Milagros Fernández, Oscar Déniz and Marcial Garcia*

### **Visual Mining of Epidemic Networks**

*Stéphan Cléménçon, Hector De Arazoza, Fabrice Rossi and Viet-Chi Tran*

## ***Session 8-2B (11:30-12:50).- Biometric systems for human-machine interaction***

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Chairman & Organizers: Alexandra Psarrou, Anastassia Angelopoulou, Carlos Manuel Travieso-González, Jordi Solé-Casals

### **Object Representation with Self-Organising Networks**

*Anastassia Angelopoulou, Alexandra Psarrou and Jose Garcia-Rodriguez*

### **Gender recognition using PCA and DCT of face images**

*Ondrej Smirg, Jan Mikulka, Marcos Faundez-Zanuy, Marco Grassi and Jiri Mekyska*

### **Efficient face recognition fusing dynamic morphological quotient image with local binary pattern**

*Hong Pan, Siyu Xia, Lizuo Jin and Liangzheng Xia*

### **A growing neural gas algorithm with applications in hand modelling and tracking**

*Anastassia Angelopoulou, Alexandra Psarrou and Jose Garcia-Rodriguez*

***Session 8-2C-A (11:30-12:50).- III International Workshop of Ambient Assisted Living- IWAAL (Part II). Applications for Cognitive Impairments***

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**Distributed Tracking System for Patients with Cognitive Impairments**

*Xabier Laiseca, Eduardo Castillejo, Pablo Orduna, Aitor Gomez-Goiri, Diego López-de-Ipiña, and Ester Gonzalez Aguado*

**Designing Messenger Visual, an Instant Messaging service for individuals with cognitive disability**

*Pere Tuset, Juan Miguel López, Pere Barberán, Léonard Janer, Cristina Cervelló-Pastor*

**ATHENA: Smart Process Management for daily activity planning for cognitive impairment**

*Eva Hidalgo, Luis Castillo, R. Ignacio Madrid, Oscar Garcia-Perez, and M.R. Cabello*

**RFID performance in a localization systems**

*Ivan Alvarez, Pedro Malagon, Marina Zapater, Juan-Mariano de Goyeneche, and Jose M. Moya*

***Session 8-2C-B (13:00-14:00).- III International Workshop of Ambient Assisted Living- IWAAL (Part III). E-Health***

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**Emergency System for Elderly - a Computer Vision Based Approach**

*Rainer Planinc and Martin Kampel*

**Communication architecture for tracking and interoperable services at Hospitals: a real deployment experience**

*Augusto Morales , Tomás Robles, Ramón Alcarria ,David Alonso*

**Live Interactive Frame Technology Alleviating Children Stress and Isolation During Hospitalization**

*Pablo Anton, Antonio Mana, Antonio Munoz, Hristo Koshutanski*

***Session 8-2D (11:30-12:50).- 4th International Conference on Computational Intelligence in Security for Information Systems- CISIS 2011 (Part I). Machine Learning and Intelligence***

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**Collective Classification for Spam Filtering**

*Carlos Laorden, Borja Sanz, Igor Santos, Patxi Galán-García, and Pablo G. Bringas*

**Detecting Bad-Mouthing Attacks on Reputation Systems using Self-organizing Maps**

*Zorana Bankovic, J.C. Vallejo, D. Fraga, J.M. Moya*

**Approach based ensemble methods for better and faster detection intrusions**

*Emna Bahri, Nouria Harbi and Hoa Nguyen Huu*

**Application of the Generic Feature Selection Measure in Detection of Web Attacks**

*Hai Nguyen, Carmen Torrano-Gimenez, Gonzalo Alvarez, Slobodan Petrovic, and Katrin Franke*

**Data Aggregation Based on Fuzzy Logic for VANETs**

*Pino Caballero-Gil, J. Molina-Gil and C. Caballero-Gil*

***Official Opening and Invited Talk 1 (13:00-14:00)***

***”General Type-2 Fuzzy Logic Systems to enable Better Uncertainty Handling for Real World Application”***

***Prof. Hani Hagra***

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***Session 8-3A (16:00-17:30).-Applications of Computational Intelligence. (Part I)***

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Chairman: Gauthier Doquire, Javier Lorenzo

**Short-Term Wind Power Forecast based on Cluster Analysis and Artificial Neural Networks**

*Javier Lorenzo, Juan Méndez, Daniel Hernández and Modesto Castrillón*

**Graph Laplacian for Semi-Supervised Feature Selection in regression problems**

*Gauthier Doquire and Michel Verleysen*

**Detection of transients in steel casting through standard and AI-based techniques**

*Valentina Colla, Marco Vannucci, Nicola Matarese, Gerard Stephens, Marco Pianezzola, Izaskun Alonso, Torsten Lamp, Juan Palacios and Siegfried Schiewe*

**Oesophageal Voice Harmonic to Noise Ratio Enhancement over UMTS Networks Using Kalman-EM**

*Marouen Azzouz, Begonya García Zapirain, Ibon Ruiz Oleagordia and Amaia Mendez Zorrilla*

**Differential Evolution Optimization of 3D Topological Active Volumes**

*Jorge Novo Buján, José Santos Reyes and Manuel Francisco González Penedo*

***Session 8-3B (16:00-17:30).-Computational intelligence in multimedia processing***

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Chairman & Organizers: Adriana Dapena, Julio Bregáins, Nicolás Guil

**Computational Intelligence in Multimedia Processing**

*Nicolás Guil, Julio C. Bregáins and Adriana Dapena*

**A Novel Strategy for Improving the Quality of Embedded Zerotree Wavelet Images Transmitted over Alamouti Coding Systems**

*Josmary Labrador Briceño, Paula M. Castro Castro, Héctor J. Pérez-Iglesias and Adriana Dapena Janeiro*

**Applying Data Mining Techniques in a Wyner-Ziv to H.264 Video Transcoder**

*José Luis Martínez Martínez, Alberto Corrales-García, Pedro Cuenca and Francisco José Quiles Flor*

**On the Use of Genetic Algorithms to Improve Wavelet Sign Coding Performance**

*Otoniel Lopez Granado, Ricardo Garcia, Manuel Perez Malumbres and Antonio Martí*

**Kernel-Based Object Tracking Using a Simple Fuzzy Color Histogram**

*Juan Villalba Espinosa, Jose González Linares, Julian Ramos Cozar and Nicolás Guil Mata*

***Session 8-3C (16:00-17:30).- III International Workshop of Ambient Assisted Living- IWAAL (Part IV). Smart and Wireless Sensors***

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**Review and New Proposals for Zigbee Applications in Healthcare & Home Automation**

*Iker Caballero, Javier Vicente Sáez, Begoña García Zapirain*

**AVATAR: An Open Source Architecture for Embodied Conversational Agents in Smart Environments**

*Marcos Santos-Perez, Eva Gonzalez-Parada and Jose Manuel Cano-García*

**Cognitive Wireless Sensor Network Device for AAL Scenarios**

*Fernando López, Elena Romero, Javier Blesa, Daniel Villanueva and Alvaro Araujo*

**An Ambient Assisted Living platform to integrate biometric sensors to detect respiratory failures for patients with serious breathing problems**

*Antonio J. Jara, Miguel A. Zamora and Antonio F. Gómez Skarmeta*

**A 6LoWPAN-based foundation for AAL-Applications**

*Matthias Felsche, Lars Schulz, Andrea Schuster, Horst Schwetlick*

***Session 8-3D (16:00-17:30).- 4th International Conference on Computational Intelligence in Security for Information Systems-CISIS 2011 (Part II). Cryptography***

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**Structural Properties of Cryptographic Sequences**

*Amparo Fuster-Sabater*

**A multisignature scheme based on the SDLP and on the IFP**

*Luis Hernández, R. Durán Díaz, J. Muñoz Masqué*

**A group signature scheme based on the integer factorization and the subgroup discrete logarithm problems**

*Luis Hernández, R. Durán Díaz, J. Muñoz Masqué*

**Cryptanalysis of Multicast protocols with Key Refreshment based on the Extended Euclidean Algorithm**

*Alberto Peinado, Andrés Ortiz*

**Improving the Message Expansion of the Tangle Hash Function**

*Rafael Alvarez, José-Francisco Vicent, and Antonio Zamora*

**Cryptosystem with One Dimensional Chaotic Maps**

*Rubén Vázquez-Medina, J. A. Martínez-Ñonthe, A. Díaz-Méndez, M. Cruz-Irisson, L. Palacios-Luengas, J. L. Del-Río-Correa*

***Session 8-4A (18:00-19:40).-Applications of Computational Intelligence. (Part II)***

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Chairman: Fernando Rojas

**Genetic algorithms applied to the design of 3D Photonic Crystals**

*Agustín Morgado, Alejandro Escuín and Elisa Guerrero*

**Sliding Empirical Mode Decomposition for On-line Analysis of Biomedical Time Series**

*Angela Zeiler, Rupert Faltermeier, Alexander Brawanski, Ana Maria Tomé, Carlos Puntonet and Elmar Lang*

**Aeration control and parameter soft estimation for a wastewater treatment plant using a neurogenetic design**

*Javier Fernandez De Canete, Pablo Del Saz Orozco and Inmaculada Garcia-Moral*

**Pulse Component Modification Detection in Spino Cerebellar Ataxia 2 using ICA**

*Rodolfo García, Fernando Rojas, Jesús González, Luis Velázquez, Roberto Rodríguez, Roberto Becerra and Olga Valenzuela*

**Study of Various Neural Networks to Improve the Defuzzification of Fuzzy Clustering Algorithms for ROIs Detection in Lung CTs**

*Alberto Rey, Alfonso Castro and Bernardino Arcay*

***Session 8-4B (18:00-20:00).- Recent advances on fuzzy logic and soft computing applications***

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Chairman & Organizers: Inma P. Cabrera, Pablo Cordero, Manuel Ojeda-Aciego

**Non-deterministic algebraic structures for soft computing**

*Inma P. Cabrera, Pablo Cordero and Manuel Ojeda-Aciego*

**An efficient algorithm for reasoning about fuzzy functional dependencies**

*Pablo Cordero Ortega, Ángel Mora-Bonilla, Inmaculada Pérez De Guzmán, Manuel Enciso García-Oliveros and Jose Manuel Rodríguez Jiménez*

**A Sound Semantics for a Similarity-based Logic Programming Language**

*Pascual Julián Iranzo and Clemente Rubio Manzano*

**A Static Preprocess for Improving Fuzzy Thresholded Tabulation**

*Pascual Julian-Iranzo, Jesús Medina-Moreno, Pedro-Jose Morcillo, Gines Moreno and Manuel Ojeda-Aciego*

**Fuzzy Computed Answers Collecting Proof Information**

*Pedro-José Morcillo, Gines Moreno, Jaime Penabad and Carlos Vázquez*

**Implication triples versus adjoint triples**

*M<sup>a</sup> Eugenia Cornejo, Jesús Medina-Moreno and Eloisa Ramírez*

***Session 8-4C (18:00-20:00).- Biological and Bio-inspired Dynamical Systems***

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Chairman & Organizers: Vladimir Râsvan, Daniela Danciu

**Bio-inspired systems. Several equilibria. Qualitative behavior**

*Daniela Danciu*

**Robustness of the 'Hopfield estimator' for identification of dynamical systems**

*Miguel Atencia, Gonzalo Joya and Francisco Sandoval*

**Dengue Model Described by Differential Inclusions**

*Jorge Barrios, Alain Piétrus, Aymée Marrero, Héctor De Arazoza and Gonzalo Joya*

**Simulating Building Blocks for Spikes Signals Processing**

*Angel Jimenez-Fernandez, Manuel J. Dominguez-Morales, Elena Cerezuela-Escudero, Rafael Paz-Vicente, Alejandro Linares-Barranco and Gabriel Jimenez-Moreno*

**Description of a Fault Tolerance System Implemented in a Hardware Architecture with Self-Adaptive Capabilities**

*Javier Soto, J.Manuel Moreno and Joan Cabestany*

**Systems with slope restricted nonlinearities and neural networks dynamics**

*Daniela Danciu and Vladimir Rasvan*

***Session 8-4D (18:00-20:00).- 4th International Conference on Computational Intelligence in Security for Information Systems-CISIS 2011 (Part III). Network Security I***

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**A New Alert Correlation Algorithm based on Attack Graph**

*Sebastian Roschke, Feng Cheng, Christoph Meinel*

**Security Alert Correlation Using Growing Neural Gas**

*Francisco Jo. Mora, Francisco Maciá-Pérez, Iren Lorenzo-Fonseca, Juan Antonio Gil-Martínez-Abarca, Diego Marcos-Jorquera and Virgilio Gilart-Iglesias*

**A Comparative Performance Evaluation of DNS Tunneling Tools**

*Alessio Merlo, Gianluca Papaleo, Stefano Veneziano, Maurizio Aiello*

**A Secure and Efficient Searching Scheme for Trusted Nodes in a Peer-to-Peer Network**

*Jaydip Sen*

**Testing Classifiers for Intrusion Detection: on the Identification of Mutated Network Scans**

*Silvia González, Javier Sedano, Álvaro Herrero, Bruno Baruque, Emilio Corchado*

**An Intelligent Information Security Mechanism for the Network Layer of WSN: BIOSARP**

*Kashif Saleem, Norsheila Fisal, Sharifah Hafizah, Rozeha A. Rashid*

Thursday, June 9

***Session 9-1A (9:00-11:00).- New applications of Brain-Computer Interfaces***

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Chairman & Organizers: Francisco Pelayo Valle, Miguel Angel López, Ricardo Ron

**Auditory Brain-computer Interfaces for Complete locked-in Patients**

*Miguel A. Lopez-Gordo, Ricardo Ron-Angevin and Francisco Pelayo*

**Audio-cued SMR Brain-Computer Interface to Drive a Virtual Wheelchair**

*Francisco Velasco-Alvarez, Ricardo Ron-Angevin, Leandro Da Silva-Sauer, Salvador Sancha-Ros and María José Blanca-Mena*

**A Domotic Control System using Brain-Computer Interface (BCI)**

*Rebeca Corralejo, Roberto Hornero and Daniel Alvarez*

**A Dictionary-Driven SSVEP Speller with a Modified Graphical User Interface**

*Ivan Volosyak, Anton Moor and Axel Gräser*

**Non-invasive brain-computer interfaces: Enhanced gaming and robotic control**

*Reinhold Scherer, Elisabeth V.C. Friedrich, Brendan Allison, Markus Pröll, Mike Chung, Willy Cheung, Rajesh P.N. Rao and Christa Neuper*

**Brain-computer interface: Generic control interface for social interaction applications**

*Christoph Hintermüller, Christoph Guger and Günther Edlinger*

***Session 9-1B (9:00-11:00).- Applying evolutionary computation and nature-inspired algorithms to formal methods***

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Chairman & Organizer: Ismael Rodríguez

**A preliminary general testing method based on genetic algorithms**

*Luis M. Alonso, Ismael Rodriguez and Pablo Rabanal*

**Tackling the Static RWA problem by Using a Multiobjective Artificial Bee Colony Algorithm**

*Álvaro Rubio-Largo, Miguel A. Vega-Rodríguez, Juan Antonio Gómez-Pulido and Juan Manuel Sanchez-Perez*

**Applying a Multiobjective Gravitational Search Algorithm (MO-GSA) to Discover Motifs**

*David L. González-Álvarez, Miguel A. Vega-Rodríguez, Juan A. Gómez-Pulido and Juan M. Sánchez-Pérez*



**Looking for a Cheaper ROSA**

*Fernando L. Pelayo, Fernando Cuartero and Diego Cazorla*

**A Parallel Skeleton for Genetic Algorithms**

*Alberto De La Encina, Mercedes Hidalgo-Herrero, Pablo Rabanal and Fernando Rubio*

**Experimental Comparison of Different Techniques to Generate Adaptive Sequences**

*Carlos Molinero, Manuel Nuñez and Robert M. Hierons*

***Session 9-1C (9:00-11:00).- III International Workshop of Ambient Assisted Living- IWAAL (Part V). Applied Technologies, Frameworks and Platforms***

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**SENIORCHANNEL an Interactive Digital Television Channel for Promoting Entertainment and Social Interaction amongst Elderly People**

*Ana Hernandez, Francisco Ibañez, Neftis Atallah*

**An Interactive Content Service for Photo Frames in the Home**

*Carlos Lopes, Rui Jose and Ana Aguiar*

**System approach to AAL applications: a case study**

*Lenka Lhotska, Jan Havlik, and Petr Panyrek*

**A Presence-aware Smart Home System (PASH)**

*Ernesto Garcia Davis, Anna Calveras Augé*

**Applying Zheleznogorsk Robotics for Learning Children with Disabilities**

*Anton Khnykin, Nikolay Laletin, Victor Uglev*

**Context-awareness in a service oriented e-health platform**

*P. Garcia-Sanchez, S. Gonzalez, A. Rivadeneyra, M. P. Palomares, and J. Gonzalez*

**HOMEdotOLD, HOME services aDvancing the sOcial inTeractiOn of eLDERly people**

*Konstantinos Perakis, Gianna Tsakou, Christoforos Kavvadias, Alkis Giannakoulas*

***Session 9-1D (10:00-11:00).- 4th International Conference on Computational Intelligence in Security for Information Systems-CISIS 2011 (Part IV). Securing Software***

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**A Quantitative Analysis into the Economics of Correcting Software Bugs**

*Tanveer Zia, Craig S Wright*

**Rationally Opting for the Insecure Alternative: Negative Externalities and the Selection of Security Controls**

*Tanveer Zia, Craig S Wright*

**An approach for adapting Moodle into a secure infrastructure**

*Jesus Diaz, David Arroyo, Francisco B. Rodríguez*

**On Secure JAVA Application in SOA-Based PKI Mobile Government Systems**

*Milan Markovic, Goran Dorñevic*

***Session 9-P (11:00-11:45).- Poster Session***

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Chairman: Hector Pomares

**Feature weighting in competitive learning for multiple object tracking in video sequences**

*Rafael Marcos Luque Baena, Juan Miguel Ortiz-De-Lazcano-Lobato, Ezequiel Lopez-Rubio, Enrique Dominguez and Esteban José Palomo*

**Single neuron transient activity detection by means of tomography**

*Carlos Aguirre, Pedro Pascual, Doris Campos and Eduardo Serrano*

**A case study on the use of genetic algorithms to generate test cases for temporal systems**

*Karnig Derderian, Mercedes Merayo, Rob Hierons and Manuel Nuñez*

**An EEG-based design for the online detection of movement intention**

*Jaime Ibáñez, J. Ignacio Serrano, M. Dolores Del Castillo, Luis J. Barrios, Juan A. Gallego and Eduardo Rocon*

**Confidence-Based Reasoning with Local Temporal Formal Contexts**

*Joaquín Borrego-Díaz, Gonzalo A. Aranda-Corral and Juan Galán-Páez*

**Suitability of artificial neural networks for designing LoC circuits**

*David Moreno, Sandra Gómez and Juan Castellanos*

**Early pigmentary retinosis diagnostic based on classification trees**

*Vivian Sistasch-Vega, Gonzalo Joya and Miguel A. Díaz-Martínez*

**Human/Robot Interface for Voice Teleoperation of a Robotic Platform**

*Leticia Gallardo-Estrella and Alberto Poncela*

**Flexible Entrainment in a Bio-Inspired Modular Oscillator for Modular Robot Locomotion**

*Fernando Herrero-Carrón, Francisco B Rodríguez and Pablo Varona*

**Modeling detection of HIV in Cuba**

*Hector De Arazoza, Rachid Lounes, Ying-Hen Hsieh, Andres Sanchez and Jorge Barrios*

**Implementation matters: programming best practices for evolutionary algorithms**

*Jj Merelo, Gustavo Romero López, María Isabel García Arenas, Pedro Castillo, Antonio Mora and Juan Luis Jiménez Laredo*

**Online vs Offline ANOVA use on Evolutionary Algorithms**

*Gustavo Romero López, Pedro Castillo Valdivieso, Maribel Gracia Arenas and Juan Julián Merelo Guervós*

**Neural network ensembles with missing data processing and data fusion capacities: Applications in Medicine and in the Environment**

*Patricio García Báez, Carmen Paz Suarez Araujo and Pablo Fernández López*

**Optical flow reliability model approximated with RBF**

*Rodrigo Agis, Javier Díaz, Pilar Martínez, Pablo Guzmán and Eduardo Ros*

**A geometrical method of diffuse and specular image components separation**

*Ramón Moreno, Manuel Graña and Alicia D'Ánjou*

**The Segmentation of Different Skin Colors Using the Combination of Graph Cuts and Probability Neural Network**

*Chih-Lyang Hwang and Kai-Di Lu*

**The Command Control of a Two-Degree-of-Freedom Platform by Hand Gesture Moment Invariants**

*Chih-Lyang Hwang and Chen-Han Yang*

**Combination of GA and ANN to High Accuracy of Polarimetric SAR Data Classification**

*Ataollah Haddadi G. and Mahmood Reza Sahebi*

**Back Propagation with Balanced MSE Cost-Function and Nearest Neighbor Editing for Handling Class Overlap and Class Imbalance**

*Roberto Alejo, José Martínez Sotoca, Rosa María Valdovinos and Vicente Garcia*

**An AER spike-processing filter simulator and automatic VHDL generator based on Cellular Automata**

*Manuel Rivas-Perez, Alejandro Linares-Barranco, Francisco Gomez-Rodriguez, Arturo Morgado-Estevez, Anton Civit-Balcells and Gabriel Jimenez-Moreno*

**An AER to CAN bridge for spike-based robot control**

*Manuel J. Dominguez-Morales, Angel Jimenez-Fernandez, Rafael Paz-Vicente, Alejandro Linares-Barranco, Daniel Cascado-Caballero, Juan Lopez-Coronado, Jose Luis Muñoz-Lozano and Gabriel Jimenez-Moreno*

**Ant colony optimization for water distribution: network design: A comparative study**

*Consolación Gil Montoya, Raúl Baños, Julio Ortega, Antonio López Márquez, Antonio Fernández and María Montoya*

***Session 9-2A (11:45-13:00).- Video and image processing. (Part I)***

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Chairman & Organizers: Enrique Domínguez, José García

**Lossy Image Compression using a GHSOM**

*Esteban José Palomo Ferrer, Enrique Domínguez Merino, Rafael Marcos Luque Baena and José Muñoz Pérez*

**Visual Features Extraction Based Egomotion Calculation from a Infrared Time-of-Flight Camera**

*Diego Viejo, Jose Garcia-Rodriguez and Miguel Cazorla*

**Reduction of JPEG compression artifacts by kernel regression and probabilistic self-organizing maps**

*María Nieves Florentín-Núñez, Ezequiel López-Rubio and Francisco Javier López-Rubio*

**An Unsupervised Method for Active Region Extraction in Sports Videos**

*Markos Mentzelopoulos, Alexandra Psarrou and Anastassia Angelopoulou*

***Session 9-2B (11:45-13:00).- Hybrid Artificial Neural Networks: Models, Algorithms and Data. (Part I)***

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Chairman & Organizers: César Hervás-Martínez, Pedro Antonio Gutiérrez

**Parallelism in Binary Hopfield Networks**

*José Muñoz Pérez, Amparo Ruiz Sepúlveda and Rafaela Benitez*

**Multi-parametric Gaussian Kernel Function Optimization for SVMr using a Genetic Algorithm**

*Jorge Garcón-Moreno, Emilio Ortiz-García, Sancho Salcedo-Sanz, Arturo Paniagua-Tineo, Beatriz Saavedra-Moreno and Antonio Portilla-Figueras*

**Face Recognition System in a Dynamical Environment**

*Aldo Franco Dragoni, Germano Vallesi and Paola Baldassarri*

**Memetic Pareto Differential Evolutionary Neural Network for Donor-Recipient Matching in Liver Transplantation**

*Manuel Cruz-Ramírez, Cesar Hervas, Pedro Antonio Gutiérrez, Javier Briceño and Manuel De La Mata*

***Session 9-2C-A (11:30 - 12:30).- III International Workshop of Ambient Assisted Living- IWAAL (Part VI). Methodologies & Brian Interfaces***

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**Stress Telecare Using a Smart Device Controller**

*Nicolas Boulesteix, Javier Vicente, Begoña García Zapirain, Amaia Méndez*

**Image Processing Algorithms for AAL services**

*Iván Ovejero, Elena Romero, Zorana Bankovic, Pedro Malagón and Alvaro Araujo*

**A methodology for developing accessible mobile platforms over leading devices for visually impaired people**

*Patricia Arroba, Juan Carlos Vallejo, Alvaro Araujo, David Fraga, and Jose M. Moya*

**Context-Awareness as an Enhancement of Brain-Computer Interfaces**

*Agustin A. Navarro, Luigi Ceccaroni, Sergi Torrellas, Filip Velickovski, Felip Miralles, Brendan Z. Allison, Reinhold Scherer, Josef Faller*

***Session 9-2C-B (12:45 - 14:00).- III International Workshop of Ambient Assisted Living- IWAAL (Part VII). Special Session (AAL Platforms). AAL for disabled people. New challenges.***

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***Session 9-2D (11:45-13:00).- 4th International Conference on Computational Intelligence in Security for Information Systems- CISIS 2011 (Part V). Network Security II***

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**Digging into IP Flow Records with a Visual Kernel Method**

*Cynthia Wagner, Gerard Wagener, Radu State, and Thomas Engel*

**Opcode-sequence-based Semi-supervised Unknown Malware Detection**

*Igor Santos, Borja Sanz, Carlos Laorden, Felix Brezo, and Pablo G. Bringas*

**A Qualitative Survey of Active TCP/IP Fingerprinting Tools and Techniques for Operating Systems Identification**

*João P.S. Medeiros, Agostinho de Medeiros Brito Júnior, Paulo S. Motta Pires*

**Structural Feature based Anomaly Detection for Packed Executable Identification**

*Xabier Ugarte-Pedrero, Igor Santos, and Pablo G. Bringas*

**Security Analysis and Complexity Comparison of Some Recent Lightweight RFID Protocols**

*Ehsan Vahedi, Rabab K. Ward and Ian F. Blake*

***Invited Talk 2 (13:00-14:00)***

***"Dataset Shift in Classification: Approaches and Problems"***

***Prof. Francisco Herrera***

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***Session 9-3A (16:00-17:30).- Video and image processing. (Part II)***

Chairman & Organizers: Enrique Domínguez, José García

**Video and Image Processing with Self-Organizing Neural Networks**

*Jose Garcia-Rodriguez, Enrique Dominguez, Anastassia Angelopoulou, Alexandra Psarrou and Juan M. García-Chamizo*

**6DoF Egomotion Computing Using 3D GNG-Based Reconstruction**

*Diego Viejo, Jose García and Miguel Cazorla*

**Fast Image Representation with GPU-Based Growing Neural Gas**

*Jose Garcia-Rodriguez, Anastassia Angelopoulou, Vicente Morell, Sergio Orts, Alexandra Psarrou and Juan Manuel Garcia-Chamizo*

**Texture and color analysis for the automatic classification of the eye lipid layer**

*Lucía Ramos, Marta Penas Centeno, Beatriz Remeseiro, Antonio Mosquera, Noelia Barrreira and Eva Yebra-Pimentel*

**Quantitative Study and Monitoring of the growth of lung cancer nodules evolution using X-ray computed tomography images processing tool**

*Jose Luis García Arroyo, Begonya García Zapirain and Amaia Mendez*

***Session 9-3B (16:00-17:30).- Hybrid Artificial Neural Networks: Models, Algorithms and Data. (Part II)***

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Chairman & Organizers: César Hervás-Martínez, Pedro Antonio Gutiérrez

**Hybrid Artificial Neural Networks: Models, Algorithms and Data**

*Pedro Antonio Gutiérrez and Cesar Hervás-Martínez*

**Studying the Hybridization of Artificial Neural Networks in HECIC**

*José Del Campo-Ávila, Gonzalo Ramos-Jiménez, Jesús Pérez-García and Rafael Morales-Bueno*

**Processing Acyclic Data Structures using modified Self-Organizing Maps**

*Gabriela Andrejkova and Jozef Oravec*

**On the Performance of the micro-GA Extreme Learning Machines in Regression Problems**

*Arturo Paniagua-Tineo, Emilio Ortiz-García, Sancho Salcedo-Sanz, Jorge Garcón-Moreno, Beatriz Saavedra-Moreno and Antonio Portilla-Figuera*

**A hybrid evolutionary approach to obtain better quality classifiers**

*David Becerra-Alonso, Mariano Carbonero-Ruz, Francisco José Martínez-Estudillo and Alfonso Carlos Martínez-Estudillo*

***Session 9-3C (16:00-17:30).-International Workshop of Intelligent systems for context-based information fusion (ISCIF'11). (Part I)***

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**On planning in multi-agent environment: algorithm of scene reasoning from incomplete information**

*Tomasz Grzejszczak and Adam Galuszka*

**Research opportunities in contextualized fusion systems. The harbor surveillance case.**

*Jesus García, Jose M. Molina, Tarunraj Singh, John Crassidis and James Llinas*

**Multiagent-based middleware for the agents'behavior simulation**

*Elena García, Sara Rodríguez, Juan F. De Paz and Juan M. Corchado*

**A Dynamic Context-Aware Architecture for Ambient Intelligence**

*Jose M. Fernández, Rubén Fuentes and Juan Pavón*

**Group behavior recognition in context-aware systems**

*Alberto Pozo, Miguel Angel Patricio, Jesús García and Jose M. Molina*

***Session 9-3D (16:00-17:30).- 4th International Conference on Computational Intelligence in Security for Information Systems-CISIS 2011. IEEE Meeting. IEEE Systems, Man and Cybernetics Society. Spain***

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***Session 9-4A (18:00-19:40).- Bio-inspired systems and neuro-engineering***

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Chairman: Francisco Gomez-Rodriguez

**Neuromorphic real-time objects tracking using Address Event Representation and silicon retina**

*Francisco Gomez-Rodriguez, Lourdes Miro-Amarante, Manuel Rivas, Gabriel Jimenez and Fernando Diaz-del-Rio*

**Performance study of software AER-based convolutions on a parallel supercomputer**

*Rafael Jesús Montero González, Arturo Morgado Estevez, Alejandro Linares Barranco, Bernabé Linares Barranco, Fernando Perez Peña, Jose Antonio Perez Carrasco and Angel Jimenez Fernandez*

**Frequency Analysis of a 64x64 pixel Retinomorphic System with AER output to estimate the limits to apply onto specific mechanical environment**

*Fernando Perez-Peña, Arturo Morgado-Estevez, Alejandro Linares-Barranco, Gabriel Jimenez-Moreno, Jose Maria Rodriguez-Corral and Rafael J. Montero-Gonzalez*

**A Biologically Inspired Neural Network for Autonomous Underwater Vehicles**

*Francisco García-Córdova and Antonio Guerrero-González*

**Multi-modal Opponent Behaviour Prognosis in E-Negotiations**

*Ioannis Papaioannou, Ioanna Roussaki and Miltiades Anagnostou*

***Session 9-4B (18:00-19:40).- Hybrid Intelligent Systems***

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Chairman: Marco Vannucci

**A Preliminary Study on the Use of Fuzzy Rough Set based Feature Selection for Improving Evolutionary Instance Selection Algorithms**

*Joaquín Derrac, Chris Cornelis, Salvador García and Francisco Herrera*

**Forecasting Based on Short Time Series Using ANNs and Grey Theory Some Basic Comparisons**

*Jelena Milojkovic, Vančo Litovski, Octavio Nieto-Taladriz and Slobodan Bojanic*

**An Evolutionary Algorithm for Routing in Multistage Interconnection Networks**



*Mehran Ghaziasgar and Armin Tavakoli Naeini*

**Network Intrusion Prevention by using Hierarchical Self-Organizing Maps and Probability-based Labeling**

*Andres Ortiz, Julio Ortega, Antonio F. Diaz and Alberto Prieto*

**Estimate of a Probability Density Function Through Neural Networks**

*Leonardo Reyneri, Valentina Colla and Marco Vannucci*

***Session 9-4C (18:00-19:20).-International Workshop of Intelligent systems for context-based information fusion (ISCIF'11). (Part II)***

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**Context-awareness at the service of Sensor Fusion Systems: Inverting the Usual Scheme**

*Enrique Martí, Jesús García and José Manuel Molina*

**Improving a Telemonitoring System based on Heterogeneous Sensor Networks**

*Ricardo S. Alonso, Dante Tapia, Javier Bajo, Sara Rodríguez and Juan M. Corchado*

**Supporting system for detecting pathologies**

*Carolina Zato, Juan F. De Paz, Fernando De La Prieta and Beatriz Martín*

**An Ontological Approach for Context-aware Reminders in Assisted Living'Behavior Simulation**

*Shumei Zhang, Paul McCullagh, Chris Nugent, Huiru Zheng and Norman Black*

***Session 9-4D (18:00-19:30).- 4th International Conference on Computational Intelligence in Security for Information Systems- CISIS 2011 (Part VI). Applications I***

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**Keeping Group Communications Private: an Up-to-Date Review on Centralized Secure Multicast**

*Juan Á. Muñoz-Naranjo, L.G. Casado*

**Java Card implementation of the Elliptic Curve Integrated Encryption Scheme using prime and binary finite fields**

*Víctor Gayoso, L. Hernández Encinas, and C. Sánchez Ávila*

**Comprehensive Protection of RFID Traceability Information Systems Using Aggregate Signatures**

*Guillermo Azuara, José Luis Salazar*

**Produre: A Novel Proximity Discovery Mechanism in Location Tagging System**

*Yonggang Wang, Jianbin Hu, Tao Yang, Zhi Guan, Nike Gui, Zhong Chen*

**Scientific Gateway and Visualization tool**

*Eva Pajorova, Ladislav Hluchý*

**An innovative framework for securing unstructured documents**

*Valentina Casola, Flora Amato, Antonino Mazzeo, and Sara Romano*

Friday, June 10

***Session 10-1A (9:00-11:00).- Computing languages with Bio-inspired Devices and Multi-Agent Systems***

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Chairman & Organizers: M. Dolores Jiménez-López, Alfonso Ortega de la Puente

**Computing Languages with Bio-Inspired Devices and Multi-Agent Systems**

*M. Dolores Jimenez-Lopez*

**About Complete Obligatory Hybrid Networks of Evolutionary Processors Without Substitution**

*Artiom Alhazov, Gemma Bel-Enguix, Alexander Krassovitskiy and Yurii Rogozhin*

**Chemical Signaling as a Useful Metafor for Resource Management**

*Evgeny Skvortsov, Nima Kaviani and Veronica Dahl*

**Distributed simulation of P systems by means of map-reduce: first steps with hadoop and P-Lingua**

*Marina De La Cruz, Leonardo Diez, Rafael Núñez and Alfonso Ortega de la Puente*

**Hierarchy Results On Stateless Multicounter 5'-¿3'Watson-Crick Automata**

*Benedek Nagy, László Hegedüs and Ömer Egecioglu*

**Towards a Bio-Computational Model of Natural Language Learning**

*Leonor Becerra Bonache*

***Session 10-1B (9:00-11:00).- Optimization algorithms in Graphic Processing Units***

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Chairman & Organizers: Antonio M. Mora García, María Isabel G. Arenas, Pedro Castillo Vadi-vieso

**GPU Computation in Bioinspired Algorithms. A review**

*Pedro Castillo, M.G. Arenas, Gustavo Romero and A.M. Mora*

**Variable Selection in a GPU Cluster Using Delta Test**

*Alberto Guillen*

**Towards ParadisEO-MO-GPU: a Framework for GPU-based Local Search Metaheuristics**

*Nouredine Melab, Thé Van Luong, Karima Boufaras and El-Ghazali Talbi*

**Efficient simulation of spatio-temporal dynamics in ultrasonic resonators**

*Pedro Alonso-Jordá, Jesús Peinado-Pinilla, Isabel Pérez-Arjona and Victor J. Sánchez-Morcillo*

**GPU implementation of a bio-inspired vision model**

*Raquel Ureña, Christian Morillas, Romero Samuel and Francisco J. Pelayo*

**Bipartite Graph Matching on GPU over Complete or Local Grid Neighborhoods**

*Cristina Vasconcelos and Bodo Rosenhahn*

***Session 10-1C (9:00-11:00).-Bio-inspired combinatorial optimization***

---

Chairman & Organizers: Carlos Cotta Porras, Antonio J. Fernández Leiva

**Bio-inspired Combinatorial Optimization: Notes on Reactive and Proactive Interaction**

*Carlos Cotta and Antonio J. Fernández Leiva*

**Towards User-Centric Memetic Algorithms: Experiences with the TSP**

*Ana Reyes Badillo, Carlos Cotta and Antonio José Fernández Leiva*

**A Multi-objective Approach for the 2D Guillotine Cutting Stock Problem**

*Jesica De Armas, Gara Miranda and Coromoto Leon*

**Optimizing strategy parameters in a game bot**

*Antonio Fernandez-Ares, Antonio Mora, Jj Merelo, Pablo García Sánchez and Carlos Fernandes*

**A preliminary analysis and simulation of Load Balancing Techniques applied to Parallel Genetic Programming**

*Francisco Fernandez De Vega, Jose Gabriel Abengoazar Sanchez and Carlos Cotta Porras*

**A Study of Parallel Approaches in MOACOs for solving the Bicriteria TSP**

*Antonio Mora, J.J. Merelo, Pedro A. Castillo, Maria Isabel García Arenas, Pablo García Sánchez, Juan Luis Jiménez Laredo and Gustavo Romero*

***Session 10-1D (9:00-11:00).- New advances in theory and applications of ICA-based algorithms***

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Chairman & Organizers: Addison Salazar, Luis Vergara

**Nonlinear Prediction based on Independent Component Analysis Mixture Modelling**

*Gonzalo Safont, Addison Salazar and Luis Vergara*

**Application of Independent Component Analysis for Evaluation of Ashlar Masonry Walls**

*Addisson Salazar, Gonzalo Safont and Luis Vergara*

**Fast Independent Component Analysis using a new property**

*Ruben Martin-Clemente, Susana Hornillo-Mellado and José Luis Camargo-Olivares*

**Using Particle Swarm Optimization for minimizing mutual information in Independent Component Analysis**

*Jorge Igual, Jehad Ababneh, Raúl Llinares Llopis and Carmen Igual*

**Regularized Active Set Least Squares Algorithm for Nonnegative Matrix Factorization in Application to Raman Spectra Separation**

*Rafal Zdunek*

**A Decision-Aided Strategy for Enhancing Transmissions in Wireless OSTBC-based Systems**

*Tiago Fernández-Caramés, Adriana Dapena, José A. García-Naya and Miguel González-López*

***Session 10-2A (11:30-13:00).-Advances in machine learning for bioinformatics and computational biomedicine***

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Chairman & Organizers: Paulo J.L. Lisboa, Alfredo Vellido, Leonardo Franco

**Prediction of functional associations between proteins by means of a Cost-sensitive Artificial Neural Network**

*Javier P. Florido, Hector Pomares, Ignacio Rojas, Jose Miguel Urquiza and Francisco Manuel Ortuño*

**Automatic Recognition of Daily Living Activities based on a Hierarchical Classifier**

*Oresti Baños, Miguel Damas, Héctor Pomares and Ignacio Rojas*

**Hybrid (Generalization-Correlation) method for feature selection in high dimensional DNA microarray prediction problems**

*Yasel Couce, Leonardo Franco, Daniel Urda, José Luis Subirats and Jose M. Jerez*

**Model Selection with PLANN-CR-ARD**

*Corneliu Arsene, Paulo Lisboa and Elia Biganzoli*

***Session 10-2B (11:30-13:00).-Biologically plausible spiking neural processing***

---

Chairman & Organizers: Eduardo Ros, Richard R. Carrillo

**Event and Time driven hybrid simulation of spiking neural networks**

*Jesus Garrido, Richard R. Carrillo, Niceto Luque and Eduardo Ros*

**Isometric coding of spiking haptic signals by peripheral somatosensory neurons**

*Romain Brasselet, Roland S. Johansson and Angelo Arleo*

**Context Separability Mediated by the Granular Layer in a Spiking Cerebellum Model for Robot Control**

*Niceto Rafael Luque Sola, Jesús Alberto Garrido Alcázar, Richard Rafael Carrillo Sánchez and Eduardo Ros Vidal*

**Realistic modeling of large-scale networks: spacio-temporal dynamics and long-term synaptic plasticity in the cerebellum**

*Egidio D'Ángelo and Sergio Solinas*

***Session 10-2C (11:30-13:00).- Interactive and cognitive environments***

---

Chairman & Organizers: Andreu Catalá, Cecilio Angulo

**Biologically Inspired Path Execution using SURF Flow in Robot Navigation**

*Xavier Perez-Sala, Cecilio Angulo and Sergio Escalera*

**Equilibrium-Driven Adaptive Behavior Design**

*Paul Olivier and Juan Manuel Moreno Arostegui*

**Gait identification by using Spectrum Analysis on state space reconstruction**

*Albert Sama, Francisco J Ruiz, Carlos Perez and Andreu Catala*

**Aibo JukeBox. A Robot Dance Interactive Experience**

*Cecilio Angulo, Joan Comas and Diego Pardo*

***Session 10-2D (11:30-13:00).- 4th International Conference on Computational Intelligence in Security for Information Systems- CISIS 2011 (Part VII). Applications II***

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**Use of Schema Associative Mapping for synchronization of the Virtual Machine Audit Logs**

*Sean Thorpe, Indrajit Ray, Tyrone Grandison*

**Enforcing Data Quality Rules for a Synchronized VM Log Audit Environment using Transformation Mapping Techniques**

*Sean Thorpe, Indrajit Ray, Tyrone Grandison*

**Evaluating User-centered Privacy Model (UPM) in Pervasive Computing Systems**

*Ali Dehghantanha, Nur Izura Udzir and Ramlan Mahmud*

**An Innovative Linkage Learning Based on Differences in Local Optimums**

*Hamid Parvin, Behrouz Minaei-Bidgoli, B.Hoda Helmi*

**A New Particle Swarm Optimization for Dynamic Environments**

*Hamid Parvin , Behrouz Minaei, Sajjad Ghatei*

**A Classifier Ensemble for Face Recognition Using Gabor Wavelet Features**

*Hamid Parvin, Nasser Mozayani, Akram Beigi*

*Invited Talk 3 and Closing Ceremony (13:00-14:00)*

*"Bayesian machine learning for decoding the brain"*

*Prof. Tom Heskes*

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