

SOCO CONFERENCE			
	Wed. 6	Thu. 7	Fri. 8
ROOM	Room "Salón de Grados"	Room "Salón de Grados"	Room "Salón de Grados"
8:00	Registration (Open the whole day)	Registration (Open the whole day)	Registration (Open the whole day)
8:30	Bus to the venue from (Hotel Conde Luna, Hotel Colegiata San Isidoro)		
9:00 - 10:00	OPENING (SALÓN DE GRADOS) Invited Talk - Mr Alberto Hernández Moreno	SESSION SOCO S4.1 SPECIAL SESSION ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLIED TO HEALTH SCIENCES (Room Salon de Grados)	SESSION SOCO S4.2 SPECIAL SESSION ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLIED TO HEALTH SCIENCES (Room Salon de Grados)
10:00-11:00	SESSION SOCO S1 GENETIC AND EVOLUTIONARY ALGORITHMS (Room Salon de Grados)	SESSION SOCO S2 ENERGY EFFICIENCY (Room 207)	
11:00-12:00	Invited Talk (SALÓN DE GRADOS) Dr José Luis Verdégay	Invited Talk (SALÓN DE GRADOS) Prof. Dr Hujun Yin	SESSION SOCO S6 FUZZY LOGIC (Room Salon de Grados)
12:00-12:30	Coffee break	Coffee break	Coffee break
12:30-13:30	SESSION SOCO S3.1 DATA MINING & OPTIMIZATION (Room Salon de Grados)	SESSION SOCO S5 SPECIAL SESSION SOFT COMPUTING METHODS IN MANUFACTURING AND MANAGEMENT SYSTEMS (Room Salon de Grados)	SESSION SOCO S7 APPLICATIONS (Room Salon de Grados)
13:30-14:30	SESSION SOCO S3.2 DATA MINING & OPTIMIZATION (Room Salon de Grados)		SESSION SOCO S8 MACHINE LEARNING (Room Salon de Grados)
14:30	Bus to the restaurants from the venue		
14:30-16:30	Lunch	Lunch	Lunch
16:30-17:30	FREE TIME	FREE TIME	
17:30-19:30	LEON WALKING TOUR (17:15 Meeting Point at (Hotel Conde Luna, Hotel Colegiata San Isidoro)	ROMAN CITY TOUR (17:15 Meeting Point at (Hotel Conde Luna, Hotel Colegiata San Isidoro)	
19:30	OFFICIAL RECEPTION IN THE LEON PROVINCIAL COUNCIL (DIPUTACIÓN DE LEÓN)	OFFICIAL RECEPTION IN THE LEON TOWN HALL	
21:00	SPANISH WINE AND DINNER WITH TAPAS IN THE CLOISTER OF THE DIPUTACIÓN DE LEÓN	GALA DINNER (COLEGIATA SAN ISIDORO)	

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SESSION SOCO S1 - GENETIC AND EVOLUTIONARY ALGORITHMS

Learning Bayesian Network to Predict Group Emotion in Kindergarten by Evolutionary Computation	Seul-Gi Choi and Sung-Bae Cho	30
Dynamic resources configuration for coevolutionary scheduling of scientific workflows in cloud environment	Alexander Visheratin, Mikhail Melnik and Denis Nasonov	19
Computation of Berge-Zhukvoskii equilibrium in discrete time dynamic games	Noémi Gaskó, Mihai Suciu and Rodica Ioana Lung	39
Applying genetic algorithms in chemical engineering for determining zeolite structures	Xuehua Liu, Estefania Argente, Soledad Valero and German Sastre	21

SESSION SOCO S2 - ENERGY EFFICIENCY

Optimization of wind power producer participation in electricity markets with energy storage in a way of Energy 4.0	Isaias Gomes, Hugo Pousinho, Rui Melício and Victor Mendes	8
Gas Consumption Prediction Based on Artificial Neural Networks for Residential Sectors	Alain Porto and Eloy Irigoyen	51
Bioclimatic house heat exchanger behavior prediction with time series modeling	Bruno Baruque, Esteban Jove, José-Luis Casteleiro-Roca, Santiago Porrás, José Luis Calvo-Rolle and Emilio Corchado	23
Optimization with the evolution strategy by example of electrical-discharge drilling	Jan Streckenbach, Ivan Santibáñez Koref, Ingo Rechenberg and Eckart Uhlmann	35

SESSION SOCO S3.1 - DATA MINING & OPTIMIZATION

Forecasting freight inspection volume using Bayesian regularization artificial neural networks: an aggregation-disaggregation procedure	Juan Jesús Ruiz Aguilar, José Antonio Moscoso López, Ignacio Turias and Francisco Javier González Enrique	22
Combining Stream Mining and Neural Networks for Short Term Delay Prediction	Maciej Grzenda, Karolina Kwasiborska and Tomasz Zaremba	38
Techniques and Utilities to Improve the Design, Development and Debugging of Multiagent Applications with Agile Principles	Francisco J. Aguayo, Isaias Garcia, Hector Alaiz and Carmen Benavides	26
About Nash Equilibrium, Modularity Optimization, and Network Community Structure Detection	Rodica Ioana Lung, Mihai Suciuc and Noémi Gaskó	40

SESSION SOCO S3.2 - DATA MINING & OPTIMIZATION

Design and implementation of a PC based vision system on an innovative single point micro-machining device for the localization of the tool tip	Luis Lopez-Estrada, Marcelo Fajardo-Pruna, Lidia Sánchez González, Hilde Perez and Antonio Vizán	64
New Application of 3D VFH Descriptors in Archaeological Categorization: A Case Study	Jose Santamaría, Enrique Bermejo, Carlos Enriquez, Sergio Damas and Oscar Cerdón	59
Spanish Patent Landscape 2013-2016	Andrea Vázquez-Ingelmo, Ana-Belén Gil-González, Angel-Luis Blanco-Mateos, Fernando de La Prieta and Ana de Luis Reboredo	53
Instability detection on a radial turning process for superalloys	Alberto Jimenez Cortadi, Fernando Boto, Itziar Irigoien, Basilio Sierra and Alfredo Suarez	4

SESSION SOCO S4.1 SPECIAL SESSION - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLIED TO HEALTH SCIENCES

Outcome prediction for salivary gland cancer using multivariate adaptative regression splines (MARS) and self-organizing maps (SOM)	Paloma Lequerica-Fernández, Ignacio Peña, Fernando Sánchez-Lasheras, Francisco Javier Iglesias Rodriguez, Carlos González Gutiérrez and Juan C De Vicente	24
An artificial neural network model for the prediction of bruxism by means of occlusal variables	Angel Arenal, Héctor Dellanos-Lanchares, Elena Martin-Fernandez, Carlos González Gutiérrez, Mario Mauvezin and Francisco Javier de Cos Juez	33
Genetic algorithm based on support vector machines for computer vision syndrome classification	Eva María Artime Ríos, María Del Mar Seguí Crespo, Ana Suarez Sanchez, Sergio Luis Suárez Gómez and Fernando Sánchez Lasheras	37
A methodology for the detection of relevant single nucleotide polymorphism in prostate cancer by means of multivariate adaptive regression splines and backpropagation artificial neural networks	Juan Enrique Sánchez Lasheras, Adonina Tardon, Guillermo Fernández-Tardón, Sergio Luis Suárez Gómez, Vicente Martín, Carmen González Donquiles and Francisco Javier de Cos	45
A multiregressive approach for SNPs identificacion in prostate cancer	David Álvarez Gutiérrez, Fernando Sánchez Lasheras, Sergio Luis Suárez Gómez, Jesús Daniel Santos, Adonina Tardón, Guillermo Fernández-Tardón, Carmen González Donquiles and Vicente Martín	46
Comparison of the periimplant bone stress distribution on three fixed partial supported prosthesis designs under different loading. A 3D Finite Element Analysis	Héctor Dellanos-Lanchares, Angel Arenal, Javier Bobes Bascaran, Carlos González, Ana Suarez Sanchez and Francisco Blanco Alvarez	47
PoDA algorithm: predictive pathways in colorectal cancer	Carmen Gonzalez Donquiles, Fernando Sanchez Lasheras, Jessica Alonso-Molero, Laura Vilorio-Marqués, Tania Fernandez-Villa, Juan Enrique Sánchez Lasheras, Guillermo Fernández-Tardón, David Álvarez Gutiérrez, Antonio José Molina, Francisco Javier de Cos and Vicente Martín	48
Sparse Representation Based Anomalies Detection in Electrocardiography Signals	Tomasz Andrysiak	52

SESSION SOCO S4.2 SPECIAL SESSION - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLIED TO HEALTH SCIENCES

A SMOTE Extension for Balancing Multivariate Epilepsy-related Time Series Datasets	Enrique de La Cal, José Ramón Villar, Paula Vergara, Javier Sedano and Álvaro Herreo	11
Mining Temporal Causal Relations in Medical Texts	Alejandro Sobrino, Cristina Puente and José Ángel Olivas	13

A Machine Learning based system for analgesic drug delivery	Jose M. Gonzalez-Cava, Rafael Arnay, Juan Albino Méndez Pérez, Ana León, María Martín, Esteban Jove-Perez, José Luis Calvo-Rolle, José-Luis Casteleiro-Roca and Francisco Javier de Cos Juez	27
Assessing Feature Selection Techniques for a Colorectal Cancer Prediction Model	Nahúm Cueto-Lopez, Rocio Alaiz-Rodriguez, Maria Teresa Garcia-Ordas, Carmen Gonzalez and Vicente Martin	36
Data mining techniques for the estimation of variables in health-related noisy data	Hector Alaiz-Moreton, Laura Fernández-Robles, Javier Alfonso-Cendón, Manuel Castejón-Limas, Lidia Sánchez-González and Hilde Pérez	50
An intelligent model to predict ANI in patients undergoing general anesthesia	Esteban Jove, Jose M. Gonzalez-Cava, Jose-Luis Casteleiro-Roca, Juan Albino Mendez Perez, Jose Luis Calvo-Rolle and Francisco Javier de Cos Juez	61

SESSION SOCO S5 SPECIAL SESSION - SOFT COMPUTING METHODS IN MANUFACTURING AND MANAGEMENT SYSTEMS

An activity-oriented Petri net simulation approach for optimization of dispatching rules for job shop transient scheduling	Damian Krenczyk, Reggie Davidrajuh and Bozena Skolud	58
MAC approach concept for Virtual Manufacturing networks generating	Aleksander Gwiazda, Małgorzata Olender, Agnieszka Sękała and Damian Krenczyk	65
Ecodesign of technological processes with the use of decision trees method	Izabela Rojek, Ewa Dostatni and Adam Hamrol	7
Modular Petri Net models of Communicating Agents: A GPenSIM Approach	Reggie Davidrajuh	10
Methodology supporting the planning of machining allowances in the wood industry	Agnieszka Kujawińska, Magdalena Diering, Krzysztof Żywicki, Michał Rogalewicz, Adam Hamrol, Piotr Hoffmann and Marek Konstańczak	20
Stochastic scheduling of production orders under uncertainty	Iwona Lapunka, Iwona Pisz and Piotr Wittbrodt	43

SESSION SOCO S6 - FUZZY LOGIC

Health assessment of automotive batteries through computational intelligence-based soft sensors: an empirical study	Eva Almansa, David Ansean, Ines Couso and Luciano Sanchez	9
Intelligent Decision System Based on Fuzzy Logic Expert System to improve plastic injection molding process	Miryam Chaves, Juan De Juanes Marquez, Hilde Perez, Antonio Vizan and Lidia Sánchez-González	63
Acquisition and fuzzy processing of physiological signals to obtain the stress level using low cost portable hardware	Unai Zalabarria, Eloy Irigoyen, Raquel Martinez and Javier Arechalde	54
A Fuzzy Ordered Weighted Averaging Approach to Rerostering in Nurse Scheduling Problem	Dragan Simic, Svetlana Simic, Dragana Milutinovic, Jovanka Dordevic and Svetislav Simic	67

SESSION SOCO S7 - APPLICATIONS

Detection of Cardiac Arrhythmias through Singular Spectrum Analysis of a time-distorted EGM Signal	Jesús Fernández, Julián Velasco and Luciano Sanchez	17
An approach to location extraction from Russian online social networks: road accidents use case	Timur Fatkulin, Nikolay Butakov, Bakhruz Dzhafarov, Maxim Petrov and Daniil Voloshin	18
Intelligent Maintenance for Industrial Processes, a Case Study on Cold Stamping	Fernando Boto, Zigor Lizuain and Alberto Jimenez	6
Attempts Prediction by Missing Data Imputation in Engineering Degree	Esteban Jove, Patricia Blanco-Rodríguez, José-Luis Casteleiro-Roca, Francisco Javier Moreno-Arboleda, José Antonio López-Vázquez, Francisco Javier de Cos-Juez and José Luis Calvo-Rolle	60

SESSION SOCO S8 - MACHINE LEARNING

PAELLA as a booster in weighted regression	Manuel Castejón-Limas, Hector Alaiz-Moreton, Laura Fernández-Robles, Javier Alfonso-Cendón, Camino Fernández-Llamas, Lidia Sánchez-González and Hilde Pérez	49
A data-driven approach to dialog structure modeling	David Griol, Araceli Sanchis and Jose M. Molina	32
Inception and Specification of What-If Scenarios Using OLAP Usage Preferences	Mariana Carvalho and Orlando Belo	34
Analysing the Effect of Recent Anti-Pollution Policies in Madrid City through Soft-Computing	Ángel Arroyo, Verónica Tricio, Álvaro Herrero and Emilio Corchado	15