	14 <sup>th</sup> December, Wednesday - Parallel Session 1: (ROOM 1)	
	Chairs:	
	Classification and Clustering	
11.00 – 11.15 Paper ID112	Trust Intrusion Detection System based on Location for Wireless Sensor Network Hela Maddar, Wafa Kammoun and Habib Youssef	
11.15 – 11.30 Paper ID59	A Gamification Model for Resource Sharing in Malaysian Schools using Cloud Computing Platform M Nordin A Rahman	
11.30 – 11.45 Paper ID9	Improving Imputation Accuracy in Ordinal Data Using Classification Shafiq Alam	
11.45 – 12.00 Paper ID12	Three Case Studies Using Agglomerative Clustering Rodrigo Camargos and M. C. Nicoletti	
12.00 – 12.15 Paper ID17	Investigating the Effect of Combining Text Clustering with Classification on Improving Spam Email Detection Doaa Hassan	
12.15 – 12.30 Paper ID24	Using Cluster Barycenters for the Generalized Traveling Salesman Problem Mehdi El Krari, Belaïd Ahiod and Bouazza El Benani	
12.30 – 12.45 Paper ID61		
12.45 – 13.00 Paper ID		

	14 <sup>th</sup> December, Wednesday - Parallel Session 1: (ROOM 2)	
	Chairs:	
	Data Mining	
11.00 – 11.15 Paper ID84	A Parallel Adaptive PSO Algorithm with non-Iterative Electrostatic Repulsion and Social Dynamic Neighborhood Wilson Soto and Daniel Soto	
11.15 – 11.30 Paper ID38	A Minimal Rare Substructures-Based Model for Graph Database Indexing Mehdi Azaouzi and Lotfi Ben Romdhane	
11.30 – 11.45 Paper ID102	Industrial Plant Layout Analysing based on SNA Leonilde Varela, Adriana Araújo, Goran Putnik, V. Manupati and K. Anirudh	
11.45 – 12.00 Paper ID76	Mining perfectly rare itemsets on Big Data: an approach based on Apriori-Inverse and MapReduce Francisco Padillo, J. M. Luna and Sebastián Ventura	
12.00 – 12.15 Paper ID134	A Proposal to Model Knowledge Dimension in Sensitive Business Processes Mariam Ben Hassen, Mohamed Turki and Faïez Gargouri	
12.15 – 12.30 Paper ID125	BigDimETL: ETL for multidimensional Big Data Hana Mallek, Faiza Ghozzi, Olivier Teste and Faiez Gargouri	
12.30 – 12.45 Paper ID130	A Contribution of Dynamical Systems Theory and Epidemiological Modeling to a Viral Marketing Campaign João N. C. Gonçalves, Helena Sofia Rodrigues and M. Teresa T. Monteiro	
12.45 – 13.00 Paper ID		

	14 <sup>th</sup> December, Wednesday - Parallel Session 2: (ROOM 1)	
	Chair:	
	Image Processing and Pattern Analysis	
14.00 - 14.15	Nuclei Malignancy Analysis Based On An Adaptive Bottom-Hat Filter	
Paper ID30	Tiia Ikonen, Keijo Haataja, Pekka Toivanen, Teemu Tolonen and Jorma Isola	
14.15 - 14.30	Age And Gender Classification From Finger Vein Patterns	
Paper ID110	Wafa Damak, Randa Boukhris Trabelsi, Alima Damak Masmoudi, Dorra Sellami and Amine Nait-Ali	
14.30 - 14.45	Multibiometrics Enhancement Using Quality Measurement In Score Level Fusion	
Paper ID39	Saliha Artabaz, Layth Sliman, Hachemi Nabil Dellys, Karima Benatchba and Mouloud Koudil	
14.45 – 15.00	Using a Synthetic Character Database for Training Deep Learning Models Applied to Offline	
Paper ID43	Handwritten Recognition	
гарет 1045	Jorge Sueiras, Victoria Ruiz, Angel Sanchez and Jose Velez	
15.00 - 15.15	Reliable Attribute Selection based on Random forest(RASER)	
Paper ID4	Noura Aboudi, Hechmi Shili and Lotfi Ben Romdhane	
15.15 – 15.30	Age, Gender, Race And Smile Prediction Based On Social Textual And Visual Data Analyzing	
Paper ID33	Onsa Lazzez, Wael Ouarda and Adel M. Alimi	
15.30 - 15.45	Effects Of Random Sampling On SVM Hyper-Parameter Tuning	
Paper ID40	Tomas Horvath, Rafael G. Mantovani and Andre C. P. L. F. de Carvalho	
15.45 - 16.00		
Paper ID		

14 <sup>th</sup> December, Wednesday - Parallel Session 2: (ROOM 2)		
	Chairs:	
	Heuristic Approaches	
14.00 – 14.15 Paper ID49	Fish School Search Variations and Other Metaheuristics in the solution of Assembly Line Balancing Problems Isabela Maria Carneiro de Albuquerque, João Batista Monteiro Filho, Fernando B. De Lima Neto and Alany M. de Oliveira Silva	
14.15 – 14.30 Paper ID50	Improved Search Mechanisms for the Fish School Search Algorithm João Batista Monteiro Filho, Isabela Maria Carneiro de Albuquerque, Fernando Buarque De Lima Neto and Filipe Vieira Silva Ferreira	
14.30 – 14.45 Paper ID41	Bayesian Networks for Identifying Semantic Relations in a Never-Ending Learning System Edimilson Batista Dos Santos, Massilon Lourenço Fernandes, Estevam R. Hruschka Júnior and Maísa Cristina Duarte	
14.45 – 15.00 Paper ID34	Test Suite Prioritization using Nature Inspired Meta-Heuristic Algorithms Daya Gupta and Vishal Gupta	
15.00 – 15.15 Paper ID52	Heuristic For Scheduling Intrees On M Machines With Non-Availability Constraints Khaoula Ben Abdellafou, Hatem Hadda and Ouajdi Korbaa	
15.15 – 15.30 Paper ID118	An ILS Heuristic For The Waste Collection Vehicle Routing Problem With Time Windows Alba Assis Campos and Jose Elias Claudio Arroyo	
15.30 – 15.45 Paper ID127	A General VNS Heuristic For A Three-Stage Assembly Flow Shop Scheduling Problem Saulo Cunha Campos, Jose Elias Claudio Arroyo and Ricardo Tavares	
15.45 – 16.00 Paper ID95	Security Incident Response: Towards A Novel Decision-Making System Samih Souissi, Ahmed Serhrouchni, Layth Sliman and Benoit Charroux	

	14 <sup>th</sup> December, Wednesday - Parallel Session 3: (ROOM 1)	
	Chairs:	
	Optimization and Hybrid Strategies	
16.30 – 16.45 Paper ID10	GA-PSO-FASTSLAM: A Hybrid Optimization Approach in Improving FastSLAM Performance Alif Ridzuan Khairuddin, Mohamad Shukor Talib, Habibollah Haron and Muhamad Yazid Che Abdullah	
16.45 – 17.00 Paper ID28	Robust and Reliable Bionic Optimization of Nonlinear Control Problems Rolf Steinbuch and Lukas Haas	
17.00 – 17.15 Paper ID75	Multi-objective Particle Swarm Optimisation for Robust Dynamic Scheduling in a Permutation Flow Shop Mohanad Al-Behadili, Djamila Ouelhadj and Dylan Jones	
17.15 – 17.30 Paper ID117	An Approach For Incorporating The Usability Optimization Process Into The Model Transformation Marwa Hentati, Lasaad Benammar, Abdelwaheb Trabelsi and Adel Mahfoudhi	
17.30 – 17.45 Paper ID81	Learner's Profile Hierarchization In An Interoperable Education System Leila Ghorbel, Corinne Amel Zayani, Ikram Amous and Florence Sèdes	

	14 <sup>th</sup> December, Wednesday - Parallel Session 3: (ROOM 2)	
	Chairs:	
	Detection and Prediction	
16.30 – 16.45 Paper ID22	Diversification Strategies in Differential Evolution Algorithm to Solve the Protein Structure Prediction Problem Pedro Henrique Narloch and Rafael Parpinelli	
16.45 – 17.00 Paper ID29	Human Detection Using Biological Signals In Camera Images With Privacy Aware Toshihiro Kitajima, Edwardo Arata Y. Murakami, Shunsuke Yoshimoto, Yoshihiro Kuroda and Osamu Oshiro	
17.00 - 17.15	Cloudlets Architecture for Wireless Sensor Network	
Paper ID114	Hela Maddar, Wafa Kammoun and Habib Youssef	
17.15 – 17.30	Detection of Behavioral Patterns for Increasing Attentiveness Level	
Paper ID86	Dalila Durães, Sérgio Gonçalves, Davide Carneiro, Javier Bajo and Paulo Novais	
17.30 - 17.45		
Paper ID		

15 <sup>th</sup> December, Thursday - Parallel Session 4: (ROOM 1)	
Chairs:	
	Neural Networks and Fuzzy Systems
11.00 - 11.15	Certification under Uncertainties of Control Methods for Multi-source Elevators
Paper ID27	Chloé Desdouits, Mazen Alamir, Rodolphe Giroudeau and Claude Le Pape
11.15 - 11.30	Self-Organizing Maps and Fuzzy C-means Algorithms on Gait Analysis Based on Inertial Sensors Data
Paper ID31	Rafael Caldas, Yabing Hu, Fernando B. De Lima Neto and Bernd Markert
11.30 - 11.45	A Genetic-Fuzzy Classification Approach to improve High-Dimensional Intrusion Detection System
Paper ID45	Imen Gaied, Farah Jemili and Ouajdi Korbaa
11.45 - 12.00	M2Onto: an Approach and a Tool to Learn OWL Ontology from MongoDB Database
Paper ID88	Hanen Abbes and Faiez Gargouri
12.00 - 12.15	An improved Elman Neural Network for Daily Living Activities Recognition
Paper ID99	Zaineb Liouane, Tayeb Lemlouma, Philippe Roose, Frederic Weis and Hassani Messaoud
12.15 - 12.30	A Genetic Neural Network Approach for Unusual Behavior Prediction in Smart Home
Paper ID103	Zaineb Liouane, Tayeb Lemlouma, Philippe Roose, Frederic Weis and Hassani Messaoud
	Analysing The Performance Of A Tomographic Reconstructor With Different Neural Networks
12.30 - 12.45	Frameworks
Paper ID138	Sergio L. Suárez, Carlos González, Jesús D. Santos, María L. Sánchez, Fernando Sánchez-Lasheras
	and Francisco Javier de Cos
12.45 - 13.00	Similarity And Trust Metrics Used In Recommender Systems: A Survey
Paper ID137	Maryam Jallouli, Sonia Lajmi and Ikram Amous

	15 <sup>th</sup> December, Thursday - Parallel Session 4: (ROOM 2)	
	Chairs:	
	Machine learning	
11.00 - 11.15	Multi-Objective Dynamic Analysis using Fractional Entropy	
Paper ID63	Eduardo Solteiro Pires, José Tenreiro Machado and Paulo Moura Oliveira	
11.15 - 11.30	Fishing Monitor System Data: A Naïve Bayes Approach	
Paper ID85	João Ferreira, Serge Lage, Iola Pinto and Nuno Antunes	
11.30 - 11.45	Evaluation of the Simulated Annealing and the Discrete Artificial Bee Colony in the Weight	
Paper ID101	Tardiness Problem with Taguchi Experiments Parameterization	
	André Santos, Ana Madureira and Leonilde Varela	
11.45 - 12.00	Metaheuristics Parameter Tuning using Racing and Case-based Reasoning in Scheduling Systems	
Paper ID120	Ivo Pereira, Ana Madureira and Bruno Cunha	
12.00 - 12.15	Towards Better SWRL Rules Dependency Extraction	
Paper ID107	Abeer Boujelben, Tarak Chaari and Ikram Amous	
12 15 12 20	A Branch-and-Price Algorithm for the Double Vehicle Routing Problem with Multiple Stacks and	
12.15 – 12.30 Paper ID123	Heterogeneous Demand	
	Jonatas Chagas and André Santos	
12.30 - 12.45	Robot Swarms Theory Applicable to Seek and Rescue Operation	
Paper ID139	Juan Manuel Calderon and Jose Leon	
12.45 - 13.00		
Paper ID		

15 <sup>th</sup> December, Thursday - Parallel Session 5: (ROOM 1)		
	Chairs:	
	Networks and Communication	
14.00 - 14.15	On Pollution Attacks In Fully Connected P2P Networks Using Trusted Peers	
Paper ID26	Cristóbal Medina-López, Ilshat Shakirov, Leocadio G. Casado and Vicente González-Ruiz	
14.15 - 14.30	Developing an Ambient Intelligent-Based Decision Support System for Production and Control	
Paper ID131	Planning	
	Marco Gomes, Fábio Silva, Filipa Ferraz, António Silva, Paulo Novais and Cesar Analide	
14.30 - 14.45	Network Intrusion Detection using Danger Theory and Genetic Algorithms	
Paper ID56	João Santanelli and Fernando Neto	
14.45 – 15.00	Emerging Opportunities For Ambient Intelligence In Creativity Support Tools	
Paper ID91	Frederica Gonçalves, Eduardo Fermé and João C. Ferreira	
15.00 - 15.15	Towards Activity Theory - Preliminary Report: Ambient Intelligence Applied To Smart Education	
Paper ID90	Frederica Gonçalves, Eduardo Fermé, Ana Lúcia Martins and João C. Ferreira	
15.15 - 15.30	Three Case Studies Using Agglomerative Clustering	
Paper ID12	Rodrigo Camargos and M. C. Nicoletti	
15.30 - 15.45	Agglomerative and Divisive Approaches to Unsupervised Learning in Gestalt Clusters	
Paper ID8	Rodrigo Camargos, Paulo Rogerio Nietto and Maria Do Carmo Nicoletti	
15.45 - 16.00	Estimating the Number of Clusters as a Pre-Processing Step to Unsupervised Learning	
Paper ID05	Paulo Rogerio Nietto and Maria Do Carmo Nicoletti	
16.00 - 16.15		
Paper ID		

	15 <sup>th</sup> December, Thursday - Parallel Session 5: (ROOM 2)	
	Chairs:	
	Information Systems and Software Architecture	
14.00 - 14.15	Architecture of Adaptive Decision Support System for Intelligent Scheduling	
Paper ID106	Ana Madureira, Ivo Pereira and Bruno Cunha	
14.15 - 14.30	Using Intelligent Systems To Improve Case Flow In Court Systems	
Paper ID135	Ana Lúcia Martins	
14.30 - 14.45	Enabling The Definition And Reuse Of Multi-Domain Workflow-Based Data Analysis	
Paper ID97	Rubén Salado-Cid and José Raúl Romero	
14.45 - 15.00	Memetic Algorithms For The Automatic Discovery Of Software Architectures	
Paper ID62	Aurora Ramírez, Rafael Barbudo Lunar, José Raúl Romero and Sebastián Ventura	
15.00 - 15.15	Coupling Event-B/ProB for the analysis of the Software Architecture Evolution described in PDDL	
Paper ID111	Farah Fourati, Mohamed Tahar Bhiri and Riadh Robbana	
15.15 – 15.30	Time Series Data Mining For Energy Prices Forecasting: An Application To Real Data	
Paper ID92	Eliana Costa E Silva, Ana Borges, M. Filomena Teodoro, Marina Andrade and Ricardo Covas	
15.30 - 15.45	Knowledge Integration in Collaborative Environments Using Supervised Ontological Alignment	
Paper ID126	Leandro Pupo Natale and Nizam Omar	
15.45 – 16.00	An Approach For Measuring Flexibility Of Business Processes Based On Distances Between Models	
15.45 – 16.00 Paper ID105	And Their Variants	
	Asma Mejri, Sonia Ayachi and Ricardo Martinho	
16.00 - 16.15	Evaluating the Quality of Business Process Models based on measures and Criteria in Higher	
Paper ID109	Education: Developing a Framework for continuous quality improvement	
Paper ID109	Fouzia Kahloun and Sonia Ayachi Channouchi	

## **Virtual Presentations**

Room 3: 14 <sup>th</sup> - 15 <sup>th</sup> December, 2016
Historic Document Image De-Noising using Principal Component Analysis (PCA) and Local Pixel Grouping (LPG)
Tang Han Yang, Azah Kamilah Muda and Choo Yun Huoy
Evaluation method for an adaptive user interface
Rim Rebai
A new trajectory optimization approach for safe mobile robot navigation: a comparative study (Khepera II mobile robot) Walid Ellili, Abdelfetteh Lachtar and Mounir Samet
Training a Spiking Neural Network to Generate Online Handwriting Movements Mahmoud Ltaief, Hala Bezine and Adel M.Alimi
CCL: Cognitive Conversation Language Wesley Willy Oliveira de Souza and Estevam Rafael Hruschka Jr.
A Survey On Outlier Detection In The Context Of Stream Mining : review Of Existing Approaches And Recommendations Imen Souiden, Zaki Brahmi and Hajer Toumi
A Modified Naive Possibilistic Classifier for Numerical Data Karim Baati, Tarek M. Hamdani, Adel M. Alimi and Ajith Abraham
Multi-Agent Based Truck Scheduling Using Ant Colony Intelligence in a Cross-docking platform Houda Zouhaier, Lamjed Ben Said
Forecasting Using Elman Recurrent Neural Network Emna Krichene, Youssef Masmoudi, Adel M. Alimi, Ajith Abraham and Habib Chabchoub
Patient-specific epilepsy seizure detection using random forest classification over one-dimension transformed EEG data Marco Antonio Pinto Orellana and Fabio Ribeiro Cerqueira
A new approach to Human Activity Recognition using Machine Learning techniques Leandro B. Marinho, Amauri Souza Júnior and Pedro Pedrosa Rebouças Filho
Lung Segmentation in Chest Computerized Tomography Images Using the Border Following Algorithm Murillo Rodrigues, Leandro Marinho, Raul Victor Nóbrega, João Wellington Souza and Pedro Pedrosa Rebouças Filho
ACO-PSO Optimization for Solving TSP Problem with GPU Acceleration Olfa Bali, Walid Elloumi, Ajith Abraham and Adel Alimi
Comparison of hard and probabilistic evidence in Bayesian model Rim Rebai
Towards an Approach Based on Ontology for Semantic-Temporal Modeling of Social Network Data Chiha Rim and Ben Ayed Mounir
New Adaptive Resource Allocation Scheme in LTE-Advanced Radhia Khdhir, Kais Mnif, Aymen Belguith and Lotfi Kamoun
Clustering of Maintenance Tasks for the Danish Railway System Shahrzad Mohammadpour and Una Benlic
Temporal Patterns Visualization for Knowledge Acquisition In Dynamic Decision-Making Environment Jihed Elouni, Hela Ltifi, Mounir Ben Ayed and Mohamed Masmoudi
Community Detection in Bipartite Networks Using a Noisy Extremal Optimization Algorithm Noémi Gaskó, Rodica Ioana Lung and Mihai Suciu
An NLP-based Ontology Population for intentional structure Noura Labidi, Tarak Chaari and Rafik Bouaziz
CobWeb Multidimensional Model: Visualizing OLAP Query Results Using Tag-Cloud Operators Omar Khrouf
A new Data Placement approach for Scientific Workflows in Cloud Computing environments Hamdi Kchaou, Zied Kechaou and Adel M. Alimi

Evaluation of the Simulated Annealing and the Discrete Artificial Bee Colony in the Weight Tardiness Problem with
Taguchi Experiments Parameterization
André Santos, Ana Madureira and Leonilde Varela
A Robust and Optimally Pruned Extreme Learning Machine
Ananda Freire and Ajalmar Rocha Neto
Radial Basis Function Neural Networks For Datasets With Missing Values
Diego Mesquita and João Gomes
A Novel Simulated Annealing-Based Learning Algorithm For Training Support Vector Machines
Madson Luiz Dantas Dias and Ajalmar Rêgo Da Rocha Neto
Towards NoSQL Graph Data Warehouse for Big Social Data Analysis
Hajer Akid and Mounir Ben Ayed
From Traditional Data Warehouse To Real Time Data Warehouse
Senda Bouaziz
A New Social Media Mashup Approach
Abir Troudi, Corinne Amel Zayani, Salma Jamoussi and Ikram Amous
A Time Delay Neural Network For Online Arabic Handwriting Recognition
Ramzi Zouari, Houcine Boubaker and Monji Kherallah
Efficient parameterization for Automatic speaker recognition using Support Vector Machines
Rania Chakroun, Mondher Frikha and Leila Beltaifa
Towards a Medical Intensive Care Unit Decision Support System based on Intuitionistic Fuzzy Logic
Hanen Jemal, Zied Kechaou and Mounir Ben Ayed
Data Fusion Classification Method Based On Multi Agents System
Elhoucine Ben Boussada, Mounir Ben Ayed and Adel M.Alimi
Intelligent Traffic Congestion Prediction System Based On ANN And Decision Tree Using Big GPS Traces
Wiam Elleuch, Ali Wali and Adel Alimi
Linguistic Representation by Fuzzy Formal Concept and Interval Type-2 Feature Selection
Sahar Cherif, Nesrine Baklouti, Mohamed Adel Alimi and Vaclav Snasel
The Improvement of an Image compression Approach Using Weber-Fechner Law
Mourad Rahali, Mohamed Salim Bouhlel and Habiba Loukil
Combinatorial Structural Clustering (CSC): A Novel Structural Clustering Approach For Large Scale Networks
Liang Chen, Hongbo Liu, Weishi Zhang and Bo Zhang