December 13, 2018

08:00 - 09:00 Registration

09:00 - 10:00 Parallel Session: HIS01 - Intelligent Decision Making Systems (Act Room)

Chair: Ivo Pereira
Co-chair: Ladislav Zjavka

2 A Machine Learning Approach to Contact Databases Importation for Spam Prevention
   Duarte Coelho, Ana Madureira, Ivo Pereira and Bruno Cunha

6 Post-processing of Wind-speed Forecasts Using the extended Perfect Prog method with Polynomial Neural Networks to elicit PDE models
   Ladislav Zjavka, Stanislav Misák and Lukás Prokop

10 Hybrid instrumental means of predictive analysis of the dynamics of natural and economic processes
   Elena Popova, Luís de Sousa Costa and Alfira Kumratova

09:00 - 10:00 Parallel Session: IAS01 - Electronic Data Interchange For Information Assurance (Meeting Room)

Chair: Mário Antunes
Co-chair: Miguel Frade

3 An Efficient and Secure Forward Error Correcting Scheme for DNA Data Storage
   Anouar Yatribi, Mostafa Belkasmi and Fouad Ayoub

4 A Blockchain-based Scheme for Access Control in e-Health Scenarios
   João Pedro Dias, Hugo Sereno Ferreira and Angelo Martins

5 Blockchain-based PKI for Crowdsourced IoT Sensor Information
   Guilherme Pinto, João Pedro Dias and Hugo Ferreira

10 Privacy Enhancement of Telecom Processes Interacting with Charging Data Records
   Siham Arfaoui, Abdelhamid Belmekki and Abdellatif Mezrioui

10:00 - 10:20 Coffee break
10:20 - 10:30 Conference Opening Session

10:30 - 11:30 Plenary 1 – “Deep learning in brain imaging” (Act Room)
by Petia Georgieva, University of Aveiro, Portugal

11:30 - 13:00 Parallel Session: HIS02 – Intelligent Decision Making Systems 2 (Act Room)

Chair: Ana Madureira
Co-chair: André Santos

15 Modelling and Predicting Individual Salaries in United Kingdom with Graph Convolutional Network
Long Chen, Piyushita Thakuriah and Yeran Sun

20 Real-Time Monitoring System for Boiler Tube Leakage Detection
Min-Gi Choi, Jaeyoung Kim, In-Kyu Jeong, Yu-Hyun Kim and Jong-Myon Kim

39 Hybridizing S-Metric Selection and Support Vector Decoder for Constrained Multi-Objective Energy Management
Jörg Bremer and Sebastian Lehnhoff

26 An Intelligent Data Acquisition and Control System for Pipeline Leakage Detection Simulation
Jaeho Jeong, In-Kyu Jeong, Duck-Chan Jeon and Jong-Myon Kim

11:30 - 13:00 Parallel Session: SoCPaR01 - Intelligent Systems (Meeting Room)

Chair: Petia Georgieva
Co-chair: Aldina Correia

2 Shaping the Music Perception of an Automatic Music Composition: An Empirical Approach for modelling Music Expressiveness
Michel Della Ventura

11 Diverse Ranking Approach in MCDM based on Trapezoidal Intuitionistic Fuzzy Numbers
Zamali Tarmudi and Norzanah Abd Rahman

12 Decision Tree and MCDA under Fuzziness to Support E-Customer Satisfaction Survey
Houda Zaim, Mohammed Ramdani and Adil Haddi

13 Search Convenience and Access Convenience: The Difference Between Website Shopping and Mobile Shopping
Ibrahim Almarashdeh
14 Automatic Classification and Segmentation of Low-Grade Gliomas in Magnetic Resonance Imaging  
Luis Pinto-Coelho, Marta Barbosa, Pedro Moreira and Rogério Ribeiro

16 Enhancing Ensemble Prediction Accuracy of Breast Cancer Survivability and Diabetes Diagnostic using optimized EKF-RBFN trained prototypes  
Vincent Adegoke, Daqing Chen, Ebad Banissi and Safia Barikzai

13:00 - 14:00 Lunch

14:00 - 15:00 Plenary 2 – “Security in IoT: new domains, old problems”  
by Henrique M. Dinis Santos, University of Minho, Portugal

15:00 - 16:00 Parallel Session: HIS03 – Intelligent Decision Making Systems 3 (Act Room)

Chair: Luis Coelho  
Co-chair: Ramiro Barbosa

29 User Modeling on Twitter with Exploiting Explicit Relationships for Personalized Recommendations  
Abdullah Alshammari, Stelios Kapetanakis, Roger Evans, Nikolaos Polatidis and Gharbi Alshammari

30 Hybrid Approaches for Time Series Prediction  
Xavier Fontes and Daniel Castro Silva

31 Clustering Approaches for an Aggregator in a Smart Grid Context  
Catia Silva, Pedro Faria and Zita Vale

32 Economic Impact of an Optimization-Based SCADA Model for an Office Building  
Mahsa Khorram,  
Pedro Faria, Omid Abrishambaf and Zita Vale

15:00 - 16:00 Parallel Session: IAS02 – Cybernetics and Security (Meeting Room)

Chair: Ajith Abraham  
Co-chair: Faouzi Jaidi

11 Warning of Affected Users About an Identity Leak  
Timo Malderle, Matthias Wübbeling, Sven Knauer and Michael Meier

14 Network Security Evaluation and Training Based on Real World Scenarios of Vulnerabilities Detected in Portuguese Municipalities? Network Devices
15 A Novel Concept of Firewall-Filtering Service Based on Rules Trust-Risk Assessment
Faouzi Jaidi

16 A survey of blockchain frameworks and applications
Bruno Tavares, Filipe Figueiredo Correia, André Restivo, João Pascoal Faria and Ademar Aguiar

16:00 - 16:20 Coffee break

16:20 - 18:00 Parallel Session: HIS04 – Hybrid Intelligent Systems (Act Room)

Chair: Eduardo Solteiro Pires
Co-chair: Davide Carneiro

33 Kernel based Chaotic Firefly Algorithm for Diagnosing Parkinson’s Disease
Sujata Dash, Ajith Abraham and Atta-Ur Rehman

35 A Hybrid EDA/Nelder-Mead for Concurrent Robot Optimization
S. Ivvan Valdez P., Eusebio Hernandez and Sajjad Keshtkar

38 PSO Evolution based on a Entropy Metric
Eduardo Solteiro Pires, Jose Tenreiro Machado and Paulo Moura Oliveira

40 A Hybrid Recommendation Algorithm to address the Cold Start Problem
Licínio Castanheira and Fátima Rodrigues

41 A Decision-Support System for preventive maintenance in street lighting networks
Davide Carneiro, Diogo Nunes and Cristóvão Sousa

45 Development of an Intelligent Diagnosis System for Detecting Leakage of Circulating Fluidized Bed Boiler Tube
Yu-Hyun Kim, In-Kyu Jeong, Jae-Young Kim, Jae-Kyo Ban and Jong-Myon Kim

16:20 - 18:00: Parallel Session: SoCPaR 02 – Pattern recognition in social networks 1 (Meeting Room)

Chair: Catarina Silva

17 Improving audiovisual content annotation through a semi-automated process based on Deep Learning
Luis Vilaça, Paula Viana, Pedro Carvalho and Teresa Andrade
18  Subject Identification Based on Gait Using a RGB-D Camera  
Ana Patrícia Rocha, José Maria Fernandes, Hugo Miguel Pereira Choupina, Maria Do Carmo Vilas-Boas and João Paulo Silva Cunha

19  Leakage Detection of a Boiler Tube using a Genetic Algorithm-like Method and Support Vector Machines  
Young-Hun Kim, Jaeyoung Kim and Jong-Myon Kim

24  A genetic algorithm for Superior Solution Set Search Problem  
Ryu Fukushima, Kenichi Tamura, Junichi Tsuchiya and Keiichiro Yasuda

25  An intelligent tool for detection of phishing messages  
Marcos Pires and Petia Georgieva

27  Discrete Wavelet Transform Application in Variable Displacement Pumps Condition Monitoring  
Molham Chikhalsouk

18:00 - Cultural moment – Act Room

18:30 - 22:00: Gala Dinner

December 14, 2018

09:00 - 10:00: Parallel Session: HIS05 – Optimization, Statistical and Computational Intelligence 1 (Act Room)

Chair: Telmo Matos  
Co-chair: Ameni Azzouz

14  Extending Flow Graphs for Handling Continuous-valued Attributes  
Emilio Carlos Rodrigues and Maria Do Carmo Nicoletti

46  Optimizing Dispatching Rules for Stochastic Job Shop Scheduling  
Cristiane Ferreira, Gonçalo Figueira and Pedro Amorim

48  A simple Dual-RAMP algorithm for the Uncapacitated Multiple Allocation Hub Location Problem  
Telmo Matos, Fábio Maia and Dorabela Gamboa

49  Solving Flexible Job Shop scheduling Problem using Hybrid Bilevel optimization model  
Hajer Ben Younes, Ameni Azzouz and Meriem Ennigrou
09:00 - 10:00: Parallel Session: SoCPaR03 – Machine Learning Applications (Meeting Room)

Chair: Molham Chikhalsouk

28 Characterizing Parkinson’s Disease from Speech Samples Using Deep Structured Learning
Ligia Sousa, Diogo Braga, Ana Madureira, Luis Coelho and Francesco Renna

29 Combinatorial Optimization Method Considering Distance in Scheduling Problem
Yuta Obinata, Kenichi Tamura, Junichi Tsuchiya and Keiichiro Yasuda

30 An improved gas classification technique using new features and support vector machines
Se-Jong Kang, Jae-Young Kim, In-Kyu Jeong, M M Manjurul Islam, Kichang Im and Jong-Myon Kim

31 Superior Relation Based Firefly Algorithm in Superior Solution Set Search
Hongran Wang, Kenichi Tamura, Junichi Tsuchiya and Keiichiro Yasuda

10:00 - 10:20 - Coffee break

By J. A. Tenreiro Machado, Polytechnic of Porto, Portugal

11:20 - 13:00 - Parallel Session: HIS06 - Intelligent Decision Making Systems 2 (Act Room)

Chair: Bruno Cunha

50 Deep Reinforcement Learning as a Job Shop Scheduling Solver: A Literature Review
Bruno Cunha, Ana Madureira, Benjamim Fonseca and Duarte Coelho

53 Adaptive Sequence-based Heuristic for the Two-Dimensional Non-Guillotine Bin Packing
Problem
Óscar Oliveira and Dorabela Gamboa

54 Hybrid Multi-Agent Approach to solve the Multi-Depot Heterogeneous Fleet Vehicle
Routing Problem with Time Window (MDHFVRPTW)
Marwa Ben Abdallah and Meriem Ennigrou

55 Hybrid System for Simultaneous Job Shop Scheduling and Layout Optimization based on
Multi-agents and Genetic Algorithm
Filipe Alves, Leonilde Varela, Ana Rocha, Ana Pereira, José Barbosa and Paulo Leitão

56 Application of the simulated annealing algorithm to minimize the makespan on the
unrelated parallel machine scheduling problem with setup times
Gabriela Amaral, Lino Costa, Ana Rocha, Leonilde Varela and Ana Madureira

57 Ontology-based Meta-model for Hybrid Collaborative Scheduling
Leonilde Varela, Goran Putnik, Vijaya Manupati, Ana Madureira, André Santos, Gabriela Amaral and Luís Ferreirinha

59 Fuzzy Algorithms for Fractional PID Control Systems
Ramiro Barbosa and Isabel Jesus

11:20 - 13:00: Parallel Session: IAS03 - Digital Forensics (Meeting Room)

Chair: Mário Antunes
Co-chair: Kazuhiro Kono

17 Filtering Email Addresses, Credit Card Numbers and searching for Bitcoin Artifacts with the Autopsy Digital Forensics Software
Patricio Domingues, Miguel Frade and João Mota

18 A survey on the use of data points in IDS research
Heini Ahde, Sampsa Rauti and Ville Leppânen

19 Cybersecurity and digital forensics ? course development in a higher education institution
Mário Antunes and Carlos Rabadão

21 Model Driven Architectural Design of Information Security System
Ivan Gaidarski, Zlatogor Minchev and Rumen Andreev

22 An Automated System for Criminal Police Reports Analysis
Gonçalo Carnaz, Vitor Nogueira, Mário Antunes and Nuno Ferreira

23 Detecting Internet-Scale Traffic Redirection Attacks using Latent Class Models
Ana Subtil, M. Rosário Oliveira, Rui Valadas, Antonio Pacheco and Paulo Salvador

25 Passive Video Forgery Detection Considering Spatio-Temporal Consistency
Kazuhiro Kono, Takaaki Yoshida, Shoken Ohshiro and Noboru Babaguchi

13:00 - 14:00: Lunch

14:00 - 17:00: Parallel Session: HIS07 – Hybrid Systems (Act Room)

Chair: Leonilde Varela
Co-chair: André Santos

36 A Hybrid Multiobjective Optimization Approach for Dynamic Problems: Evolutionary
Algorithm using Hypervolume Indicator  
Meriem Ben Ouada, Imen Boudali and Moncef Tagina

58 Decision support tool to dynamic scheduling  
Luís Ferreirinha, André Santos, Ana Madureira, Leonilde Varela and João Bastos

60 A semantic Web architecture for competency-based lifelong learning support systems  
Kalthoum Rezgui and Hédia Mhiri

61 Modified and Hybridized Monarch Butterfly Algorithms for Multi-Objective Optimization  
Ivana Strumberger, Eva Tuba, Nebojsa Bacanin, Marko Beko and Milan Tuba

62 Usage of Textual and Visual Analysis to Automatically Detect Cyberbullying in Online Social Networks  
Carlos Silva, Ricardo Santos and Ricardo Barbosa

63 A proposal for avoiding compensatory effects while using ELECTRE TRI with multiple evaluators  
Helder Costa, Lívia Dias De Oliveira Nepomuceno and Valdey Pereira

64 A hybrid Variable Neighborhood Tabu Search for the Long-term Car Pooling Problem  
Imen Mlayah, Imen Boudali and Moncef Tagina

66 Early Diagnose of Autism Spectrum Disorder Using Machine Learning Based on Simple Upper Limb Movements  
Adel Al-Jumaily and Mohammad Wedyan

67 Orientation Sensitive Fuzzy C Means Based Fast Level Set Evolution for Segmentation of Histopathological Images to Detect Skin Cancer  
Adel Al-Jumaily and Ammara Masood

68 Electrogastrogram based medical applications an overview and processing frame work  
Adel Al-Jumaily and Ahmad A. Al-Taee

14:00 - 15:15 Parallel Session: HIS08 - Optimization, Statistical and Computational Intelligence 2  
(Meeting Room)

Chair: M. Filomena Teodoro  
Co-chair: Aldina Correia

70 A Novel MAC Scheme for Reliable Safety Messages Dissemination in Vehicular Networks  
Muhammad Alam, João Rufino, Kok-Hoe Wong and Joaquim Ferreira

71 DSS-based ontology alignment in solid reference system configuration
Nuno Silva, Paulo Maio, Alexandre Gouveia and Rui Lopes

Clustering of PP Nanocomposites Flow Curves under Different Extrusion Conditions
Fátima De Almeida, Eliana Costa E Silva and Aldina Correia

Building a decision support system to handle teams in emergency case - a preliminary approach
M. Filomena Teodoro

Automatic Clinic Measures and Comparison of Heads using Point Clouds
Pedro Oliveira, Ângelo Pinto, Antonio Vieira de Castro, Fátima Rodrigues, João Vilaça, Paulo Morais and Fernando Veloso

15:15 - 17:00: Parallel Session: SoCPaR 04 – Pattern recognition in social networks 2 (Meeting Room)

Chair: Catarina Silva
Co-chair: Joana Costa

Learning in Twitter streams with 280 character tweets
Joana Costa, Catarina Silva and Bernardete Ribeiro

Retweet Predictive Model for Predicting the Popularity of Tweets
Nelson Oliveira, Joana Costa, Catarina Silva and Bernardete Ribeiro

Handcrafted Descriptors-Based Effective Framework for Off-line Text-independent Writer Identification
Abderrazak Chahi, Youssef El Merabet, Yassine Ruichek and Raja Touahni

Server load prediction on Wikipedia traffic
Cláudio A. D. Silva, Carlos Grilo and Catarina Silva

Evolutionary genes algorithm to path planning problems
Paulo Alexandre Salgado and Paulo Afonso

17:00 - 17:20: Coffee break

17:20: Closing ceremony
**HIS – Virtual Presentations**

9  Classifying and Grouping Narratives with Convolutional Neural Networks, PCA and t-SNE
Manoela Kohler, Leonardo Forero, Leonardo Sondermann and Marco Aurelio Pacheco

11  Optimizing Routes for Medicine Distribution Using Team Ant Colony System
Renan C. Alencar, Clodomir J. Santana Jr. and Carmelo J. A. Bastos Filho

17  Predicting the Degree of Collaboration of Researchers on Co-authorship Social Networks
Doaa Hassan

18  Deterministic Parameter Selection of Artificial Bee Colony based on Diagonalization
Marco A. Florenzano Mollinetti, Mario Tasso Ribeiro Serra Neto and Takahito Kuno

19  An Ensemble of Deep Auto-encoders for Healthcare Monitoring
Ons Aouedi, Mohamed Anis Bach Tobji and Abraham Ajith

27  Assessing Ant Colony Optimization Using Adapted Networks Science Metrics
Sérgio F. Ribeiro and Carmelo J. A. Bastos Filho

34  Hybridization of Migrating Birds Optimization with Simulated Annealing
Ramazan Algin, Ali Fuat Alkaya and Vural Aksakalli

37  Coarse Grained Parallel Quantum Genetic Algorithm For Reconfiguration Of Electric Power Networks
Ahmed Hieba and Nabil Abbai

42  Improving the research strategy in the problem of intervention planning by the use of symmetries
Mounir Ketata, Zied Loukil and Faiez Gargouri

43  Towards a Hybrid System for the Identification of Arabic and Latin Scripts in Printed and Handwritten Natures
Karim Baati and Slim Kanou

44  Social Media Chatbot System - beekeeping case study
Zine Eddine Latioui, Lamine Bougueroua and Alain Moretto

51  Improving Nearest Neighbor Partitioning Neural Network Classifier Using Multi-layer Particle Swarm Optimization
Xuehui Zhu, He Zhang, Lin Wang, Bo Yang, Jin Zhou and Zhenxiang Chen
77  Structural and Statistical feature extraction methodology for the recognition of handwritten Arabic words
    Marwa Amara, Kamel Zidi and Khaled Ghedira

IAS - Virtual Presentations
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8    The Design of a Cloud Forensics Middleware System Base on Memory Analysis
     Shumian Yang

SoCPaR – Virtual Presentations
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20   Sentiment Analysis on Tweets for Trains using Machine Learning
     Sachin Kumar and Marina Nezhurina