Multi-grid cellular genetic algorithm for optimizing variable ordering of ROBDDs

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Abstract—**This paper presents a cellular genetic algorithm for optimizing the variable order in Reduced Ordered Binary Decision Diagrams. The evolution process is inspired by a basic genetic algorithm. The population evolves on a bidimensional grid and is implicitly organized in geographical clusters that present a form of structural similarity between individuals. Two feature functions are used to measure the similarity between chromosomes. The approach considers multiple parallel evolving grids. A similarity based communication protocol between clusters of individuals from parallel grids is defined. The exchange of genetic material proves to considerably boost the quality of the solution. The extensive experimental evaluation uses difficult classical benchmarks and proves the efficiency and the stability of the algorithm. The approach systematically produces better results than the used basic genetic algorithm and better or similar results with other heuristic methods.**

Keywords – multi-grid cellular genetic algorithm; simmilarity preserving communication; distributed implementation; search space exploration and exploitation.

I. INTRODUCTION

The Reduced Ordered Binary Decision Diagrams are data structures that represent a canonical form for Boolean functions. An ROBDD is an acyclic graph with respect to an order of the input variables and satisfying a set of properties. This paper presents a novel approach to the problem of optimizing the variable order for ROBDDs. The goal is to minimize the size of the ROBDD, which is defined as the number of non-terminal nodes in the graph. This size strongly depends on the variable ordering. Important applications that can be mentioned for ROBDDs are: digital circuit design – minimizing the size of a ROBDD that represents a Boolean function describing a circuit transfers directly to a smaller chip area; formal verification of combinational circuits; analysis of sequential systems; symbolic model checking.

Both exact and heuristic methods were applied to the problem. The most successful exact methods consist of branch-and-bound techniques that use the lemma proven in [1]. Heuristic approaches can be divided into static and dynamic techniques. Static approaches use application specific information to devise good orders before constructing the ROBDD ([2]). Dynamic approaches optimize the size of the ROBDD by altering the used variable order. Simple methods

can be found in [3] and [4]. A specialized local search technique, called "the sifting heuristic" is described in [5], the simulated annealing heuristic is used in [6]. Genetic algorithms are introduced in [7] and further developed in [8]. Hybrid approaches can be found in [9] and [10].

The Cellular Genetic Algorithm (CGA) represents a type of genetic algorithm in that chromosomes, usually called preys, are evolved on a bidimensional grid ([11]). The genetic operators and the selection process, accomplished here by entities called predators, are adapted to work on the grid. The goal is to implicitly organize the population on the grid, in geographical clusters that present some form of structural similarity between individuals. In this paper, CGAs with multiple grids are considered. In order to achieve a better tradeoff between exploration and exploitation, a similarity based communication mechanism between different grids is devised. The similarity measure is defined by using a feature vector, attached to each individual. The communication scheme acts between clusters from different grids and can be controlled in view of a good balance between computation and communication. The similarity based communication between grids proves to considerably boost the quality and stability of the solution. In this way, the described design appears as an intermediate model between single population and segregative genetic algorithms ([12]).

The structure of this paper is the following: section II describes the problem of optimizing variable ordering in ROBDDs, section III presents the single-grid CGA, section IV presents the multi-grid CGA with similarity preserving communication, section V contains the experimental evaluation of the algorithm and section VI summarizes some conclusions and future work directions.

II. OPTIMIZING VARIABLE ORDERING IN ROBDDs

In this section the importance of variable ordering for ROBDDs is shortly underlined. Let $F: B^n \to B^m$, $B = \{0,1\}$ be a Boolean function that outputs m values, and ρ a permutation of the input variables $v_1, v_2, \ldots, v_n$, $v_i \in B$, $i = 1, \ldots, n$. An Ordered BDD (OBDD) for F with respect to ρ is a directed acyclic graph with the following properties: i) it has exactly two terminal nodes, labeled with 0 and 1, respectively; ii) each nonterminal node is labeled by a variable v_i, $0 < i \le n$ and has two out-edges labeled with 0 and 1, respectively; iii) the order

that one of the goals of the segregative design is to improve the stability of the solution.

TABLE V.　　COMPARISON WITH BGA AND SGA

Method	BGA			SGA			CGA		
Instance	BF	m	σ	BF	m	σ	BF	m	σ
apex2	312	352	54	304	315	3.6	309	318.6	7.2
apex7	215	240	11	214	227	3.5	214	225.3	11
cordic	42	5.3	3.6	42	1.3	1.0	42	0.1	0.3
ttt2	107	4.1	5.4	107	1.5	1.1	107	0.4	0.8
i3	157	35.4	12	138	9.7	3.1	133	0	0
apex6	561	84.8	22	536	55.9	9.6	508	38.6	13

The results for the SGA are obtained by means of a performance evaluation similar with the one applied to the CGA. The algorithm was run 30 times on each test instance, on the same processor type. In all cases, with the exception of the *apex7* instance, the two-tailed t-test with assumed unequal variances proves the statistical significance of the differences between the averages of the absolute error (m) reported for the CGA and SGA: *apex2* – t(42) = 2.368916, p < 0.03; *cordic* – t(34) = −6.161464, p < 0.001; *ttt2* – t(52) = −4.327105, p < 0.001; *i3* − t(29) = −16.909108, p < 0.001; *apex6* − t(53) = −5.770075, p < 0.001.

3)　Distributed implementation

The measure used to evaluate the distributed implementation is the efficiency of processor utilization $E_c = T_s/(p{\times}T_p)$, where T_p is the maximum execution time for any processor, p is the number of processors (2 and 4 in this case) and T_s the sequential computing time. The average value over all runs, $E_c = 0.9$, denotes a very good usage of computational resources and proves the efficient design of the communication protocol.

VI.　CONCLUSIONS AND FUTURE WORK

In this paper a cellular genetic algorithm with multiple communicating grids for optimizing the variable order for ROBDDs was presented. The method employs parallel evolving grids and introduces an efficient communication protocol to favor reutilization of good local optima to boost the quality of the solution. The method is a novel approach for the problem. Extensive experimental evaluation on classical difficult benchmark instances proves the quality of the approach in terms of quality and stability of the solution.

Future work is focused on: improving the quality of the feature functions, to better discern between highly similar chromosomes; hybridization with a branch-and-bound method, by evolving embryos in the early stages of the process; improving the quality of the selection phase (devouring) by allowing the predators to take part in the evolution process (coevolution).

ACKNOWLEDGMENT

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IEEE World Congress on Computational Intelligence

Plenary Speakers Schedule (Great Hall 1 & 2)

Monday, Plenary Session, 8:15-9:15, Chair: Gary Fogel

Lloyd Watts, Reverse-Engineering the Human Auditory Pathway

Monday, Plenary and Public Lecture Session, 6pm-7pm, Chair: Hussein Abbass

Gary Fogel, A Survey of Applications and Future Directions of Computational Intelligence

Tuesday, Plenary Session, 8:15-9:15, Chair: Marios M. Polycarpou

Xin Yao, Unpacking and Understanding Evolutionary Algorithms

Wednesday, Plenary Session, 8:15-9:15, Chair: James Keller

Piero P. Bonissone, Lazy Meta-Learning: Creating Customized Model Ensembles on Demand

Thursday, Plenary Session, 8:15-9:15, Chair: Cesare Alippi

Risto Miikkulainen, Multiagent Learning Through Neuroevolution

Invited Lectures Schedule (Great Hall 1&2)

Monday, IJCNN Invited Lecture, 13:30-14:30, Chair: Kate Smith-Miles

Jennie Si, Uncovering the Neural Code of Learning Control

Monday, FUZZ-IEEE Invited Lecture, 14:40-15:40, Chair: Hisao Ishibuchi

Kazuo Tanaka, A Unified Fuzzy Model-Based Framework for Modeling and Control of Complex Systems: From Flying Vehicle Control to Brain-Machine Cooperative Control

Tuesday, IEEE CEC Invited Lecture, 13:30-14:30, Chair: Xin Yao

Zbyszek Michalewicz, Some thoughts on a gap between theory and practice of evolutionary algorithms

Tuesday, IJCNN Invited Lecture, 14:40-15:40, Chair: Jennie Si

Nikola Kasabov, EvoSpike: Evolving Probabilistic Spiking Neural Networks and Neuro-Genetic Systems for Spatio- and Spectro-Temporal Data Modelling and Pattern Recognition

Wednesday,FUZZ-IEEE Invited Lecture, 13:30-14:30, Chair: Bernadette Bouchon-Meunier

Maria Rifqi, Cognition-inspired fuzzy modelling

Wednesday, IEEE CEC Invited Lecture, 14:40-15:40, Chair: Garrison W. Greenwood

Dan Ashlock, Exploring the Issue of Representation in Evolutionary Computation

Thursday, FUZZ-IEEE Invited Lecture, 9:20-10:20, Chair: Jerry Mendel

Bernard De Baets, The quest for transitivity, a showcase of fuzzy relational calculus

Thursday, IEEE-CEC Invited Lecture, 13:30-14:30, Chair: Xiaodong Li

KC Tan, Probabilistic Graphical Approaches for Learning, Modeling, and Sampling in Evolutionary Multi-objective Optimization

Thursday, IJCNN Invited Lecture, 14:40-15:40, Chair: Marcus Randall

Vladimir Cherkassky, Predictive Learning, Knowledge Discovery and Philosophy of Science

Panel Sessions Schedule (Great Hall 1&2)

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Panel on Computing with Words: Role of Fuzzy, Probability, and Measurement Concepts and Operations

Tuesday, 12th of June, Great Hall 1&2, 16:10-17:40

The IEEE CIS History Panel: Yesterday, Today, and Tomorrow

Wednesday, 13th of June, Great Hall 1&2, 9:20-10:50

Panel on Real-world Applications of Computational Intelligence

Wednesday, 13th of June, Great Hall 1&2, 16:10-17:40

Panel on Computational Intelligence Evaluation: What to use and how to encourage its use

Thursday, 14th of June, Great Hall 1&2, 16:10-17:10

Panel on Computational Intelligence in Education and University Curricula

Special Events Schedule

Monday 11th of June, 2012

    Public Lecture, Gary Fogel, 18:00-19:00, Room: Great Hall 1&2

Tuesday 12th of June, 2012

    Woman in Computational Intelligence, 17:30-19:00, Room: P6

    Student and GOLD Reception, 17:30-19:00, Room: P10

Wednesday 13th of June, 2012

    Competition Prize Ceremony, 17:10-17:40, Room: P10

    Banquet, 19:00-22:00, Plaza Ballroom

Committee Meetings Schedule

<u>All Meetings are held in Room M9</u>

Monday 11th of June, 2012

      10:20-12:00   BBTC Meeting

      12:00-13:30   ETTC Meeting

      15:40-16:10   AMDTC Short TC Meeting

      17:10-18:30   CFETC Meeting

Tuesday 12th of June, 2012

      9:20-11:00   FML Standard Meeting

      12:00-13:30   NNTC Meeting

      15:00-16:10   ECML Standard Meeting

      17:10-19:00   Standards Committee Meeting

Wednesday 13th of June, 2012

      12:00-13:30   ECTC Meeting

      15:40-16:10   Games TC Short TC Meeting

      17:10-18:30   ISATC Meeting

Thursday 14th of June, 2012

      12:00-13:30   FSTC Meeting

      17:10-18:30   ADPRLTC Meeting

Friday 15th of June, 2012

      12:00-13:30   DMTC Meeting

Monday 11th of June 2012

Monday, Plenary Session, 8:15-9:15, Chair: Gary Fogel

Lloyd Watts, Reverse-Engineering the Human Auditory Pathway

Monday, IEEE CEC, MoC 1-1, 9:20-10:20, Evolutionary Computer Vision 1, Mengjie Zhang

426, Vic Ciesielski, Brian Lam and Minh Luan Nguyen, Comparison of Evolutionary and Conventional Feature Extraction Methods for Malt Classification

444, Mahdi Setayesh, Zhang Mengjie and Johnston Mark, Effects of Static and Dynamic Topologies in Particle Swarm Optimisation for Edge Detection in Noisy Images

461, Wenlong Fu, Mark Johnston and Mengjie Zhang, Soft Edge Maps From Edge Detectors Evolved by Genetic Programming

Monday, IEEE CEC, MoC 1-2, 9:20-10:20, Surrogate-Assisted Evolutionary Optimization of Expensive Problems, Xiaoyan Sun

188, Xiao-yan Sun, Shan-shan Chen and Xiao-ping Ma, Semi-supervised Ranking SVM-assisted IGA with Hierarchical Evaluations

228, Dunwei Gong, Lei Yang, Xiaoyan Sun and Ming Li, Applying knowledge of users with similar preference to construct surrogate models of IGAs

474, Ahmed Kattan and Edgar Galvan, Evolving Radial Basis Function Networks via GP for Estimating Fitness Values using Surrogate Models

Monday, IEEE CEC, MoC 1-3, 9:20-10:20, Nature-Inspired Constrained Optimization 1, Ruhul Sarker

7, Amit Saha and Tapabrata Ray, Equality Constrained Multi-Objective Optimization

24, Saber Elsayed, Ruhul Sarker and Daryl Essam, Memetic Multi-Topology Particle Swarm Optimizer for Constrained Optimization

215, Tetsuyuki Takahama and Setsuko Sakai, Efficient Constrained Optimization by the Epsilon Constrained Rank-Based Differential Evolution

Monday, IEEE CEC, MoC 1-4, 9:20-10:20, Particle swarm optimization 1, Andries Engelbrecht

51, Andries Engelbrecht, Particle Swarm Optimization Velocity Initialization

323, Mohammad Reza Bonyadi and Zbigniew Michalewicz, A Fast Particle Swarm Optimization Algorithm for the Multidimensional Knapsack Problem

436, Medria Hardhienata, Kathryn Merrick and Valeri Ugrinovskii, Task Allocation in Multi-Agent Systems using Models of Motivation and Leadership

Monday, IEEE CEC, MoC 1-5, 9:20-10:20, Evolutionary simulation-based optimization, Phil Hingston

174, Falko Guderian, Rainer Schaffer and Gerhard Fettweis, Administration- and Communication-Aware IP Core Mapping in Scalable Multiprocessor System-on-Chips via Evolutionary Computing

175, Falko Guderian, Rainer Schaffer and Gerhard Fettweis, Dimensioning the Heterogeneous Multicluster Architecture via Parallelism Analysis and Evolutionary Computing

310, Eman Sayed, Daryl Esam and Ruhul Sarker, Dependency Identification Technique for Large Scale Optimization Problems

Monday, FUZZ IEEE, MoF 1-1, 9:20-10:20, SS Computing with Words, Dongrui Wu

86, Dongrui Wu, A Reconstruction Decoder for the Perceptual Computer

323, Mohammad Reza Rajati and Jerry M. Mendel, Lower and Upper Probability Calculations Using Compatibility Measures for Solving Zadeh's Challenge Problems

467, Victor Raskin and Julia Taylor, Computing With Nouns and Verbs

Monday, FUZZ IEEE, MoF 1-2, 9:20-10:20, SS Ambient Intelligence and Fuzzy Logic : Methodologies & Applications, Vincenzo Loia

6, Teresa Garcia-Valverde, Alberto Garcia-Sola, Hani Hagras, James Dooley, Juan A. Botia, Victor Callaghan and Antonio Gomez-Skarmeta, An Adaptive Learning Fuzzy Logic System for Indoor Localisation using Wi-Fi in Ambient Intelligent Environments

24, Maria Ros Izquierdo, Miguel Delgado Calvo-Flores, Amparo Vila Miranda, Hani Hagras and Aysenur Bilgin, A Fuzzy Logic Approach for Learning Daily Human Activities in an Ambient Intelligent Environment

433, Saifullizam Puteh, Caroline Langensiepen and Ahmad Lotfi, Fuzzy Ambient Intelligence for Intelligent Office Environments

Monday, FUZZ IEEE, MoF 1-3, 9:20-10:20, SS Bridging Theory and Application In Fuzzy Clustering 1, Yuchi Kanzawa

51, Katsuhiro Honda, Sakuya Nakao, Akira Notsu and Hidetomo Ichihashi, Alternative Fuzzy c-Lines and Comparison with Noise Clustering in Cluster Validation

203, Hidetomo Ichihashi, Toshiro Ogita, Katsuhiro Honda and Akira Notsu, Improvement by Sorting and Thresholding in PCA Based Nearest Neighbor Search

248, David F. Nettleton, Information Loss Evaluation based on Fuzzy and Crisp Clustering of Graph Statistics

Monday, IJCNN, MoN 1-1, 9:20-10:20, Feedforward Neural Networks 1, Guangbin Huang

55, Anurag Mishra, Amita Goel, Rampal Rana, Girija Chetty and Lavneet Singh, A Novel Image Watermarking Scheme Using Extreme Learning Machine

57, Celso de Sousa, Analysis of the Backpropagation Algorithm using Linear Algebra

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Monday, IJCNN, MoN 1-2, 9:20-10:20, Supervised Learning 1, Paolo Arena

240, Lech Szymanski and Brendan McCane, Push-pull separability objective for supervised layer-wise training of neural networks

248, Carl Laufer, Regularized kernel recursive least squares CMAC

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102, Huajin Tang, Qiang Yu and Kay Chen Tan, Learning Real-World Stimuli by Single-Spike Coding and Tempotron Rule

451, Levin Kuhlmann, Michael Hauser-Raspe, Jonathan Manton, Jonathan Tapson, David Grayden and Andre van Schaik, Online learning in Bayesian Spiking Neurons

506, Paul Wright and Janet Wiles, Learning Transmission Delays in Spiking Neural Networks A Novel Approach to Sequence Learning Based on Spike Delay Variance

Monday, IJCNN, MoN 1-4, 9:20-10:20, Feature Selection, Extraction and Aggregation 1, Ioannis Pitas

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345, Lin Zhu and Deshuang Huang, A Scalable Rayleigh-Ritz Style Method for Large Scale Canonical Correlation Analysis

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355, Leon Hardy, Daniel Levine and Dahai Liu, Neurohydrodynamics as a heuristic mechanism for cognitive processes in decision-making

485, Amr Ghoneim and Daryl Essam, A Methodology for Revealing and Monitoring the Strategies Played by Neural Networks in Mind Games

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430, Paul McCarthy, Path-sharing A new betweenness measure for community identification in networks

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526, Imen Chaari, Anis Koubaa, Hachemi Bennaceur, Sahar Trigui and Khaled Al-Shalfan, smartPATH A Hybrid ACO-GA Algorithm for Robot Path Planning

527, Thillainathan Logenthiran, Srinivasan Dipti, M. Khambadkone Ashwin and Thangavelu Sundar Raj, Optimal Sizing of Distributed Energy Resources for Integrated Microgrids using Evolutionary Strategy

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636, Zhigang Shang, Li Zhihui, J. J. Liang and Ben Niu, Control Parameters Self-Adaptation in Differential Evolution based on Intrisic Structure Information

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300, Dongrui Wu, Fuzzy Sets and Systems in Building Closed-Loop Affective Computing Systems for Human-Computer InteractionAdvances and New Research Directions

355, Michael Garber-Barron and Mei Si, Using Body Movement and Posture for Emotion Detection in Non-Acted Scenarios

Monday, FUZZ IEEE, MoF 2-3, 11:00-12:00, SS Bridging Theory and Application In Fuzzy Clustering 2, Yuchi Kanzawa

23, Yuchi Kanzawa and Yasunori Endo, On FNM-based and RFCM-based Fuzzy Co-Clustering Algorithm

128, Katsuhiro Honda, Arina Kawano, Akira Notsu and Hidetomo Ichihashi, A Fuzzy Variant of k-Member Clustering for Collaborative Filtering With Data Anonymization

455, Klara Stokes and Vicenc Torra, On the Relationship Between Clustering and Coding Theory

Monday, FUZZ IEEE, MoF 2-4, 11:00-12:00, Applications, Sansanee Auephanwiriyakul

33, Wei Mei, Ganlin Shan and Chunping Wang, Model the Uncertainty in Target Recognition using Possiblized Bayes' Theorem

145, Jesada Kajornrit, Kok Wai Wong and Chun Che Fung, Rainfall Prediction in the Northeast Region of Thailand using Modular Fuzzy Inference System

289, Robert Hammell II, Timothy Hanratty and Eric Heilman, Capturing the Value of Information in Complex Military EnvironmentsA Fuzzy-based Approach

Monday, FUZZ IEEE, MoF 2-5, 11:00-12:00, SS Recent Results In Takagi-Sugeno based Control and Observation 1, Jun Yoneyama

98, Sangeetha Bindiganavile Nagesh, Zsofia Lendek, Amol Ashok Khalate and Robert Babuska, Adaptive fuzzy observer and robust controller for a 2-DOF robot arm

232, Sami Mohammad, Thierry Marie Guerra, Jean-Marie Grosbois and Bernard Hecquet, Heart Rate Modeling and Robust Control during Cycling exercise

399, Abdelhafidh Jaadari, Thierry Marie Guerra, Antonio Sala, Miguel Bernal and Kevin Guelton, New controllers and new designs for continuous-time Takagi-Sugeno models

Monday, FUZZ IEEE, MoF 2-6, 11:00-12:00, Fuzzy systems, Dipti Srinivasan

129, Erdal Kayacan, Wouter Saeys, Erkan Kayacan, Herman Ramon and Okyay Kaynak, Intelligent Control of a Tractor-Implement System Using Type-2 Fuzzy Neural Networks

209, Robert Ellen, Duncan Campbell and Michael Lees, Development of Distributed Fuzzy Systems with a Runtime-Adaptable Mobile Components Framework

286, Jamil Abou Saleh, Fakhreddine Karray and Michael Morckos, Modelling of Robot Attention Demand in Human-Robot Interaction Using Finite Fuzzy State Automata

Monday, IJCNN, MoN 2-1, 11:00-12:00, Meta Learning and Hybrid Systems, Norbert Jankowski and Wlodek Duch

174, Pericles B. C. de Miranda, Ricardo B. C. Prudencio, Andre Carlos P. L. F. de Carvalho and Carlos Soares, Multi-objective Optimization and Meta-learning for SVM Parameter Selection

242, Pavel Kordik and Jan Cerny, On performance of Meta-learning Templates on Different Datasets

672, Wlodzislaw Duch, Norbert Jankowski and Tomasz Maszczyk, Make it cheap learning with O(nd) complexity

Monday, IJCNN, MoN 2-2, 11:00-12:00, Time Series Prediction 1, Teresa Ludermir and Marley Vellasco

217, Yanfei Kang, Real-time change detection in time series based on Growing Feature Quantization

349, Daniel Leite, Pyramo Costa and Fernando Gomide, Evolving Granular Neural Network for Fuzzy Time Series Forecasting

407, Aranildo Lima, Alex Cannon and William Hsieh, Downscaling Temperature and Precipitation using Support Vector Regression with Evolutionary Strategy

Monday, IJCNN, MoN 2-3, 11:00-12:00, Data Analysis and Pattern recognition 1, Yew-Soon Ong

5, Ming Gao, Xia Hong, Sheng Chen and Chris J. Harris, Probability Density Function Estimation Based Over-Sampling for Imbalanced Two-Class Problems

472, Zhan Shi and Jinglu Hu, Local Linear Discriminant Analysis with Composite Kernel for Face Recognition

544, Ary Noviyanto and Aniati Murni Arymurthy, Sleep Stages Classification Based on Temporal Pattern Recognition in Neural Network Approach

Monday, IJCNN, MoN 2-4, 11:00-12:00, Dynamical Models of Spiking Neurons and Networks, Kiruthika Ramanathan

264, Katsutoshi Saeki, Tatsuya Tatebe and Yoshifumi Sekine, A Study on CPG Model Transition Swing and Stance Pattern with Interstitial Cells

493, Takashi Matsubata and Hiroyuki Torikai, A Generalized Asynchronous Digital Spiking Neuron Theoretical Analysis and Compartmental Model

496, Yutaro Yamashita and Hiroyuki Torikai, Bursting Analysis and Synapse Mechanism of A Piece-wise Constant Spiking Neuron Model

Monday, IJCNN, MoN 2-5, 11:00-12:00, Emotion and Motivation, Daniel S.Levine

106, Dong Huang, Cuntai Guan, Kai Keng Ang, Haihong Zhang and Yaozhang Pan, Asymmetric spatial pattern for EEG-based emotion detection

109, E. Lotfi and M.-R. Akbarzadeh-T., Supervised Brain Emotional Learning

640, Nicolas Navarro-Guerrero, Robert Lowe and Stefan Wermter, A Neurocomputational Amygdala Model of Auditory Fear Conditioning A Hybrid System Approach

Monday, IJCNN, MoN 2-6, 11:00-12:00, Synchronization and Temporal Correlation, Ping Guo

189, Mark Wildie and Murray Shanahan, Hierarchical Clustering Identifies Hub Nodes in a Model of Resting-State Brain Activity

500, Shibasaki Manabu and Adachi Masaharu, Response to External Input of Chaotic Neural Networks Based on Newman-Watts Model

655, David Bhowmik and Murray Shanahan, How Well Do Oscillator Models Capture the Behaviour of Biological Neurons?

Monday, IJCNN, MoN 2-7, 11:00-12:00, Unsupervised Learning and Clustering 1, Donald Wunsch

150, Nhat-Quang Doan, Hanane Azzag and Mustapha Lebbah, Growing Self-organizing Trees for Knowledge Discovery from Data

466, Lei Meng and Ah-Hwee Tan, Semi-supervised Hierarchical Clustering for Personalized Web Image Organization

599, Nicoleta Rogovschi, Lazhar Labiod and Mohamed Nadif, A Spectral algorithm for Topographical Co-clustering

Monday, IJCNN Invited Lecture, 13:30-14:30, Chair: Kate Smith-Miles
Jennie Si, Uncovering the Neural Code of Learning Control

Monday, IEEE CEC, MoC 3-1, 13:30-14:30, Evolutionary Computer Vision 2, Vic Ciesielski

73, Wissam Albukhanajer, Yaochu Jin, Johann Briffa and Godfried Williams, Evolutionary Multi-Objective Optimization of Trace Transform for Invariant Feature Extraction.

322, Xie Feng and Andy Song, Evolving Frame Splitters by Genetic Programming

356, Andrea Valsecchi, Sergio Damas and Jose Santamaria, An Image Registration Approach using Genetic Algorithms

Monday, IEEE CEC, MoC 3-2, 13:30-14:30, Hardware Aspects of Bio-Inspired Architectures and Systems, Andy M.Tyrrell

154, Masahiro Tanaka and Tomoya Takahama, Restoration of Motion-Blurred Line Drawings by Differential Evolution and Richardson-Lucy Algorithm

357, Lukas Sekanina, Vojtech Salajka and Zdenek Vasicek, Two-Step Evolution of Polymorphic Circuits for Image Multi-Filtering

464, Xin Zhang and Wenjian Luo, Evolutionary Repair for Evolutionary Design of Combinational Logic Circuits

Monday, IEEE CEC, MoC 3-3, 13:30-14:30, Evolutionary Computation In Scheduling, Rong Qu

246, Boris Mitavskiy and Jun He, A Polynomial Time Approximation Scheme for a Single Machine Scheduling Problem Using a Hybrid Evolutionary Algorithm

655, Krisztian Balazs and Laszlo T. Koczy, Hybrid Bacterial Iterated Greedy Heuristics for the Permutation Flow Shop Problem

726, Sameer Alam, Chris Lokan and Hussein Abbass, What Can Make an Airspace Unsafe? Characterizing Collision Risk using Multi-Objective Optimization

Monday, IEEE CEC, MoC 3-4, 13:30-14:30, Evolutionary Multiobjective Optimization 1, Oscar Cordon

27, Danial Yazdani, Mohammad Reza Akbarzadeh-Totonchi, Babak Nasiri and Mohammad Reza Meybodi, A New Artificial Fish Swarm Algorithm for Dynamic Optimization Problems

65, Oliver Chikumbo, Erik Goodman and Kalyanmoy Deb, Approximating a multi-dimensional Pareto front for a land use management problem A modified MOEA with an epigenetic silencing metaphor

516, Lyndon While and Lucas Bradstreet, Applying the WFG Algorithm to Calculate Incremental Hypervolumes

Monday, IEEE CEC, MoC 3-5, 13:30-14:30, Nature-Inspired Constrained Optimization 2, Efrén Mezura-Montes

376, Efren Mezura-Montes and Elyar A. Lopez-Davila, Adaptation and Local Search in the Modified Bacterial Foraging Algorithm for Constrained Optimization

662, Afonso Lemonge, Helio Barbosa and Heder Bernardino, A Family of Adaptive Penalty Schemes for Steady-state Genetic Algorithms

672, Yukiko Orito, Hisashi Yamamoto and Yasuhiro Tsujimura, Equality Constrained Long-Short Portfolio Replication by Using Probabilistic Model-building GA

Monday, IEEE CEC, MoC 3-6, 13:30-14:30, Particle swarm optimization 2, Andreas Ernst

361, Kusum Deep, Pinkey Chauhan and Millie Pant, Totally Disturbed Chaotic Particle Swarm Optimization

371, Avishek Ghosh, Arnab Ghosh, Arkabandhu Chowdhury, Amit Konar, Eunjin Kim and Atulya K. Nagar, Linear Phase Low Pass FIR Filter Design Using Genetic Particle Swarm Optimization with Dynamically Varying Neighborhood Technique

476, Andreas Ernst and Gaurav Singh, Lagrangian Particle Swarm Optimization for a Resource Constrained Machine Scheduling Problem

Monday, IEEE CEC, MoC 3-7, 13:30-14:30, Dynamic and uncertain environments, Byoung-Tak Zhang

200, Li Xiao and Xingquan Zuo, Multi-DEPSO----a DE and PSO Based Hybrid Algorithm in Dynamic Environments

266, Haobo Fu, Bernhard Sendhoff, Ke Tang and Xin Yao, Characterizing Environmental Changes in Robust Optimization Over Time

607, Jun Hee Yoo, Ho-Sik Seok and Byoung-Tak Zhang, Evolutionary Particle Filtering for Sequential Dependency Learning from Video Data

Monday, FUZZ IEEE, MoF 3-1, 13:30-14:30, SS Aggregation operators 2, Gleb Beliakov

69, Xiaojing Wang, Angel Garcia Contreras, Martine Ceberio, Christian Del Hoyo and Luis Gutierrez, A Speculative Algorithm to Extract Fuzzy Measures from Sample Data

372, Daniel Paternain, Aranzazu Jurio, Javier Fernandez, Humberto Bustince and Gleb Beliakov, Color Image Reduction by Minimizing Penalty Functions

409, Takehiko Nakama and Michio Sugeno, Admissibility of Preferences and Modeling Capabilities of Fuzzy Integrals

Monday, FUZZ IEEE, MoF 3-2, 13:30-14:30, Fuzzy Maps and Nets, Roberto Furfaro

75, Wei She and Yangdong Ye, Fault Diagnosis Via Fuzzy Time Analysis

81, Sampreeti Ghosh and Sushmita Mitra, Gene Selection using Biological Knowledge and Fuzzy Clustering

124, Costas Neocleous and Christos Schizas, Modeling Socio-politico-economic Systems with Time-dependent Fuzzy Cognitive Maps

Monday, FUZZ IEEE, MoF 3-3, 13:30-14:30, SS Bridging Theory and Application In Fuzzy Clustering 3, Yuchi Kanzawa

193, Slah Alsaleh, Nayak Richi and Xu Yue, Grouping People in Social Networks Using a Weighted Multi-Constraints Clustering Method

197, Sadaaki Miyamoto, Shohei Suzuki and Satoshi Takumi, Clustering in Tweets Using a Fuzzy Neighborhood Model

267, Yui Matsumoto, Takeshi Yamamoto, Katsuhiro Honda, Akira Notsu and Hidetomo Ichihashi, Application of Cluster Validity Criteria to Rock-Paper-Scissors Game Judgment

Monday, FUZZ IEEE, MoF 3-4, 13:30-14:30, Fuzzy data mining, Keeley Crockett

178, Soto Montalvo, Eduardo G. Pardo, Raquel Martinez and Victor Fresno, Automatic Cognate Identification based on a Fuzzy Combination of String Similarity Measures

363, Joao P. Carvalho, Fernando Batista and Luisa Coheur, A Critical Survey on the use of Fuzzy Sets in Speech and Natural Language Processing

461, Rodrigo Moura Juvenil Ayres and Marilde Terezinha Prado Santos, FOntGAR AlgorithmMining Generalized Association Rules Using Fuzzy Ontologies

Monday, FUZZ IEEE, MoF 3-5, 13:30-14:30, SS Recent Results In Takagi-Sugeno based Control and Observation 2, Thierry-Marie Guerra

173, Zsofia Lendek, Thierry Marie Guerra and Jimmy Lauber, Construction of extended Lyapunov functions and control laws for discrete-time TS systems

181, Horst Schulte, Michal Zajac and Soeren Georg, Takagi-Sugeno Sliding Mode Observer Design for Load Estimation and Sensor Fault Detection in Wind Turbines

316, Ryutaro Takada, Yuzu Uchida and Jun Yoneyama, Output Feedback Stabilization of Takagi-Sugeno Fuzzy Bilinear Time-Delay Systems

Monday, FUZZ IEEE, MoF 3-6, 13:30-14:30, Competition,Xiao-Jun Zeng, Yingjie Yang

475, Dejan Dovzan, Vito Logar and Igor Skrjanc, Solving the sales prediction problem with fuzzy evolving methods

476, Andre Lemos, Daniel Leite, Leandro Maciel, Rosangela Ballini, Walmir Caminhas and Fernando Gomide, Evolving Fuzzy Linear Regression Tree Approach for Forecasting Sales Volume of Petroleum Products

477, Nicole Sprunk, Alejandro Mendoza Garcia and Alois Knoll, Learning a Fuzzy System from Training Data using the Munsteraner Optimisation System

Monday, FUZZ-IEEE Invited Lecture, 14:40-15:40, Chair: Hisao Ishibuchi

Kazuo Tanaka, A Unified Fuzzy Model-Based Framework for Modeling and Control of Complex Systems: From Flying Vehicle Control to Brain-Machine Cooperative Control

Monday, IEEE CEC, MoC 4-1, 14:40-15:40, Evolutionary Computer Vision 3, Andy Song

291, Harith Al-Sahaf, Andy Song, Kourosh Neshatian and Mengjie Zhang, Extracting Image Features for Classification By Two-Tier Genetic Programming

385, Ales Zamuda and Janez Brest, Tree Model Reconstruction Innovization Using Multi-objective Differential Evolution

543, Zheng Zhang, Hock Soon Seah and Jixiang Sun, A Hybrid Particle Swarm Optimization with Cooperative Method for Multi-Object Tracking

Monday, IEEE CEC, MoC 4-2, 14:40-15:40, Evolutionary Multiobjective Optimization 2, Kalyanmoy Deb

364, Olacir Castro Junior, Andre Britto and Aurora Pozo, A Comparison of Methods for Leader Selection in Many-Objective Problems

369, Andre Britto and Aurora Pozo, Using Archiving Methods to Control Convergence and Diversity for Many-Objective Problems in Particle Swarm Optimization

432, Jane Jing Liang, Boyang Qu, P. N. Suganthan and Ben Niu, Dynamic Multi-Swarm Particle Swarm Optimization for Multi-Objective Optimization Problems

Monday, IEEE CEC, MoC 4-3, 14:40-15:40, Quantum Computing and Evolutionary Computation 1, William N. N. Hung

25, Xu Juan, Chen Han-wu, Liu Zhihao, Ruan Yue and Zhu Wanning, Quantum secret sharing without exclusive OR of qubits' measuring results

100, Fei Yan, Phuc Q. Le, Abdullah M. Iliyasu, Bo Sun, Jesus A. Garcia, Fangyan Dong and Kaoru Hirota, Assessing the Similarity of Quantum Images based on Probability Measurements

720, Md. Mazder Rahman and Gerhard Dueck, An Algorithm to Find Quantum Templates

Monday, IEEE CEC, MoC 4-4, 14:40-15:40, Artificial Immune systems 1, Gary Yen

145, Mlungisi Duma, Bhekisipho Twala, Tshilidzi Marwala and Fulufhelo Nelwamondo, Classification with Missing Data using Multi-Layered Artificial Immune Systems

177, Weiwei Zhang and Gary Yen, Immune-inspired Evolutionary Algorithm for Constrained Optimization

295, Ma Wenping, Huang Yuanyuan, Li Congling and Liu Jing, Image Segmentation Based On A Hybrid Immune Memetic Algorithm

Monday, IEEE CEC, MoC 4-5, 14:40-15:40, Particle swarm optimization 3, Tim Hendtlass

127, Simone Ludwig, Step-Optimized Particle Swarm Optimization

199, Tim Hendtlass, Restarting Particle Swarm Optimisation

353, Michael Epitropakis, Dimitris Tasoulis, Nicos Pavlidis, Vassilis Plagianakos and Michael Vrahatis, Tracking Particle Swarm Optimizers An adaptive approach through multinomial distribution tracking with exponential forgetting

Monday, Hybrid, MoH 4-1, 14:40-15:40, Applications of Computational Intelligence In Education and Disability to Benefit Society (Hybrid) 1, Keeley Crockett

325, Fiona Buckingham, Keeley Crockett, Zuhair Bandar, James O'Shea, Kathleen MacQueen and Mario Chen, Measuring Human Comprehension from Nonverbal Behaviour using Artificial Neural Networks

365, Francisco Mugica, Angela Nebot, Solmaz Bagherpour, Antoni Serrano-Blanco and Luisa Baladon, MADRIMA major depression remote intelligent monitor

452, Sandra Sandri, Jonas Mendonca, Flavia Martins-Bede, Ricardo Guimaraes and Omar Carvalho, Weighted Fuzzy Similarity Relations Case-Based Reasoninga Case Study in Classification

Monday, Hybrid, MoH 4-2, 14:40-15:40, Computational Intelligence and Games (Hybrid) 1,Julian Togelius, Phil Hingston

58, Garrison Greenwood and Daniel Ashlock, Evolutionary Games and the Study of Cooperation Why Has So Little Progress Been Made?

173, Hisao Ishibuchi, Koichiro Hoshino and Yusuke Nojima, Strategy Evolution in a Spatial IPD Game where Each Agent is not Allowed to Play against Itself

183, Philip Hingston, Martin Masek and Daniel Beard, Using Monte Carlo Tree Search for Replanning in a Multistage Simultaneous Game

Monday, Hybrid, MoH 4-3, 14:40-15:40, Computational Intelligence for Cognitive Robotics (Hybrid) 1,aoyuki Kubota, Honghai Liu

349, Yutaka Yasuda, Naoyuki Kubota and Toda Yuichiro, Adaptive Formation Behaviors of Multi-robot for Cooperative Exploration

359, Zhaojie Ju and Honghai Liu, A Generalised Framework for Analysing Human Hand Motions based on Multisensor Information

368, Isao Hayashi, Shinji Tsuruse, Junichi Suzuki and Robert Thijs Kozma, A Proposal for Applying pdi-Boosting to Brain-Computer Interfaces

Monday, IJCNN, MoN 4-1, 14:40-15:40, Robotics 1, Zeng-Guang Hou

61, Milton Heinen, Paulo Engel and Rafael Pinto, Using a Gaussian Mixture Neural Network for Incremental Learning and Robotics

65, Chih-Lyang Hwang and June-Yun Huang, Neural-Network-Based 3-D Localization and Inverse Kinematics for Target Grasping of a Humanoid Robot by an Active Stereo Vision System

373, Jason Kulk and James Welsh, Measuring Impacts using Support Vector Machines on a Standing Humanoid Robot

Monday, IJCNN, MoN 4-2, 14:40-15:40,Signal, Image Processing and Multimedia 1, Anne Canuto

120, Weibao Zou, Wai Yeung Yan and Ahmed Shaker, Neural Network Based Remote Sensing Image Classification in Urban Area

478, Ashfaqur Rahman, Brijesh Verma and David Stockwell, An Hierarchical Approach Towards Road Image Segmentation

612, Keisuke Takizawa, Seiya Takenouchi, Hisashi Aomori, Tsuyoshi Otake, Mamoru Tanaka, Ichiro Matsuda and Susumu Itoh, Lossless Image Coding by Cellular Neural Networks with Backward Error Propagation Learning

Monday, IJCNN, MoN 4-3, 14:40-15:40, Power Systems Applications 1, Ganesh K. Venayagamoorthy

49, Abbas Khosravi, Saeid Nahavandi, Douglas Creighton and Reihaneh Naghavizadeh, Uncertainty Quantification for Wind Farm Power Generation

229, Naji Al-Messabi, Yun Li, Ibrahim El-amin and Cindy Goh, Forecasting of Photovoltaic Power Yield Using Dynamic Neural Networks

290, Peng Kou and Feng Gao, Sparse Heteroscedastic Gaussian Process for Short-term Wind Speed Forecasting

Monday, IJCNN, MoN 4-4, 14:40-15:40, Data Analysis and Pattern recognition 2, Sansanee Auephanwiriyakul

56, Giansalvo Cirrincione, Miguel Delgado, Humberto Henao and Juan Antonio Ortega, Bearing Fault Diagnosis by EXIN CCA

180, Ngoc Nam Nguyen, Chai Quek and Eng Yeow Cheu, Traffic Prediction using a Generic Self-Evolving Takagi-Sugeno-Kang (GSETSK) Fuzzy Neural Network

193, Lining Zhang, Lipo Wang and Weisi Lin, Laplacian Regularized Subspace Learning for Interactive Image Re-ranking

Monday, IJCNN, MoN 4-5, 14:40-15:40,Modeling emotions, Decision Making and Judgment,Robert Kozma, Qiangfu Zhao, Goutam Chakraborty and Tahahiko Murata

45, Roman Ilin and Robert Kozma, Cognitively Motivated Learning of Categorical Data with Modeling Fields Theory

69, Dominique Beroule and Pascale Gisquet-Verrier, Decision Making guided by Emotion A computational architecture

660, Daniel Levine, I Think Therefore I Feel Possible Neural Mechanisms for Knowledge-based Pleasure

Monday, FUZZ IEEE, Poster MoF, 15:40-17:10, Poster session FUZZ-IEEE, Bob (R.I) McKay

3, He Yu-Lin, Improving Kernel Inapability by Equivalent Probability in Flexible Naive Bayesian

7, Chi-Hsu Wang and Kun-Neng Hung, Adaptive SOM-Based Fuzzy Neural Network Controller Design for Multi-Agent System Dispatching and Path Planning

15, Yan Cui and Zhong Jin, Feature Extraction Using Fuzzy Complete Linear Discriminant Analysis

25, Hoel Le Capitaine, Online Equivalence Learning Through A Quasi-Newton Method

28, Jonathon Parker, Lawrence Hall and James Bezdek, Comparison of Scalable Fuzzy Clustering Methods

42, Tomislav Bacek, Josip Kasac, Dubravko Majetic and Danko Brezak, Real-Time Vehicle Navigation in Unknown Environment with Obstacles Using Analytical Fuzzy Controller and Potential Field Method

54, Iyakaremye Cesar, Luukka Pasi and Koloseni David, Feature selection using Yu's similarity measure and fuzzy entropy measures

62, Chang Zheng, Ban Xiaojuan and Mu Xing, A Study on Application of Fuzzy Data Mining and Forecasting in Oil Exploration

84, Rong-Jong Wai, Yu-Chih Huang and Yi-Chang Chen, Intelligent Daily Load Forecasting With Fuzzy Neural Network and Particle Swarm Optimization

111, Timothy Havens, James Bezdek and Marimuthu Palaniswami, Cluster Validity For Kernel Fuzzy Clustering

118, Serge Guillaume and Brigitte Charnomordic, Parameter optimization of a Fuzzy Inference System using the FisPro open source software

159, Shih-Ju Ho and Bor-Sen Chen, Robust H_infinity Synchronization Behavior for Nonlinear Stochastic Coupled Networks with Time Delays and Noises

160, Ali Adham and Razman Tahar, Enhancing Efficiency of Automobile Assembly Line Using the Fuzzy logical and Multi-objective Genetic Algorithm

161, Mary Tom, Computational Intelligence Using Fuzzy Multicriteria Decision Making for DIligenSDietary Intelligence System

172, Gwo-Ruey Yu, Constraints on Control Input and Output of Polynomial Fuzzy Systems via a Sum of Squares Approach

180, Alejandro Mendoza Garcia, Nicole Sprunk, Benedikt Baumgartner, Alois Knoll, Ulrich Schreiber, Stefan Eichhorn, Markus Krane and Ruediger Lange, Application of Adaptive Fuzzy Controllers for the Automation of Medical Devices

192, Derek Anderson, Tim Havens, Christian Wagner, James Keller, Melissa Anderson and Daniel Wescott, Sugeno Fuzzy Integral Generalizations for Sub-Normal Fuzzy Set-Valued Inputs

204, Nuryani Nuryani, Sai Ho Ling and Hung Nguyen, Hybrid Particle Swarm - based Fuzzy Support Vector Machine for Hypoglycaemia Detection

208, Kai Meng Tay, Chee Peng Lim, Chin Ying Teh and See Hung Lau, A Monotonicity Index for the Monotone Fuzzy Modeling Problem

237, Ines del Campo, Koldo Basterretxea, Victoria Martinez, Javier Echanobe and Faiyaz Doctor, A Hardware/Software Embedded Agent for Real-Time Control of Ambient-Intelligence Environment.

256, Anna Wilbik, James Keller and James Bezdek, Generation of prototypes from sets of linguistic summaries

261, Eulalia Szmidt and Janusz Kacprzyk, Correlation between Intuitionistic Fuzzy SetsSome Conceptual and Numerical Extensions

275, Mohammed Khalilia and Mihail Popescu, Fuzzy Relational Self-Organizing Maps

292, Chien-Chih Weng and Wen-Shyong Yu, H_∞ Tracking Adaptive Fuzzy Integral Sliding Mode Control for Parallel Manipulators

305, Naho Ito and Masafumi Hagiwara, Image Description Generation without Image Processing using Fuzzy Inference

309, Jinwook Kim, Oh-Kyu Choi and Jin S. Lee, Design and Stability Analysis of TSK-type Full-Scale Fuzzy PID Controllers

312, Chung-Chun Kung and Shuo-Chieh Chang, The Fuzzy C-regression Model of the Lithium Battery and its Application to the Estimation of the State of Charge

320, Dionis Boixader and Jordi Recasens, A Decomposition Theorem for T-indistinguishability Operators. The Continuous Strict Archimedean Case

334, Hyun seung Son, Jin Bae Park and Young Hoon Joo, Tracking Algorithm Compensating Acceleration for 3D Maneuvering Target with PSO-FCM

337, Fu-Hsaing Chi, Chih-Li Huo, Yu-Hsaing Yu and Tsung-Ying Sun, Forward Vechile Detection System Based on Lane-Marking Tracking with Fuzzy Adjustable Vanishing Point Mechanism

351, Hong-Chi Ku, Chung-Chun Kung and Wei-Yin Chen, A Novel Cluster Validity Criterion for the Bilinear Models and its Application to the T-S Fuzzy Bilinear Model Identification

381, Shinsuke Muta, Shohei Watanabe and Masayoshi Kanoh, A Radial-Ring Network Model for Object Posture Estimation

383, Ahmad Kalhor, Hossein Iranmanesh and Majid Abdollahzade, Online Modeling of Real-World Time Series Through Evolving AR Models

392, Yukinobu Hoshino and Hiroshi Takimoto, PSO training of the Neural Network application for a controller of the line tracing car

398, Raymond Y K Lau and Long Song, Mining Fuzzy Ontology for Fuzzy Granular IR Systems

404, Takahiro Shose, Yoichiro Maeda and Yasutake Takahashi, Skill Acquisition and Rule Extraction Method of Expert's Operation

406, Renata Souza, Leonardo Carvalho and Nicomedes Cavalcanti, A Novel Adaptive Fuzzy c-Means Algorithm for Interval Data Type

416, Marcin Detyniecki, Christophe Marsala, Ashwati Krishnan and Mel Siegel, Weather-Based Solar Energy Prediction

438, Naouel Baili and Hichem Frigui, Fuzzy Clustering with Multiple Kernels in Feature Space

445, Christophe Marsala, Gradual Fuzzy Decision Trees to Help Medical Diagnosis

Monday, IEEE CEC, MoC 5-1, 16:10-17:10, Evolutionary Multiobjective Optimization 3, Carlos A. Coello Coello

11, Dongseop Lee, Luis Felipe Gonzalez, Periaux Jacques and Gabriel Bugeda, Multi-Objective Design Optimization of Morphing UAV Aerofoil/Wing Using Hybridised MOGA

367, Eduardo Segredo, Carlos Segura and Coromoto Leon, Analysing the Robustness of Multiobjectivisation Parameters with Large Scale Optimisation Problems

615, Xinye Cai, Zhenzhou Hu, Sanjoy Das and Stephen Welch, A Hierarchical Pareto Dominance based Multi-objective Approach for the Optimization of Gene Regulatory Network Models

Monday, IEEE CEC, MoC 5-2, 16:10-17:10, Quantum Computing and Evolutionary Computation 2, Marek Perkowski

43, Zhihao Liu, Hanwu Chen, Juan Xu, Wenqian Li and Zhigang Li, Deterministic Secure Quantum Communication with Mutual Authentication Based on Bell Measurement

479, Hamid Izadinia and Mohammad Mehdi Ebadzadeh, Adaptive Quantum-Inspired Evolution Strategy

Monday, IEEE CEC, MoC 5-3, 16:10-17:10, Evolutionary Computation In Social Network Analysis and Applications, Di Wang

283, Minh Van Nguyen, Michael Kirley and Rodolfo Garcia-Flores, Community Evolution in A Scientific Collaboration Network

420, Yun-Chia Liang and Josue Rodolfo Cuevas Juarez, Multilevel Image Thresholding Using Relative Entropy and Virus Optimization Algorithm

663, Prakash Shelokar, Arnaud Quirin and Oscar Cordon, Automatic Extraction of Common Research Areas in World Scientograms using the Multiobjective Subdue Algorithm

Monday, IEEE CEC, MoC 5-4, 16:10-17:10, Multi-objective evolutionary algorithms 1, Kay Chen Tan

259, Valerio Lattarulo and Geoffrey T. Parks, A Preliminary Study of a new Multi-objective Optimization Algorithm

311, Vui Ann Shim, Kay Chen Tan and Kok Kiong Tan, A Hybrid Estimation of Distribution Algorithm for Solving the Multi-objective Multiple Traveling Salesman Problem

Monday, IEEE CEC, MoC 5-5, 16:10-17:10, Particle swarm optimization 4, Millie Pant

536, Zhen Ji, Tao Tian, Zexuan Zhu and Shan He, A Memory Binary Particle Swarm Optimization

578, Kusum Deep, Pinkey Chauhan and Millie Pant, Multi Task Selection including Part Mix, Tool Allocation and Process Plans in CNC Machining Centers using New Binary PSO

Monday, Hybrid, MoH 5-1, 16:10-17:10, Applications of Computational Intelligence In Education and Disability to Benefit Society (Hybrid) 2, Keeley Crockett

104, Olga Kosheleva and Karen Villaverde, How to Make Sure that Students Spend Enough Time StudyingFuzzy-Motivated Optimization Approach to Selecting a Grading Policy

116, Elham Ghassemi and Zoi Kapoula, AFCMACan Auto-adaptive Fuzzy CMAC for Oculomotor System

357, Phonkrit Chanda, Sansanee Auephanwiriyakul and Nipon Theera-Umpon, Thai Sign Language Translation System Using Upright Speed-Up Robust Feature and C-Means Clustering

Monday, Hybrid, MoH 5-2, 16:10-17:10, Computational Intelligence and Games (Hybrid) 2,Julian Togelius, Phil Hingston

700, Diego Perez, Philipp Rohlfshagen and Simon Lucas, The Physical Travelling Salesman Problem WCCI 2012 Competition

727, Tobias Mahlmann, Julian Togelius and Georgios N. Yannakakis, Evolving Card Sets Towards Balancing Dominion

734, Hisao Ishibuchi, Koichiro Hoshino and Yusuke Nojima, Evolution of Strategies in a Spatial IPD Game with a Number of Different Representation Schemes

Monday, Hybrid, MoH 5-3, 16:10-17:10, Computational Intelligence and Measurement Systems (Hybrid) 1, Albert Y.S. Lam

436, Blanca Priego, Francisco Bellas, Daniel Souto, Fernando Lopez-Pena and Richard J. Duro, Evolving Cellular Automata for Detecting Edges in Hyperspectral Images

596, Afonso D. Ribas, Juan G. Colonna, Carlos M. S. Figueiredo and Eduardo F. Nakamura, Similarity Clustering for Data Fusion in Wireless Sensor Networks Using k-means

Monday, Hybrid, MoH 5-4, 16:10-17:10, Computational Intelligence on Consumer Games and Graphics Hardware (Hybrid), Yuji Sato

217, Garnett Wilson, Simon Harding, Orland Hoeber, Rodolphe Devillers and Wolfgang Banzhaf, Parallel Exhaustive Search vs. Evolutionary Computation in a Large Real World Network Search Space

332, Shigeyoshi Tsutsui and Noriyuki Fujimoto, Implementation of Histogram Based Sampling Algorithm within an EDA Scheme with CUDA

669, Noel Lopes, Bernardete Ribeiro and Joao Goncalves, Restricted Boltzmann Machines and Deep Belief Networks on Multi-Core Processors

Monday, IJCNN, MoN 5-1, 16:10-17:10, Self-Organizing Maps 1, Akira Hirose

188, Ryotaro Kamimura, Interaction of Individually and Collectively Treated Neurons for Explicit Class Structure in Self-Organizing Maps

351, Hansenclever Bassani and Aluizio Araujo, Dimension Selective Self-Organizing Maps for Clustering High Dimensional Data

392, Romulo Sousa and Roberto Oliveira, Optimization of Geodesic Self-Organizing Map Using tesselladed tetrahedron as spherical lattice

Monday, IJCNN, MoN 5-2, 16:10-17:10, Radial Basis Functions Networks 1, Haibo He

115, Tianrui Chen and Cong Wang, Rapid Isolation of Small Oscillation Faults via Deterministic Learning

545, Sateesh Babu Giduthuri, Suresh Sundaram and Mahanand Bs, Alzheimer's Disease Detection Using A Projection Based Learning Meta-cognitive RBF Network

721, Ladys Rodriguez, Luis Diago, Ichiro Hagiwara and Frederic Magoules, Color Reproduction by Means of a Compactly Supported Radial Basis Function Space Mapping

Monday, IJCNN, MoN 5-3, 16:10-17:10, Ensemble and Meta Learning, Brijesh Verma

289, Ashfaqur Rahman and Brijesh Verma, Influence of Unstable Patterns in Layered Cluster Oriented Ensemble Classifier

378, Yuanchun Zhu, Guyue Mi and Ying Tan, Query Based Hybrid Learning Models for Adaptively Adjusting Locality

521, Yong Liu, New Discoveries in Balanced Ensemble Learning

Monday, IJCNN, MoN 5-4, 16:10-17:10, Visual Systems, Robi Polikar

267, Sepehr Jalali, Joo Hwee Lim, Jo Yew Tham and Sim Heng Ong, Clustering and Use of Spatial and Frequency Information in a Biologically Inspired Approach to Image Classification

359, Ravi Rao and Youping Xiao, A computational model of early visual cortex using konio-cellular pathway projections

686, Jing Wang and Chengan Guo, Face Recognition based on Sparse Representation and Error Correction SVM

Monday, IJCNN, MoN 5-5, 16:10-17:10, Brain Inspired Models of Cognitive Memory,Kiruthika Ramanathan, Tang Huajin, and Ning Ning

101, Qiang Yu, Kay Chen Tan and Huajin Tang, Pattern Recognition Computation in A Spiking Neural Network with Temporal Encoding and Learning

140, Ning Ning, Kejie Huang and Luping Shi, Artificial Neuron with Somatic and Axonal Computation Units Mathematical and Neuromorphic Models of Persistent Firing Neurons

307, Wenwen Wang, Budhitama Subagdja, Ah-Hwee Tan and Yuan-Sin Tan, A Self-Organizing Multi-Memory System for Autonomous Agents

Monday, Plenary and Public Lecture Session, 6pm-7pm, Chair: Hussein Abbass

Gary Fogel, A Survey of Applications and Future Directions of Computational Intelligence

Tuesday 12th of June 2012

Xin Yao, Unpacking and Understanding Evolutionary Algorithms

Tuesday, IEEE CEC, TuC 1-1, 9:20-10:20, Differential evolution 1, June Zhang

42, Xin Zhang and Shiu Yin Yuen, Opposition-Based Adaptive Differential Evolution

72, Iztok Fajfar, Selection Strategies and Random Perturbations in Differential Evolution

613, Sami Barmada, Marco Raugi and Mauro Tucci, Global Optimization Algorithm Based on Self-Organizing Centroids

Tuesday, IEEE CEC, TuC 1-2, 9:20-10:20, Multi-objective evolutionary algorithms 2, Tomohiro Yoshikawa

33, Kaustuv Nag and Tandra Pal, A new Archive based Steady State Genetic Algorithm

540, Fumiya Kudo and Tomohiro Yoshikawa, Knowledge Extraction in Multi-objective Optimization Problem based on Visualization of Pareto Solutions

554, Martin Pilat and Roman Neruda, An Evolutionary Strategy for Surrogate-Based Multiobjective Optimization

Tuesday, IEEE CEC, TuC 1-3, 9:20-10:20, Particle swarm optimization 5, Mengjie Zhang

180, Juan Rada-Vilela, Mengjie Zhang and Winston Seah, A Performance Study on the Effects of Noise and Evaporation in Particle Swarm Optimization

456, Liam Cervante, Bing Xue, Mengjie Zhang and Lin Shang, Binary Particle Swarm Optimisation for Feature Selection A Filter Based Approach

233, Mitchell Yuwono, Steven W. Su, Bruce Moulton and Hung Nguyen, Fast unsupervised learning method for rapid estimation of cluster centroids

Tuesday, IEEE CEC, TuC 1-4, 9:20-10:20, Discrete and combinatorial optimization 1, Irene Moser

316, Irene Moser and Marius Gheorghita, Combining Search Space Diagnostics and Optimisation

556, Stepan Balcar, Martin Pilat and Roman Neruda, An Evolutionary Algorithm for 2D Semi-Guillotinable Circular Saw Cutting

735, Bruno Bruck, Andre' Santos and Jose' Arroyo, Hybrid metaheuristic for the single vehicle routing problem with deliveries and selective pickups

Tuesday, FUZZ IEEE, TuF 1-1, 9:20-10:20, SS Fuzzy Ontologies and Fuzzy Markup Language Applications, Chang-Shing Lee

152, Chang-Shing Lee, Mei-Hui Wang, Meng-Jhen Wu, Yuki Nakagawa, Hiroshi Tsuji, Yoichi Yamazaki and Kaoru Hirota, FML-based Emotional Expression System for Computer Go Application

270, Marta Cimitile, Matteo Gaeta and Vincenzo Loia, An Ontological Multi-Criteria Optimization System for Workforce Management

364, Carmen De Maio, Giuseppe Fenza, Domenico Furno and Vincenzo Loia, Swarm-based semantic fuzzy reasoning for Situation Awareness Computing

Tuesday, FUZZ IEEE, TuF 1-2, 9:20-10:20, SS Fuzzy Systems on Renewable Energy, Faa-Jeng Lin

136, Men-Shen Tsai and Yu-Hsiu Lin, Application of Neuro-Fuzzy Pattern Recognition for Non-intrusive Appliance Load Monitoring in Electricity Energy Conservation

240, Eleonora D'Andrea and Beatrice Lazzerini, Fuzzy Forecasting of Energy Production in Solar Photovoltaic Installations

339, Francesco Grimaccia, Marco Mussetta and Riccardo E. Zich, Advanced Predictive Models towards PV Energy Integration in Smart Grid

Tuesday, FUZZ IEEE, TuF 1-3, 9:20-10:20, SS Evolutionary Fuzzy Systems 1, Yusuke Nojima

139, Stelios Mylonas, Dimitris Stavrakoudis and John Theocharis, A GA-based Sequential Fuzzy Segmentation Approach For Classification of Remote Sensing Images

268, Mohsen Naderpour and Jie Lu, A Fuzzy Dual Expert System for Managing Situation Awareness in a Safety Supervisory System

432, Shen Wang and Mahdi Mahfouf, Multi-Objective Optimisation for Fuzzy Modelling using Interval Type-2 Fuzzy Sets

Tuesday, IJCNN, TuN 1-1, 9:20-10:20,Models of Conditioning, Reward and Behaviour, Robert Kozma

291, Ryo Ito, Yuta Nakayama and Toshimichi Saito, Analysis and Learning of Periodic Orbits in Dynamic Binary Neural Networks

295, Hansol Choi, Jun-Cheol Park, Jae Hyun Lim, Jae young Jun and Dae-shik Kim, Reward Hierarchical Temporal Memory

515, Michiel Boes, Damiano Oldoni, Bert De Coensel and Dick Botteldooren, Attention-Driven Auditory Stream Segregation using a SOM coupled with an Excitatory-Inhibitory ANN

Tuesday, IJCNN, TuN 1-2, 9:20-10:20, Machine Learning and Data Mining, Dongbin Zhao

179, Baichuan Li, Michael R. Lyu and Irwin King, Communities of Yahoo! Answers and Baidu Zhidao Complementing or Competing?

394, Dumidu Wijayasekara and Milos Manic, Visual, Linguistic Data Mining Using Self-Organizing Maps

744, Hadautho Silva and Paulo Adeodato, A Data Mining Approach for Preventing Undergraduate Students Retention

Tuesday, IJCNN, TuN 1-3, 9:20-10:20, Spiking Neural Networks 2, Nikola Kasabov

319, Siyao Fu, Ting Wu, Long Cheng and Guosheng Yang, A Simple Probabilistic Spiking Neuron Model with Hebbian Learning Rules

431, Kshitij Dhoble, Nuttapod Nuntalid, Giacomo Indiveri and Nikola Kasabov, Online Spatio-Temporal Pattern Recognition with Evolving Spiking Neural Networks utilising Address Event Representation, Rank Order, and Temporal Spike Learning

455, Dmitri Yudanov and Leon Reznik, Scalable Multi-Precision Simulation of Spiking Neural Networks on GPU with OpenCL

Tuesday, IJCNN, TuN 1-4, 9:20-10:20, SVM and Kernel Methods 1, Vladimir Cherkassky

167, Alistair Shilton, Daniel T. H. Lai and Marimuthu Palaniswami, The Conic-Segmentation Support Vector Machine - a Target Space Method for Multiclass Classification

372, Han-Tai Shiao and Vladimir Cherkassky, Implementation and Comparison of SVM-Based Multi-Task Learning Methods

426, Hiroyuki Funaya and Ikeda Kazushi, A statistical analysis of soft-margin support vector machines for non-separable problems

Tuesday, IJCNN, Poster TuN, 10:20-12:00, Poster session IJCNN, Bob (R.I) McKay

20, Shuai Li, Sanfeng Chen, Yuesheng Lou, Bo Liu and Liang Yongsheng, A Nonlinear Neural Network for Inter-Localization of Mobile Phones

54, Teresa Garcia-Valverde, Alberto Garcia-Sola, Juan A. Botia and Antonio Gomez-Skarmeta, Ubiquitous Deployment Configuration of Indoor Location Services

72, Atsushi Hara and Yoichi Hayashi, Ensemble Neural Network Rule Extraction Using Re-RX Algorithm

84, Rafael Prado, Jorge Melo, Jose Alberto Oliveira and Adriao Doria Neto, FPGA Based Implementation of a Fuzzy Neural Network Modular Architecture for Embedded Systems

99, Renata C. B. Madeo, Sarajane M. Peres, Clodoaldo A. M. Lima and Clodis Boscarioli, Hybrid Architecture for Gesture Recognition Integrating Fuzzy-Connectionist and Heuristic Classifiers using Fuzzy Syntactical Strategy

103, Chi Cheng, Wee Peng Tay and Guang-Bin Huang, Extreme Learning Machines for Intrusion Detection

134, Piyasak Jeatrakul and Kok Wai Wong, Enhancing Classification Performance of Multi-Class Imbalanced Data Using the OAA-DB Algorithm

157, Chih Hui Chiu, Chun Chieh Chang and Ya Fu Peng, Implementation of human conveyance vehicle using model-free AORCMAC control strategy

159, Hao Quan, Dipti Srinivasan and Abbas Khosravi, Construction of Neural Network-based Prediction Intervals using Particle Swarm Optimization

183, Ching-Tsan Chiang, Yung-Sheng Lee, Xiao Ru Li and Chiung-Chou Liao, A RSCMAC Based Forecasting for Solar Irradiance from Local Weather Information

198, I-Hsum Li, Lian-Wang Lee and Wei-Yen Wang, Hybrid Adaptive control Based on a Hopfield Dynamic Neural Network for Nonlinear Dynamical Systems

199, Badong Chen, Songlin Zhao, Sohan Seth and Jose Principe, Online Efficient Learning with Quantized KLMS and L1 Regularization

211, Chris Lovell and Steve Gunn, Towards Improved Theoretical Problems for Autonomous Discovery

216, Ana L. C. Bazzan, Coordinating Many Agents in Stochastic Games

218, Shuangyong Song, Qiudan Li and Xiaolong Zheng, Detecting Popular Topics in Micro-blogging Based on a User Interest-Based Model

230, Aida Ferreira, Ludermir Teresa and Aquino Ronaldo, Comparing Recurrent Networks for Time-Series Forecasting

234, Tong Liu, Yuhong Kang, Mohini Verma, and Marius Orlowski, Novel Highly Nonlinear Memristive Circuit Elements for Neural Networks

247, Glenn Francis and Sandra Stein, Prediction of Histologic Grade in Breast Cancer using an Artificial Neural Network.

266, Yozo Suzuki, Michimasa Kitahara and Masaki Kobayashi, Rotor Associative Memory with a Periodic Activation Function

297, Shu Feng and Ah-Hwee Tan, A Biologically-Inspired Affective Model Based on Cognitive Situational Appraisal

299, Msizi Khoza and Tshilidzi Marwala, Computational Intelligence Techniques for Modelling an Economic System

300, Adham Atyabi, Sean P. Fitzgibbon and David M. W. Powers, Biasing the Overlapping and Non-Overlapping Sub-Windows of EEG recording

310, Tiago Lima, Adenilton Silva and Teresa Ludermir, Clustering and Selection of Neural Networks Using Adaptive Differential Evolution

331, Ronaldo Prati, Combining feature ranking algorithms through rank aggregation

360, Jonathan Masci, Ueli Meier, Dan Ciresan, Gabriel Fricout and Juergen Schmidhuber, Steel Defect Classification with Max-Pooling Convolutional Neural Networks

361, Andrea Flexeder, Matthias Putz and Thomas Runkler, Support Vector Machines for Program Analysis

364, Joao Henrique Ferreira Flores, Paulo Martins Engel and Rafael Coimbra Pinto, Autocorrelation and partial autocorrelation functions to improve neural networks models on univariate time series forecasting

371, Paulo Soares and Ricardo Prudencio, Time Series Based Link Prediction

380, Hasan Ferdowsi, Deepthi Shreeya Lathamaheswari Raja and Sarangapani Jagannathan, A Decentralized Fault Detection and Prediction Scheme for Nonlinear Interconnected Continuous-time Systems

402, Eri Shimokawara, Kazumasa Murakami, Yihsin Ho, Shin Ishiguro and Toru Yamaguchi, Clustering action data based on amount of exercise for use-model based health care support

403, Upuli Gunasinghe, Sumith Matharage and Damminda Alahakoon, A Sequence Based Dynamic SOM Model for Text Clustering

418, Udhay Ravishankar and Milos Manic, The Adaptive Critic Learning Agent (ACLA) Algorithm Towards Problem Independent Neural Network based Optimizers

440, Gonzalo Acuna, Cristian Ramirez and Millaray Curilem, Comparing NARX and NARMAX models using ANN and SVM for cash demand forecasting for ATM

441, Leonardo Ferreira, Alex Pinto and Liang Zhao, QK-Means A Clustering Technique Based on Community Detection and K-Means for Deployment of Cluster Head Nodes

457, Michael Li, William Guo, Brijesh Verma and Hong Lee, A neural networks-based fitting to high energy stopping power data for heavy ions in solid matter

462, Shin-Ying Huang and Rua-Huan Tsaih, The Prediction Approach with Growing Hierarchical Self-Organizing Map

465, Rakesh Chalasani, Goktug Cinar and Jose Principe, Sequential Causal Estimation and Learning from Time-Varying Images

491, Yun Li and Li-Li Feng, Integrating Feature Selection and Min-Max Modular SVM for Powerful Ensemble

525, Hiran Ganegedara, Damminda Alahakoon, John Mashford, Andrew Paplinski, Karsten Muller and Thomas Deserno, Self organising map based region of interest labelling for automated defect identification in large sewer pipe image collections

550, Mollah Rezaul Alam, Kashem Muttaqi and Abdesselam Bouzerdoum, A Short Length Window-Based Method for Islanding Detection in Distributed Generation

568, Minghui Shi, Changle Zhou, Fei Chao and Min Jiang, An Algorithm for Computing Attribute Reducts Based on Graph Search Strategy

570, Hossein Iranmanesh, Arash Miranian, Majid Abdollahzade and Ahmad Farmahini, Wind Power Forecasting by a New Local Quadratic Wavelet Neural Network

589, Joshua Davis and Robert Kozma, Analysis of Phase Relationship in ECoG using Hilbert Transform and Information Theoretic Measures

602, Nikolas Hemion, Frank Joublin and Katharina Rohlfing, Integration of Sensorimotor Mappings by Making Use of Redundancies

603, Toshihiro Yoshida, Masafumi Matsuhara, Goutam Chakraborty and Hiroshi Mabuchi, A Novel Ranking Method of Web Search Result Using Clustering and Concordance Count

608, Su-Yang Yu, Nils Hammerla, Jeff Yan and Peter Andras, A statistical aimbot detection method for online FPS

624, Cameron Patterson, Francesco Galluppi, Alexander Rast and Furber Steve, Visualising Large-Scale Neural Network Models in Real-Time

635, Yuekai Wang, Xiaofeng Wu and Juyang Weng, Skull-Closed Autonomous Development WWN-6 Using Natural Video

644, Kirsty Kitto, Peter Bruza and Liane Gabora, A Quantum Information Retrieval Approach to Memory

680, Diego Alberto, Luca Mesin, Eros Pasero and Alberto Cabilli, Control of coffee grinding with Artificial Neural Networks

682, Gregory Ditzler, Gail Rosen and Robi Polikar, Transductive Learning Algorithms for Nonstationary Environments

694, Songlin Zhao, Chen Badong and Jose Principe, An Adaptive Kernel Width Update for Correntropy

701, Rodrigo Brito and Adriano Oliveira, A foreign exchange market trading system by combining GHSOM and SVR

738, Samuel Xavier-de-Souza, Francisco Ary Alves de Souza and Adriao Duarte Doria Neto, Analysis of Multilayer Perceptron Networks in the Multicore Era

Tuesday, IEEE CEC, TuC 2-1, 11:00-12:00, Process Mining: Applying Evolutionary Computation Techniques to Process Mining, Moe Thandar Wynn

158, Yang Yang, Shingo Mabu and Kotaro Hirasawa, A Multitasks Learning Approach to Autonomous Agent based on Genetic Network Programming

269, Joos Buijs, Boudewijn Dongen, van and Wil Aalst, van der, A Genetic Algorithm for Discovering Process Trees

346, Jochen De Weerdt, Seppe vanden Broucke, Jan Vanthienen and Bart Baesens, Leveraging Process Discovery with Trace Clustering and Text Mining for Intelligent Analysis of Incident Management Processes

Tuesday, IEEE CEC, TuC 2-2, 11:00-12:00, Genetic algorithms 1, Simone Ludwig

21, Ran Cheng, Min Yao, Xiaowei Xue and Bin Shen, Bisexual Evolution A Novel Bisexual Evolutionary Framework Based on the Fisher's Runaway Process

128, Mitsukuni Matayoshi, Landscape Information Extraction from Chromosome based on a Quality Control Approach

280, Simone Ludwig, Clonal Selection based Genetic Algorithm for Workflow Service Selection

Tuesday, IEEE CEC, TuC 2-3, 11:00-12:00, Multi-objective evolutionary algorithms 3, Markus Wagner

91, David Hadka, Patrick Reed and Timothy Simpson, Diagnostic Assessment of the Borg MOEA for Many-Objective Product Family Design Problems

98, Heyam Albaity, Souham Meshoul and Ata Kaban, On Extending Quantum Behaved Particle Swarm Optimization to MultiObjective Context

671, Joseph Yuen, Sophia Gao, Markus Wagner and Frank Neumann, An Adaptive Data Structure for Evolutionary Multi-Objective Algorithms with Unbounded Archives

Tuesday, IEEE CEC, TuC 2-4, 11:00-12:00, Discrete and combinatorial optimization 2, Matthew Petering

391, Dayanne G Coelho, Elizabeth F Wanner, Sergio R Souza, Eduardo G Carrano and Robin C Purshouse, A Multiobjective Evolutionary Algorithm for the 2D Guillotine Strip Packing Problem

532, Madawa Weerasinghe and Georgy Sofronov, A Modified Cross Entropy Method for Detecting Multiple Change Points in DNA Count Data

561, Mazen Hussein and Matthew Petering, Genetic Algorithm-Based Simulation Optimization of Stacking Algorithms for Yard Cranes to Reduce Fuel Consumption at Seaport Container Transshipment Terminals

Tuesday, IEEE CEC, TuC 2-5, 11:00-12:00, Evolutionary games and multi-agent systems, Michael Barlow

276, Han The Anh, Moniz Pereira Luis and C. Santos Francisco, Intention Recognition, Commitment and the Evolution of Cooperation

438, Erandi Lakshika, Michael Barlow and Adam Easton, Fidelity and Complexity of Standing Group Conversation Simulations A Framework for the Evolution of Multi Agent Systems through Bootstrapping Human Aesthetic Judgments

460, Raymond Chiong and Michael Kirley, The Evolution of Cooperation via Stigmergic Interactions

Tuesday, IEEE CEC, TuC 2-6, 11:00-12:00, Robotics 3, Douglas Macharet

275, Michal Bidlo and Zdenek Vasicek, Evolution of Cellular Automata Using Instruction-Based Approach

348, Lorenzo Riano and T.M. McGinnity, A Robot that Autonomously Improves Skills by Evolving Computational Graphs

378, Douglas Macharet, Armando Alves Neto, Vilar da Camara Neto and Mario Campos, Data Gathering Tour Optimization for Dubins' Vehicles

Tuesday, FUZZ IEEE, TuF 2-1, 11:00-12:00, SS Fuzzy Approaches In Database Management and Information Retrieval 1, Janusz Kacprzyk, Slawomir Zadrozny

274, Lingyu Zhang and Z.M. Ma, ICFCA method for computing semantic similarity among fuzzy concepts in a fuzzy ontology

317, Fu Zhang, Z.M. Ma and Li Yan, A Fuzzy Ontology Approach for Representing Fuzzy Petri Nets

457, Che-Hung Liu, Chang-Shing Lee, Mei-Hui Wang, Yu-Yang Tseng and Yi-Ling Kuo, FML-based Knowledge Management System for University Governance and Management Assessment

Tuesday, FUZZ IEEE, TuF 2-2, 11:00-12:00, SS Evolving and Adaptive Fuzzy Systems: Towards Autonomous Learning, Plamen Angelov, N. Kasabov

234, Pouria Sadeghi-Tehran, Ana Belen Cara, Plamen Angelov, Hector Pomares and Ignacio Rojas, Self-evolving Parameter-free Rule-based Controller

276, Leandro Maciel, Fernando Gomide and Rosangela Ballini, MIMO Evolving Participatory Learning Fuzzy Modeling

315, Di Wang, Xiao-Jun Zeng and John Keane, A Structure Learning Method for Concise Fuzzy Systems

Tuesday, FUZZ IEEE, TuF 2-3, 11:00-12:00, SS Evolutionary Fuzzy Systems 2, Rafael Alcalá

78, Shinji Fukuda, Effect of Aggregation Functions on the Habitat Preference Modelling Using A Genetic Takagi-Sugeno Fuzzy System

207, Stephen G. Matthews, Mario A. Gongora, Adrian A. Hopgood and Samad Ahmadi, Temporal Fuzzy Association Rule Mining with 2-tuple Linguistic Representation

415, Michela Antonelli, Pietro Ducange and Francesco Marcelloni, Multi-objective Evolutionary Rule and Condition Selection for Designing Fuzzy Rule-based Classifiers

Tuesday, Hybrid, TuH 2-1, 11:00-12:00, Computational Intelligence In Bioinformatics (Hybrid) 1,Michael Lones, Vassilis Plagianakos, Sheridan Houghten

103, Sevan G. Ficici, Enoch Liu and Gary B. Fogel, Evolutionary Algorithms for Supertree Search

142, Zary Forghany, Mohsen Davarynejad and Ewa Snaar-Jagalska, Gene Regulatory Network Model Identification Using Artificial Bee Colony and Swarm Intelligence

290, Ahsan Chowdhury, Madhu Chetty and Nguyen Vinh, Adaptive Regulatory Genes Cardinality for Reconstructing Genetic Networks

Tuesday, Hybrid, TuH 2-2, 11:00-12:00, Computational Intelligence In Brain Computer Interface (Hybrid) 1, Li-Wei Ko and Chin-Teng Lin

270, Maria Vircikova, Peter Smolar, Peter Sincak and Martin Pala, Neural Approach for Personalised Emotional Model in Human-Robot Interaction

285, Rifai Chai, Sai Ho Ling, Gregory P Hunter and Hung T Nguyen, Mental Non-motor Imagery Tasks Classifications of Brain Computer Interface for Wheelchair Commands Using Genetic Algorithm-Based Neural Network

350, Guilherme Coelho, Celso Barbante, Levy Boccato, Romis Attux, Jose Raimundo Oliveira and Fernando Von Zuben, Automatic Feature Selection for BCI an Analysis using the Davies-Bouldin Index and Extreme Learning Machines

Tuesday, IEEE CEC Invited Lecture, 13:30-14:30, Chair: Xin Yao

Zbyszek Michalewicz, Some thoughts on a gap between theory and practice of evolutionary algorithms

Tuesday, FUZZ IEEE, TuF 3-1, 13:30-14:30, SS Fuzzy Approaches In Database Management and Information Retrieval 2,Janusz Kacprzyk, Slawomir Zadrozny

336, Eunjin Kim and Joseph Lee, Fuzzy Web Information Retrieval System with Fuzzy Thesaurus using Fuzzy Relational BK-Products

350, Yoann Pitarch, Cecile Favre, Anne Laurent and Pascal Poncelet, Enhancing Flexibility and Expressivity of Contextual Hierarchies

378, Katsutoshi Takahashi and Motohide Umano, Retrieval of Similar Time Series with Similarity Degree of Linguistic Expressions for Global Trend and Local Features

Tuesday, FUZZ IEEE, TuF 3-2, 13:30-14:30, Fuzzy control 1, Jimmy Lauber

182, Maowen Nie and Woei Wan Tan, Modeling Capability of Type-1 Fuzzy Set and Interval Type-2 Fuzzy Set

265, Miguel A. Olivares-Mendez, Luis Mejias, Pascual Campoy and Ignacio Mellado-Bataller, See-and-Avoid Quadcopter using Fuzzy Control Optimized by Cross-Entropy

353, Klaus J. Diepold and Sebastian J. Pieczona, Recurrent Takagi-Sugeno Fuzzy Interpolation for Switched Linear Systems and Hybrid Automata

Tuesday, FUZZ IEEE, TuF 3-3, 13:30-14:30, SS Evolutionary Fuzzy Systems 3,Hisao Ishibuchi, Yusuke Nojima

223, Antonio A. Marquez, Francisco A. Marquez and Antonio Peregrin, An Efficient Multi-objective Evolutionary Adaptive Conjunction for High Dimensional Problems in Linguistic Fuzzy Modelling

252, Cristobal Jose Carmona, Julian Luengo, Pedro Gonzalez and Maria Jose del Jesus, A Preliminary Study on Missing Data Imputation in Evolutionary Fuzzy Systems of Subgroup Discovery

301, Edward Hinojosa and Heloisa Camargo, Multiobjective Genetic Generation of Fuzzy Classifiers using the Iterative Rule Learning

Tuesday, Hybrid, TuH 3-1, 13:30-14:30, Computational Intelligence and Measurement Systems (Hybrid) 2, Albert Y.S. Lam

324, Ruggero Donida Labati, Angelo Genovese, Vincenzo Piuri and Fabio Scotti, Low-cost Volume Estimation by Two-view Acquisitions A Computational Intelligence Approach

490, Petia Petia Georgieva, Lyudmila Mihaylova, Nidhal Bouaynaya and Lakhmi Jain, Particle Filters and Beamforming for EEG Source Estimation

Tuesday, Hybrid, TuH 3-2, 13:30-14:30, Computational Intelligence In Biometrics (Hybrid) 1, Eliza Yingzi Du, Eric Granger, and Qinghan Xiao

227, Li Rongfeng, Tang Darun, Huang Beining and Li Wenxin, Test Sample Size Determination for Biometric Systems based on Confidence Elasticity

341, Darun Tang, Beining Huang, Rongfeng Li, Wenxin Li and Xiaoming Li, Finger Vein Verification Using Occurrence Probability Matrix (OPM)

369, Ruggero Donida Labati, Angelo Genovese, Vincenzo Piuri and Fabio Scotti, Quality Measurement of Unwrapped Three-dimensional Fingerprints a Neural Networks Approach

Tuesday, Hybrid, TuH 3-3, 13:30-14:30, Bio-Inspired Developmental Mechanisms (Hybrid), Angelo Cangelosi and Juyang Weng

209, Li-Wen Chuang, Chyi-Yeu Lin and Angelo Cangelosi, Learning of Composite Actions and Visual Categories via Grounded Linguistic Instructions Humanoid Robot Simulations

461, Wentao Huang, Zhengping Ji, Steven P. Brumby, Garrett Kenyon and Luis M. A. Bettencourt, Development of Invariant Feature Maps via a Computational Model of Simple and Complex Cells

566, Wenjie Yan, Cornelius Weber and Stefan Wermter, A Neural Approach for Robot Navigation based on Cognitive Map Learning

Tuesday, IJCNN, TuN 3-1, 13:30-14:30, Machine Intelligence In Healthcare and Sports Engineering, M. Palaniswami and Alistair Shilton

423, Braveena. K Santhiranayagam, Daniel T. H. Lai, Cancan Jiang, Alistair Shilton and Rezaul Begg, Automatic detection of different walking conditions using inertial sensor data

607, David Rowlands, Tristan McNab, Liisa Laakso and Daniel James, Cloud Based Activity Monitoring System for Health and Sport

622, Toni Stojanov, Lichao Xu, Ioanna Ioannou, Sofia Suvorova and Tharshan Vaithianathan, Preliminary Investigation of Evaluating Surgical Performance using an IMU Device

Tuesday, IJCNN, TuN 3-2, 13:30-14:30, Reservoir Networks 1, Peter Tino

337, Harold Soh and Yiannis Demiris, Iterative Temporal Learning and Prediction with the Sparse Online Echo State Gaussian Process

487, Arnaud Rachez and Masafumi Hagiwara, Augmented Echo State Networks with a Feature Layer and a Nonlinear Readout

730, Oliver Obst and Martin Riedmiller, Taming the Reservoir Feedforward Training for Recurrent Neural Networks

Tuesday, IJCNN, TuN 3-3, 13:30-14:30, Reinforcement Learning, Donald Wunsch

225, Shanqing Yu, Zhou Jing, Bing Li, Shingo Mabu and Kotaro Hirasawa, Q value-based Dynamic Programming with SARSA Learning for real time route guidance in large scale road networks

501, Jae Young Lee, Jin Bae Park and Yoon Ho Choi, Integral Reinforcement Learning with Explorations for Continuous-Time Nonlinear Systems

606, Hunor Jakab and Lehel Csato, Reinforcement learning with guided policy search using Gaussian processes

Tuesday, IJCNN, TuN 3-4, 13:30-14:30, Neurocontrol, Dongbin Zhao

190, Wen-Shyong Yu, Adaptive Neural Network Tracking Control of Robotic systems

476, Chiu-Hsiung Chen, Chiung-Chou Liao and Ching-Tsan Chiang, Adaptive neuro-wavelet control for the ship trajectory tracking problem

713, Qinglai Wei and Derong Liu, Adaptive Dynamic Programming with Stable Value Iteration Algorithm for Discrete-Time Nonlinear Systems

Tuesday, IJCNN, TuN 3-5, 13:30-14:30, Supervised Learning 2, Jungbin Gao

71, Lech Szymanski and Brendan McCane, Deep, super-narrow neural network is a universal classifier

121, Xinwei Jiang, Junbin Gao, Daming Shi and Tianjiang Wang, Thin Plate Spline Latent Variable Models for Dimensionality Reduction

Tuesday, IJCNN Invited Lecture, 14:40-15:40, Chair: Jennie Si
Nikola Kasabov, EvoSpike: Evolving Probabilistic Spiking Neural Networks and Neuro-Genetic Systems for Spatio- and Spectro-Temporal Data Modelling and Pattern Recognition

Tuesday, IEEE CEC, TuC 4-1, 14:40-15:40, Differential evolution 2, Wei-neng Chen

86, Xianpeng Wang and Lixin Tang, Multi-objective optimization using a hybrid differential evolution algorithm

163, Rammohan Mallipeddi and Minho Lee, Surrogate Model Assisted Ensemble Differential Evolution Algorithm

684, Michael Epitropakis, Vassilis Plagianakos and Michael Vrahatis, Multimodal Optimization Using Niching Differential Evolution with Index-based Neighborhoods

Tuesday, IEEE CEC, TuC 4-2, 14:40-15:40, Estimation of distribution algorithms, Marcus Gallagher

148, Xianneng Li, Bing Li, Shingo Mabu and Kotaro Hirasawa, A Continuous Estimation of Distribution Algorithm by Evolving Graph Structures Using Reinforcement Learning

431, Krishna Mishra and Marcus Gallagher, Variable Screening for Reduced Dependency Modelling in Gaussian-based Continuous Estimation of Distribution Algorithms

465, Hiroyuki Sato, Yoshihiko Hasegawa, Danushka Bollegala and Hitoshi Iba, Probabilistic Model Building GP with Belief Propagation

Tuesday, IEEE CEC, TuC 4-3, 14:40-15:40, Multi-objective evolutionary algorithms 4, Kusum Deep and Lam Thu Bui

223, Manuel Abello, Zbigniew Michalewicz and Lam Thu Bui, A Reactive-Proactive Approach for Solving Dynamic Scheduling with Time-varying Number of Tasks

312, Vui Ann Shim, Kay Chen Tan and Kok Kiong Tan, A Hybrid Adaptive Evolutionary Algorithm in the Domination-based and Decomposition-based Frameworks of Multi-objective Optimization

537, Asad Mohammadi, Mohammad Nabi Omidvar and Xiaodong Li, Reference Point Based Multi-objective Optimization Through Decomposition

Tuesday, IEEE CEC, TuC 4-4, 14:40-15:40, Particle swarm optimization 6, Mengjie Zhang

330, Adham Atyabi, Martin Luerssen, Sean P. Fitzgibbon and David M. W. Powers, Dimension Reduction in EEG Data using Particle Swarm Optimization

410, Adham Atyabi, Martin Luerssen, Sean P. Fitzgibbon and David M. W. Powers, Adapting Subject-Independent Task-Specific EEG Feature Masks using PSO

646, Guangrui Zhang, Mahdi Mahfouf, George Panoutsos and Shen Wang, A Multi-objective Particle Swarm Optimization Algorithm with a Dynamic Hypercube Archive, Mutation and Population Competition

Tuesday, IEEE CEC, TuC 4-5, 14:40-15:40, Meta-modeling and surrogate models, Michael Kirley

22, Mario A. Munoz, Michael Kirley and Saman Halgamuge, Landscape Characterization of Numerical Optimization Problems Using Biased Scattered Data

279, Alfredo Arias-Montano, Carlos A. Coello Coello and Efren Mezura-Montes, Multi-Objective Airfoil Shape Optimization Using a Multiple-Surrogate Approach

442, Koji Shimoyama, Koma Sato, Shinkyu Jeong and Shigeru Obayashi, Comparison of the Criteria for Updating Kriging Response Surface Models in Multi-Objective Optimization

Tuesday, FUZZ IEEE, TuF 4-1, 14:40-15:40, SS Fuzzy Approaches In Database Management and Information Retrieval 3,Janusz Kacprzyk, Stawomir Zadrozny

31, Luyi Bai, Li Yan and Z. M. Ma, Modeling Topological Relations between Fuzzy Spatiotemporal Regions over Time

257, Mateusz Dziedzic, Slawomir Zadrozny and Janusz Kacprzyk, Towards Bipolar Linguistic SummariesA Novel Fuzzy Bipolar Querying Based Approach

380, Umit Lutfu Altintakan, Adnan Yazici and Murat Koyuncu, A Novel Fuzzy Visual Object Classification Approach

Tuesday, FUZZ IEEE, TuF 4-2, 14:40-15:40, Fuzzy control 2, Klaus J. Diepold

254, Anh Tu Nguyen, Jimmy Lauber and Michel Dambrine, Switching Fuzzy Control of the Air System of a Turbocharged Gasoline Engine

343, Ya-Lun Ouyang, Chian-Song Chiu, Jie-Lun Li and Guan-Chyun Hsieh, High Power Efficiency Design of Direct Methanol Fuel Cell Power Generating Systems

390, Wen-Yen Hsiao and Hsin-Han Chiang, Observer-based Fuzzy Sliding Mode Control for Vehicle Semi-active Suspensions

Tuesday, FUZZ IEEE, TuF 4-3, 14:40-15:40, SS Evolutionary Fuzzy Systems 4, Hisao Ishibuchi, Yusuke Nojima

138, Vasilis Giannoglou, Dimitris Stavrakoudis, John Theocharis and Vasilios Petridis, Genetic Fuzzy Rule Based Classification Systems for Tissue Characterization of Intravascular Ultrasound Images

345, Bruno Giglio, Francesco Marcelloni, Michela Fazzolari, Rafael Alcala and Francisco Herrera, A Case Study on the Application of Instance Selection Techniques for Genetic Fuzzy Rule-Based Classifiers

472, Yusuke Nojima, Shingo Mihara and Hisao Ishibuchi, Application of Parallel Distributed Genetics-based Machine Learning to Imbalanced Data Sets

Tuesday, Hybrid, TuH 4-1, 14:40-15:40, Computational Intelligence Applications In Smart Grid and Micro-grids (Hybrid) 1, Ganesh Kumar Venayagamoorthy

450, Andrew Malakhov, Petr Kopyriulin, Sergey Petrovski and Andrei Petrovski, Adaptation of Smard Grid Technologies The use of Computational Intelligence for reliability estimation and maintenance scheduling

558, Jaime Cepeda, Jose Rueda and Istvan Erlich, Identification of Dynamic Equivalents based on Heuristic Optimization for Smart Grid Applications

627, Tea Tusar, Erik Dovgan and Bogdan Filipic, Evolutionary Scheduling of Flexible Offers for Electricity Supply and Demand

Tuesday, Hybrid, TuH 4-2, 14:40-15:40, Computational Intelligence for Cognitive Robotics (Hybrid) 2, Naoyuki Kubota, Honghai Liu

122, Jingjing Yang and Yaping Dai, A Modified Method of Vehicle Extraction Based on Background Subtraction

272, Yasutake Takahashi, Tatsuya Kimura, Yoichiro Maeda and Takayuki Nakamura, Body Mapping from Human Demonstrator to Inverted-Pendulum Mobile Robot for Learning from Observation

291, Shin Ishiguro, Yoshihiro Kawagishi, Ho Yihsin, Eri Sato-Shimokawara and Toru Yamaguchi, Motion Recognition Using 3D Accelerometer Sensor Network for Mobility Assistant Robot

Tuesday, Hybrid, TuH 4-3, 14:40-15:40, Computational Intelligence and Measurement Systems (Hybrid) 3, Richard J. Duro

44, Janos Grantner, Bradley Bazuin, Liang Dong, Jumana Al-shawawreh, Richard Hathaway, Claudia Fajardo, Matthew Castanier and Shabbir Hussain, Linguistic Model for Axle Fatigue

298, James J.Q. Yu, Victor O.K. Li and Albert Y.S. Lam, Sensor Deployment for Air Pollution Monitoring Using Public Transportation System

608, Santiago Vazquez-Rodriguez, Jesus A. Gomollon, Gervasio Varela and Alejandro Paz-Lopez, Non-Observability Analysis by Means of an Evolutionary Technique in Measured Electric Power Systems

Tuesday, IEEE CEC, Poster TuC, 15:40-17:10, Poster Session IEEE CEC, Bob (R.I) McKay

5, Stephen Chen, Particle Swarm Optimization with pbest Crossover

6, Amit Saha and Tapabrata Ray, A Repair Mechanism for Active Inequality Constraint Handling

29, Hao Zhang, Yunlong Zhu and Xiaohui Yan, Multi-Hive Artificial Bee Colony Algorithm for Constrained Multi-Objective Optimization

69, Krishna Veni Selvan, Mohd Saufee Muhammad and Sharifah Masniah Wan Masra, Ensembles of DNA Letters for the Design of Unique DNA Library Using a Modified Version of Multi-criteria VEDEPSO Optimizer

90, Olfa Dridi, Saoussen Krichen and Adel Guitouni, A Multi-Objective Optimization Approach for Resource Assignment and Task Scheduling Problem Application to Maritime Domain Awareness

95, Shi Cheng, Yuhui Shi and Quande Qin, Population Diversity Based Study on Search Information Propagation in Particle Swarm Optimization

102, Viswanath Avasarala and Piero Bonissone, iPresage An innovative Patent Landscaping tool

122, Yu Guo, Wei-neng Chen and Jun Zhang, Enhancing the Performance of Evolutionary Algorithms--A Novel Maturity-Based Adaptation Strategy

146, Marcel Kroetz, Tania Centeno, Myriam Delgado, Leyza Dorini, Vitor Fylyk, Allan Vieira, Luis Lucas and Marcelo Felisberto, Genetic Algorithms to Automatic Weld Bead Detection in Double Wall Double Image Digital Radiographs

171, Kaibo Zhang, Bin Li and Lixiang Tan, Empirical study of the effect of variable correlation on grouping in Cooperative Coevolutionary Evolutionary Algorithms

184, Zhifei Shao and Meng Joo Er, A Review of Inverse Reinforcement Learning Theory and Recent Advances

192, Peter Korosec and Jurij Silc, The Continuous Differential Ant-Stigmergy Algorithm Applied to Dynamic Optimization Problems

203, Marcos Alvares, Fernando Buarque and Tshilidzi Marwala, Optimizing Risk Management Using NSGA-II

207, Henry Lehmann and Stefan Menzel, Evolvability as Concept for the Optimal Design of Free-Form Deformation Control Volumes

210, Luciano Silveira, Ricardo Tanscheit and Marley Vellasco, Quantum-Inspired Genetic Algorithms applied to Ordering Combinatorial Optimization Problems

222, Bing Li, Xianneng Li, Shingo Mabu and Kotaro Hirasawa, Towards Automatic Discovery and Reuse of Subroutines in Variable Size Genetic Network Programming

289, Jui-Le Chen, Chun-Wei Tsai and Chu-Sing Yang, An Improved LGA for Protein-Ligand Docking Prediction

329, Jiaqing Xu, Qi Lv, Jie Zhou and Yong Dou, A Self-Organizing and Self-Adaptive French Flag Organism Based on Lateral Activation Model

393, Jun-Wei Qiu, John K. Zao and Yu-Hsiang Chou, A Geometrically Faithful Memetic Algorithm for Searching Sparse Representations of EEG Signals

396, Jailton Louzada, Celso Camilo-Junior, Auri Vincenzi and Cassio Rodrigues, An Elitist Evolutionary Algorithm for Automatically Generating Test Data

399, Ali Sharifi, Vahid Noroozi, Masoud Bashiri, Ali B. Hashemi and Mohammad Reza Meybodi, Two Phased Cellular PSO A New Collaborative Cellular Algorithm for Optimization in Dynamic Environments

407, Xing Fang, Nicholas Koceja, Justin Zhan, Gerry Dozier and Dasgupta Dipankar, An Artificial Immune System for Phishing Detection

433, Kalyanmoy Deb and Himanshu Jain, Handling Many-Objective Problems Using an Improved NSGA-II Procedure

434, Rachel Hunt, Kourosh Neshatian and Mengjie Zhang, Scalability Analysis of Genetic Programming Classifiers

439, Yan Meng and Guo Hongliang, A Gene Regulatory Network based Framework for Self-Organization in Mobile Sensor Networks

446, Mio Takano and Yuko Osana, Automatic Composition System using Genetic Algorithm and N-gram Model considering Melody Blocks

483, Rammohan Mallipeddi and Minho Lee, Ensemble Based Face Recognition using Discriminant PCA Features

585, Yanik Ngoko, Alfredo Goldman and Denis Trystram, Malleable resource sharing algorithms for cooperative resolution of problems

586, Daiki Watanabe and Kazuyuki Ito, Roles of real-world properties in the Baldwin effect

591, Mohammad Osiur Rahman, Aini Hussain, Edgar Scavino, M. A. Hannan and Hassan Basri, Object Identification Using DNA Computing Algorithm

598, Maolin Tang, Evolutionary Placement of Continuously Operating Reference Stations of Network Real-Time Kinematic

599, Oleg Kovarik and Pavel Kordik, Max-Min Ant System with Linear Memory Complexity

606, Benjamin Lacroix, Daniel Molina and Francisco Herrera, Region based memetic algorithm with LS chaining

612, Stjepan Picek, Marin Golub and Domagoj Jakobovic, Influence of the Crossover Operator in the Performance of the Hybrid Taguchi GA

648, Geoffrey Neumann and David Cairns, Targeted EDA Adapted for a Routing Problem with Variable Length Chromosomes

666, Cristiane Taroco, Eduardo Carrano, Oriane Neto and Ricardo Takahashi, A Faster Genetic Algorithm for Substation Location and Network Design of Power Distribution Systems

688, Arindam Jati, Garima Singh, Pratyusha Rakshit, Amit Konar, Eunjin Kim and Atulya K. Nagar, A Hybridisation of Improved Harmony Search and Bacterial Foraging for Multi-robot Motion Planning

697, Zhenan He and Gary Yen, A New Fitness Evaluation Method Based on Fuzzy Logic in Multiobjective Evolutionary Algorithms

707, Qiao Shi, Wei Yin and Andy Song, Analysis of Motion Detectors Evolved by Genetic Programming

728, Tsujimoto Takahiro, Shindo Takuya, Kimuta Takayuki and Jin'no Kenya, A Relationship between Network Topology and Search Performance of PSO

Tuesday, FUZZ IEEE, TuF 5-1, 16:10-17:10, SS Soft data analysis based knowledge discovery, Mika Sato-Ilic

266, Jeffrey W. Tweedale, Fuzzy Control Loop in an Autonomous Landing System for Unmanned Air Vehicles

348, Takashi Hasuike, Hideki Katagiri, Hiroe Tsubaki and Hiroshi Tsuda, Constructing Membership Function Based on Fuzzy Shannon Entropy and Human's Interval Estimation

396, Mika Sato-Ilic, Structural Classification based Correlation and its Application to Principal Component Analysis for High-Dimension Low-Sample Size Data

Tuesday, FUZZ IEEE, TuF 5-2, 16:10-17:10, Fuzzy control 3, Klaus J. Diepold

18, Yongming Li, Tieshan Li and Shaocheng Tong, Robust Adaptive Fuzzy Control of Nonlinear Systems with Input Saturation Based on DSC and K-Filter Techniques

27, Miguel Bernal, Raymundo Marquez, Victor Estrada-Manzo and Bernardino Castillo-Toledo, Nonlinear Output Regulation via Takagi-Sugeno Fuzzy Mappingsa Full-Information LMI Approach

169, Dawei Zhang, Qing-Long Han and Xinchun Jia, Tracking Control for Network-based T-S Fuzzy Systems With Asynchronous Constraints

Tuesday, FUZZ IEEE, TuF 5-3, 16:10-17:10, Fuzzy optimization, Fernando Gomide

293, Jussara R. Ciappina, Akebo Yamakami and Ricardo C. Silva, An adaptation of Dantzig-Wolfe decomposition applied to fuzzy multicommodity flow problems

303, Pintu Chandra Shill, Md. Faijul Amin, M. A. H. Akhand and Kazuyuki Murase, Optimization of Interval Type-2 Fuzzy Logic Controller Using Quantum Genetic Algorithms

400, Pintu Chandra Shill, Md. Faijul Amin and Kazuyuki Murase, Design of a Self-Tuning Hierarchical Fuzzy Logic Controller for Nonlinear Swing Up and Stabilizing Control of Inverted Pendulum

Tuesday, Hybrid, TuH 5-1, 16:10-17:10, Computational Intelligence for Security, Sureveillance and Defense (Hybrid) 1, Slawo Wesolkowski, Rami Abielmona, and Derek Anderson

388, Teck Wee Chua, Karianto Leman and Yue Wang, Fuzzy Rule-Based System for Dynamic Texture and Color Based Background Subtraction

705, Slawomir Wesolkowski and Daniel Wojtaszek, SaFESST Stochastic Fleet Estimation Under Steady State Tasking via Evolutionary Fleet Scheduling

730, Rafael Falcon and Rami Abielmona, A Response-Aware Risk Management Framework for Search-and-Rescue Operations

Tuesday, Hybrid, TuH 5-2, 16:10-17:10, Computational Intelligence for Agents and Robotics (Hybrid), Hani Hagras and Naoyuki Kubota

377, Xuehong Tao, Nicola Yelland and Yanchun Zhang, Fuzzy Cognitive Modeling for Argumentative Agent

450, Jin Wang, Ronghua Chen, Xiangping Sun, Mary F.H.She and Lingxue Kong, Generative models for automatic recognition of human daily activities from a single triaxial accelerometer

481, Harumitsu Nobuta, Kenta Kawamoto, Kuniaki Noda, Kohtaro Sabe, Hiroshi G. Okuno, Shun Nishide and Tetsuya Ogata, Body area segmentation from visual scene based on predictability of neuro-dynamical system

Tuesday, IJCNN, TuN 5-1, 16:10-17:10, Adaptive Dynamic Programming and 1ts Applications In Complex Networked Systems, Haibo He, Derong Liu, Dongbin Zhao

181, Jilie Zhang, Huaguang Zhang, Yanhong Luo and Hongjing Liang, Optimal control design for nonlinear systems Adaptive dynamic programming based on fuzzy critic estimator

389, Ni Zhen, He Haibo, Zhao Dongbin and Prokhorov Danil, Reinforcement Learning Control Based on Multi-Goal Representation Using Hierarchical Heuristic Dynamic Programming

432, Qiming Zhao, Hao Xu and Jagannathan Sarangapani, Adaptive Dynamic Programming-based State Quantized Networked Control System without Value and/or Policy Iterations

Tuesday, IJCNN, TuN 5-2, 16:10-17:10, Time Series Prediction 2, Teresa Ludermir and Marley Vellasco

354, Ronaldo Aquino, Hugo Gouveia, Milde Lira, Aida Ferreira, Otoni Nobrega Neto and Manoel Carvalho Jr, Wind Forecasting and Wind Power Generation Looking for the Best Model Based on Artificial Intelligence

556, Biju Joseph Jacob, Eng Yeow Cheu, Javan Tan and Chai Quek, Self-Reorganizing TSK Fuzzy Inference System with BCM Theory of Meta-Plasticity

676, Nikolaos Kourentzes, Data Driven Fitting Sample Selection For Time Series Forecasting With Neural Networks

Tuesday, IJCNN, TuN 5-3, 16:10-17:10, Spiking Neural Networks for Spatio-and Spectro-Temporal Data Modelling and Pattern Recognition, Nik Kasabov

390, Jun Yin and Yan Meng, Reservoir Computing Ensembles for Multi-Object Behavior Recognition

463, Ammar Belatreche and Rakesh Paul, Dynamic Cluster Formation using Populations of Spiking Neurons

503, Ammar Mohemmed and Nikola Kasabov, Incremental Learning Algorithm for Spatio-Temporal Spike Pattern Classification

Tuesday, IJCNN, TuN 5-4, 16:10-17:10, Complex-Valued Neural Networks 1, Igor Aizenberg, Akira Hirose, Danilo Mandic, and Jacek M. Zurada

73, Ayato Ejiri and Akira Hirose, Landmine visualization system based on multiple complex-valued SOMs to integrate multimodal information

186, A.Y.H. Al-Nuaimi, Md. Faijul Amin and Murase Kazuyuki, Enhancing MP3 Encoding by Utilizing a Predictive Complex-Valued Neural Network

632, Teijiro Isokawa, Haruhiko Nishimura and Nobuyuki Matsui, On the Fundamental Properties of Fully Quaternionic Hopfield Network

Tuesday, IJCNN, TuN 5-5, 16:10-17:10, Feedforward Neural Networks 2, Jun Wang

117, Jonathan Wright and Ivan Jordanov, Intelligent Approaches in Locomotion

576, Pedro M. Ferreira, Sergio M. Silva and Antonio E. Ruano, Energy Savings in HVAC Systems Using Discrete Model-Based Predictive Control

586, Peter Mc Leod and Brijesh Verma, Clustered Ensemble Neural Network for Breast Mass Classification in Digital Mammography

Tuesday, IJCNN, TuN 5-6, 16:10-17:10,Concept Drift, Domain Adapation and Learning In Dynamic Environments, Polikar, Robi

276, Cesare Alippi, Giacomo Boracchi and Manuel Roveri, Just-In-Time Ensemble of Classifiers

588, Karl Dyer and Robi Polikar, Semi-Supervised Learning in Initially Labeled Non-Stationary Environments with Gradual Drift

662, Eng Yeow Cheu, Kelvin Sim, See Kiong Ng and Chai Quek, Fuzzy Associative Learning of Feature Dependency for Time Series Forecasting

Tuesday, IJCNN, Poster Neuro, 17:10-19:00, Neuroscience and Neurocognition Track, Walter J Freeman and Daniel Levine

757, Petia Georgieva, Nuno Figueiredo and Filipe Silva, Error Detection for Brain Machine Interface Enhancement

760, Fu Siyao, Optimal eye-fixation positions for racially diverse face perception a combined EPR and eye-tracking empirical study

761, Fu Siyao, The face-sensitive N170 encodes social cognitive information

762, Fu Siyao, Sub-cortical face processing route encode first impressions

765, Jenia Jitsev, Nobi Abraham, Abigail Morrison and Marc Tittgemeyer, Learning from delayed reward and punishment in a spiking network model of the basal ganglia with opposing, dopamine-modulated D1/D2 synaptic plasticity

766, Lijun Jiang, Mervyn Yeo and Eugene Tham, Comparison Study On Mental Focus Onset between Able-bodied and Physically Challenged

767, Narutoshi Horimoto and Toshimichi Saito, Analysis of Simple Discrete Dynamical Systems having Rich Spike-trains

768, Lijun Jiang, BMI based assistive device opertaed in smartphone

769, Neeraj Kumar and Raees Ahmad Khan, Motor functioning alterations in rat's brain after acute exposure of non-ionizing radiation through Global System of Mobile Communications - 900 MHz.

770, Kiruthika Ramanathan, Annett Schirmer, Ning Ning, Shi Luping and Wei He, A cognitive architecture for memory based future storage devices

771, Kiruthika Ramanathan, A cognitively inspired bottom up architecture of semantic representation

772, Andrew Cookson, Optimization of electrode array currents for neural prosthetic applications

773, Li-ning Xing, Ying-wu Chen and Jian Xiong, Dynamic Structure-based Neural Network Determination for Simulation Optimization

774, James Schwaber, Systems and Computational Biology Bridging Gene Networks to Neural Networks

775, Stewart Heitmann, Pulin Gong and Michael Breakspear, A Phase-coupled Oscillator Model of Forward Motor Control in Humans

776, Charles Dyer, TDE-R A recursive cognitive architecture

778, Sabibullah M Safi, Promising models in Stroke risk prediction and classification process

779, Kwang Ryeol Lee, Jae Hyun Lim and Dae-Shik Kim, Temporal groupings of orientation selectivity yields novel visual scene statistics

780, Emmanuelle Tognoli and J. A. Scott Kelso, The Complementary Nature of Networks and Fields Extracellular Field Contributions to a Globally Conscious Brain

781, Paul McCarthy, Lubica Benuskova and Elizabeth Franz, Graph theoretical analysis of functional connectivity in the brain

782, Brett Schmerl, Daniel Padilla and Mark McDonnell, Stochastic Facilitation in Brainstem Neurons Due To Ion-Channel Noise Noise-Enhanced Neural Coding

783, Astrid Zeman, Oliver Obst and Kevin Brooks, The Muller-Lyer Illusion in a Support Vector Machine (SVM) Classifier

784, Jingwei Yue, Jun Jiang, Zongtan Zhou, Yadong Liu and Dewen Hu, Separating multiple motor imagery potentials for implementing a natural controlling paradigm of brain-computer interface (BCI)

785, Uramoto Takumi and Torikai Hiroyuki, A Calcium-based simple model of STDP

786, Yuki Komori, Akira Notsu, Katsuhiro Honda and Hidetomo Ichihashi, Automatic Adaptive Space Segmentation Based on Entropy or PCA for Reinforcement Learning

787, Tsuyoshi Beppu, Akira Notsu, Katsuhiro Honda and Hidetomo Ichihashi, Extension of Actor-Critic Method to Action Space

788, Devendra Singh, Soniya Kumar and Pradeep Kumar, First Step Towards Computing with Microtubules

789, Kwang-Eun Ko, Seung-Min Park, Jun Yeup Kim and Kwee-Bo Sim, Object-related Hand Motion-based Intention Estimation System using Adaptive Mirroring Neural Network

790, Kwee-Bo Sim, Kwang-Eun Ko, Seung-Min Park, Yong-Hoon Kim and Thanh Ha Nguyen*, Optimized EEG Feature Extraction using Stationary Common Spatial Pattern in Hand Movement

791, Pharino Chum, Yong Hoon Kim, Seung-Min Park, Kwang-Eun Ko and Kwee-Bo Sim, Adaptive Probabilistic Neural Network for EEG Feature Extraction in Classification of the Imagination Hand Movement

792, Makara Vanny, Yong-Hoon Kim, Seung-Min Park, Kwang-Eun Ko and Kwee-Bo Sim, Support Vector Machine Classifier-based Emotion Recognition for Biofeedback

793, Seung-Min Park, Jun-Yeup Kim, Kwang-Eun Ko and Kwee-Bo Sim, An Auditory Paradigm-based Brain-Computer Interfaces for Intention Recognition using the event-related potentials

794, Nasim Nematzadeh and David Powers, Wavelet illusion or Reality ?

795, Li-Wei Ko, Yu-Tin Liu, Pei-Hua Huang, Chun-Hsiang Chuang and Chin-Teng Lin, Identifying dynamic brain activities of Response Inhibition in Scenario-compatible Stop-Signal Tasks

797, Ho Gyeong Kim, Cheong-An Lee and Soo-Young Lee, An Active Learning Algorithm for Brain-like Knowledge Development

798, Cheong-An Lee, Hyun Ah Song and Soo-Young Lee, Hierarchical Feature Extraction for Brain-like Knowledge Development

799, Min Jing, T. Martin McGinnity, Sonya Coleman, Armin Fuchs and J. A. Scott Kelso, Quantification of the temporal change of diffusion patterns following mild traumatic brain injury

800, John Varghese, Kristian Weegink, Paul Bellette, Paul Meehan and Peter Silburn, Use of the Non-Markov Parameter in Unfiltered Micro Electrode Deep Brain Recordings to Estimate the Coefficient of Variation in Neuron Firing Times

801, Kristian Weegink, Paul Bellette, Varghese John, Paul Meehan and Peter Silburn, Measures of Information Exchange Between Surrounding Activity and a Single Neuron using Microelectrode Recordings.

802, Basabdatta Sen Bhattacharya, Yuksel Cakir, Neslihan Serap Sengor, Liam Maguire and Damien Coyle, Non-linear dynamical analysis of a modified alpha rhythm model

803, Roberto Santana, Concha Bielza and Larranaga Pedro, Multi-objective optimization approach to the analysis of inter-subject and inter-session variability in BCI experiments

804, Craig Vineyard, Stephen Verzi and Gregory Heileman, Neurocomputation By A Neural Chip-Firing Game

805, Shin-ichi Asakawa, Early vs late information integration for processing langage task

806, BoKyeong Kim, SuhYeon Dong, HyunAh Song and SooYoung Lee, Discriminant Feature Extraction based on Nonnegative Matrix Factorization for BCI system

809, Muhammad Naeem, David Watson, Martin McGinnity, Prasad Girijesh, KongFatt Wong-Lin and Scott Kelso, Changes of brain connectivity in social interaction tasks

Wednesday 13th of June 2012

Piero P. Bonissone, Lazy Meta-Learning: Creating Customized Model Ensembles on Demand

Wednesday, IEEE CEC, WeC 1-1, 9:20-10:20, Multiobjective optimization 1, Robin C Purshouse

247, Chih-Li Huo, Shu-Yan Lin, Tzu-Ying Lai, Yean-Shain Lien and Tsung-Ying Sun, Multi-Objective Differential Evolution with Taguchi-based Adjustable Proportional Distribution

294, Ruochen Liu, Xiao Wang, Yangyang Li and Zhang Xiangrong, Multi-objective Invasive Weed Optimization Algortihm for Clustering

555, Soumyadip Sengupta, Swagatam Das, Md. Nasir, A. V. Vasilakos and Witold Pedrycz, Energy-Efficient Differentiated Coverage of Dynamic Objects using an Improved Evolutionary Multi-objective optimization Algorithm with Fuzzy-Dominance

Wednesday, IEEE CEC, WeC 1-2, 9:20-10:20, Genetic algorithms 2, Bin Shen

588, Grant Dick, Niche Allocation in Spatially-Structured Evolutionary Algorithms with Gradients

616, Bernabe Dorronsoro and Pascal Bouvry, Study of Different Small-world Topology Generation Mechanisms for Genetic Algorithms

641, Antonio Leitao, Francisco B. Pereira and Penousal Machado, Enhancing Cluster Geometry Optimization with Island Models

Wednesday, IEEE CEC, WeC 1-3, 9:20-10:20, Genetic programming 1, Alex Freitas

155, Alberto Moraglio, Fernando Otero, Colin Johnson, Simon Thompson and Alex Freitas, Evolving Recursive Programs using Non-recursive Scaffolding

337, Yanyun Tao, Jian Cao, Yuzhen Zhang, Jiajun Lin and Minglu Li, Using Module-level Evolvable hardware Approach in Design of Sequential Logic Circuits

651, Tom Castle and Colin Johnson, Evolving Program Trees with Limited Scope Variable Declarations

Wednesday, IEEE CEC, WeC 1-4, 9:20-10:20,Heuristics, metaheuristics and hyper-heuristics 1, Sanjay Srivastava

49, Zhou Wu, Lu Xu, T. W. S. Chow and Mingbo Zhao, Local Cooperation Delivers Global Optimization

565, Richa Bansal, Kamal Srivastava and Sanjay Srivastava, A Hybrid Evolutionary Algorithm for the Cutwidth Minimization Problem

682, Ahmed El-Bouri, An Investigation of Initial Solutions on the Performance of an Iterated Local Search Algorithm for the Permutation Flowshop

Wednesday, IEEE CEC, WeC 1-5, 9:20-10:20, Interactive evolutionary computation, Colin Johnson

34, Colin Johnson, Search-based Evolutionary Operators for Extensionally-defined Search Spaces Applications to Image Search

626, Ankur Sinha, Anmol Pandey and Kalyanmoy Deb, Solving High Objective Problems in Fixed Interactions with the Decision Maker

674, Waldo Cancino, Nadia Boukhelifa and Evelyne Lutton, EvoGraphDice Interactive Evolution for Visual Analytics

Wednesday, IEEE CEC, WeC 1-6, 9:20-10:20, Multi-objective evolutionary algorithms 5, Jong-Hwan Kim

179, Jeremy Stringer, Gary Lamont and Geoffrey Akers, Radar Phase-Coded Waveform Design using Multi-Objective Evolutionary Algorithms

249, Si-Jung Ryu, Ki-Baek Lee and Jong-Hwan Kim, Improved Version of a Multiobjective Quantum-inspired Evolutionary Algorithm with Preference-based Selection

572, Claudia Szabo and Trent Kroeger, Evolving Multi-objective Strategies for Task Allocation of Scientific Workflows on Public Clouds

Wednesday, FUZZ IEEE, WeF 1-1, 9:20-10:20, SS Type-2 Fuzzy Logic Theory 1, Jerry Mendel

87, Dongrui Wu, Twelve Considerations in Choosing between Gaussian and Trapezoidal Membership Functions in Interval Type-2 Fuzzy Logic Controllers

100, Xinwang Liu, Yong Qin and Lingyao Wu, Fast and Direct Karnik-Mendel Algorithm Computation for the Centroid of an Interval Type-2 Fuzzy Set

149, Syibrah Naim and Hani Hagras, A Hybrid Approach for Multi-Criteria Group Decision Making Based on Interval Type-2 Fuzzy Logic and Intuitionistic Fuzzy Evaluation

Wednesday, FUZZ IEEE, WeF 1-2, 9:20-10:20, SS Software for Soft Computing 1, Jesús Alcalá-Fernandez

67, Serge Guillaume, Brigitte Charnomordic and Bruno Tisseyre, Open source software for modelling using agro-environmental georeferenced data

140, Jose Alonso, David Pancho and Luis Magdalena, Enhancing the fuzzy modeling tool GUAJE with a new module for fingrams-based analysis of fuzzy rule bases

236, Pablo Cingolani and Jesus Alcala-Fdez, jFuzzyLogicA Robust and Flexible Fuzzy-Logic Inference System Language Implementation

Wednesday, FUZZ IEEE, WeF 1-3, 9:20-10:20, SS Fuzzy Interpolation 1, Qiang Shen

144, Chengyuan Chen and Qiang Shen, A New Method for Rule Interpolation Inspired by Rough-Fuzzy Sets

304, Szilveszter Kovacs, Extending the Concept of Fuzzy Rule Interpolation with the Interpolation of the Fuzziness

414, Krisztian Balazs and Laszlo T. Koczy, Genetic and Bacterial Memetic Programming Approaches in Hierarchical-Interpolative Fuzzy System Construction

Wednesday, IJCNN, WeN 1-1, 9:20-10:20, Machine Learning Techniques for Multimedia search, Basabi Chakraborty

518, Basabi Chakraborty, Integrating Awareness in User Oriented Route Recommendation System

526, Dan Ciresan, Ueli Meier and Juergen Schmidhuber, Transfer Learning for Latin and Chinese Characters with Deep Neural Networks

598, Mariusz Rybnik and Wladyslaw Homenda, Extension of Knowledge-driven Harmonization Model for Tonal Music

Wednesday, IJCNN, WeN 1-2, 9:20-10:20, Supervised Learning 3, Alessandro Sperduti

205, Chi Chung Cheung, Sin Chun Ng and Andrew K Lui, Improving the Quickprop algorithm

348, Yungang Zhang, Bailing Zhang, Frans Coenen and Wenjin Lu, Highly Reliable Breast Cancer Diagnosis with Cascaded Ensemble Classifiers

368, Yu Xu, Man Lan, Yue Lu, Zheng Yu Niu and Chew Lim Tan, Connective Prediction using Machine Learning for Implicit Discourse Relation Classification

Wednesday, IJCNN, WeN 1-3, 9:20-10:20, Recurrent Neural Networks 1, Teresa Ludermir

10, Li Jun, Yang Jian and Diao Yongfeng, Continuous Attractors of Recurrent Neural Networks with Complex-valued Weights

377, Vazquez-Santacruz Eduardo and Bayro-Corrochano Eduardo, A New Geometric Recurrent Neural Network Based On Radial Basis Function and Elman Models

413, Hironori Kumeno, Yoko Uwate and Yoshifumi Nishio, Performance of Quadratic Assignment Problem by Hopfield NN with Periodic Brake

Wednesday, IJCNN, WeN 1-4, 9:20-10:20, Cognitive Architectures, Ron Sun

58, Ron Sun and Sebastien Helie, Reasoning with Heuristics and Induction

286, Tsukasa Sagara and Masafumi Hagiwara, Natural Language Neural Network and its Application to Question-Answering System

123, Hyohyeong Kang and Seungjin Choi, Bayesian Common Spatial Patterns with Dirichlet Process Priors for Multi-Subject EEG Classification

Wednesday, IJCNN, WeN 1-5, 9:20-10:20, Bioinformatics, Marley Vellasco

239, Benhui Chen, Lihua Duan and Jinglu Hu, Composite Kernel Based SVM for Hierarchical Multi-label Gene Function Classification

288, Parman Sukarno, Nandita Bhattacharjee and Bala Srinivasan, Increasing Level of Confidence of Iris Biometric Matching

613, Rogerio Rosa, Rafael Santos and Katia Guimaraes, Accurate Prediction of Error in Haplotype Inference Methods through Neural Networks

Wednesday, IJCNN, Poster WeN, 10:20-12:00, Poster session IJCNN, Bob (R.I) McKay

2, Rong-Jong Wai, You-Wei Lin and Li-Chung Shih, Design of adaptive fuzzy-neural-network control for DC-DC boost converter

36, Andrew Paplinski, Rotation-Invariant Categorization of Colour Images using the Radon Transform

37, Wei-Chen Cheng, Jiun-Wei Liou and Cheng-Yuan Liou, Construct Adaptive Template Array for Magnetic Resonance Images

108, Rami Khushaba, Sarath Sakoda, Gamini Dissanayake, Luke Greenacre, Sandra Burke and Jordan Louviere, A Neuroscientific Approach to Choice Modeling Electroencephalogram (EEG) and User Preferences

143, Nitin Mahadeo, Andrew Paplinski and Sid Ray, Model-Based Pupil and Iris Localization

166, Miao Hu, Hai Li, Qing Wu, Garrett S. Rose and Yiran Chen, Memristor Crossbar Based Hardware Realization of BSB Recall Function

176, Wen-Shyong Yu and Chih-Hao Lin, Trajectory Tracking Control of the Guiding And Following Mobile Robots Elliptic Collision-Free Approach

191, Hirokazu Madokoro, Kenya Honma and Kazuhito Sato, Classification of Behavior Patterns with Trajectory Analysis Used for Event Site

203, Zhou Jingbo, Jin Zhong and Yang Jingyu, Multiscale saliency detection using principle component analysis

215, Konstantin Zmeu, Boris Notkin, Pavel Dyachenko and Victor Kovalev, Fast Predictive Inverse Neurocontrol Comparative Simulation and Experiment

219, Yang Gang, Gao Shangce, Yi Junyan and Meng Xiaofeng, Unsupervised Up-to-Bottom Hierarchical Clustering Elastic Net Algorithm for TSP

233, Michael Fairbank and Eduardo Alonso, A Comparison of Learning Speed and Ability to Cope Without Exploration between DHP and TD(0)

235, Gonzalo E. Paredes and Luis S. Vargas, Circle-Clustering A New Heuristic Partitioning Method for the Clustering Problem

250, Hualiang Zhuang, Bo Zhao, Zohair Ahmad, Shoushun Chen and Kay Soon Low, 3D Depth Camera Based Human Posture Detection and Recognition Using PCNN Circuits and Learning-Based Hierarchical Classifier

253, Hu Lu, Bao-Ming Li and Hui Wei, A small-world of neuronal functional network from multi-electrode recordings during a working memory task

282, Shengjun Xu, Guanghui Liu and Xin Liu, Image segmentation via ant colony algorithm and loopy belief propagation algorithm

303, Tomohiro Kato, Mikio Hasegawa and Aihara Kazuyuki, Performance Improvement of Heuristic Algorithms for Large Scale Combinatorial Optimization Problems using Lebesgue Spectrum Filter

314, David Jaramillo, Ignacio Rojas, Alberto Prieto, Olga Valenzuela and Ignacio Garcia, Advanced systems in medical decision-making using intelligent computing. Application to magnetic resonance imaging

322, Bin Xia, Qingmei Zhang, Hong Xie and Jie Li, A Neurofeedback training paradigm for motor imagery based Brain-Computer Interface

343, Hui Wang, Hai Li and Robinson Pino, Memristor-based Synapse Design and Training Scheme for Neuromorphic Computing Architecture

366, Michael Avery, Jeffrey Krichmar and Nikil Dutt, Spiking Neuron Model of Basal Forebrain Enhancement of Visual Attention

395, Cheng Zhang, Yosuke Kimura, Hiroshi Higashi and Toshihisa Tanaka, A Simple Platform of Brain-Controlled Mobile Robot and Its Implementation by SSVEP

397, Chin-Teng Lin, Shu-Fang Tsai, Hua-Chin Lee, Hui-Lin Huang, Shinn-Ying Ho and Li-Wei Ko, Motion Sickness Estimation System

398, Fang-Chen Chuang, Jeen-Shing Wang, Ya-Ting Yang and Tzu-Ping Kao, A Wearable Activity Sensor System and Its Physical Activity Classification Scheme

400, Luis Filipe A. Pereira, Hector N. B. Pinheiro, Jose Ivson S. Silva, Anderson G. Silva, Thais M. L. Pina, George D. C. Cavalcanti, Ing Ren Tsang and Joao Paulo N. de Oliveira, A fingerprint spoof detection based on MLP and SVM

408, Xiangnan He, Wenlian Lu and Tianping Chen, A Note on Adaptive L_{p} Regularization

427, Arash Jalalian, Stephan Chalup and Michael Ostwald, Analysis of pedestrian spatial behaviour using GDTW-P-SVMs

438, Alcides X. Benicasa, Liang Zhao and Roseli A.F. Romero, Model of Top-Down / Bottom-UP Visual Attention for Location of Salient Objects in Specific Domains

459, Baiying Lei, Insu Song and Shah Atiqur Rahman, Optimal Watermarking Scheme for Breath Sound

471, Ranisha Fernando and Siddhivinayak Kulkarni, Hybrid Technique for Colour Image Classification and Efficient Retrieval based on Fuzzy Logic and Neural Networks

483, Gonzalo S. Nido, Joanna M. Williams and Lubica Benuskova, Bistable properties of a memory-related gene regulatory network

508, Adhi Harmoko Saputro, M. Marzuki Mustafa, Aini Hussain, Oteh Maskon and Ika Faizura Mohd Nor, Shape Deformation Descriptor using Fourier Analysis - Case study in A2C and A4C Views of Left Ventricle

533, Filomena Anelli, Roberto Nicoletti, Sinan Kalkan, Erol Sahin and Anna M. Borghi, Human and robotics hands grasping danger

540, Dermot Kerr, Sonya Coleman, Martin McGinnity, Marine Clogenson and QingXiang Wu, A Novel Approach to Robot Vision using a Hexagonal Grid and Spiking Neural Networks

541, Masato Yonekawa and Hiroaki Kurokawa, The Content-Based Image Retrieval using the Pulse Coupled Neural Network

547, Anwesha Khasnobish, Arindam Jati, Garima Singh, Saugat Bhattacharyya, Amit Konar, D.N. Tibarewala, Eujin Kim and Atulya Nagar, Object-Shape Recognition from Tactile Images Using a Feed-forward Neural Network

600, Zheng-Ping Wei and Bao-Liang Lu, Online Vigilance Analysis Based on Electrooculography

605, Araga Yusuke, Shirabayashi Makoto, Kaida Keishi and Hikawa Hiroomi, Real Time Gesture Recognition System Using Posture Classifier and Jordan Recurrent Neural Network

620, Bisser Raytchev and Yusuke Kimura, Real-Time 3D Pose and Correspondence from Stereo Image Sequences by Combinatorial Optimization

659, Indrazno Siradjuddin, Laxmidhar Behera, T. Martin McGinnity and Sonya Coleman, A position based visual tracking system for a 7 DOF robot manipulator using a Kinect camera

664, Kristina Vassiljeva, Eduard Petlenkov and Juri Belikov, GA based Optimization of NN-SANARX Model for Adaptive Control of Nonlinear Systems

685, Sven Nomm, Vassiljeva Kristina and Petlenkov Eduard, Evaluation Function Optimization for the Genetic Algorithm Based Tuning of NN-ANARX Model Structure

692, Antoine Joubert, Bilel Belhadj, Olivier Temam and Rodolphe Heliot, Hardware spiking neurons design analog or digital?

707, Cleber Zanchettin, Leandro M. Almeida, Frederico D. Menezes, Teresa B. Ludermir and Walter M. Azevedo, Odor recognition systems for natural gas odorization monitoring

731, Suet-Peng Yong, Jeremiah Deng and Martin Purvis, Modeling Semantic Context for Key-frame Extraction in Wildlife Video

Wednesday, IEEE CEC, WeC 2-1, 11:00-12:00, Bilevel Optimization, Kalyanmoy Deb

403, Ankur Sinha, Pekka Malo and Kalyanmoy Deb, Unconstrained Scalable Test Problems for Single-Objective Bilevel Optimization

463, Claire Diora Jordan and Trent Kroeger, An Evolutionary Algorithm for Bilevel Optimisation of Men's Team Pursuit Track Cycling

706, Slawomir Wesolkowski, Daniel Wojtaszek and Kyle Willick, Multi-objective Optimization of the Fleet Mix Problem Using the SaFER Model

Wednesday, IEEE CEC, WeC 2-2, 11:00-12:00, Genetic algorithms 3, Grant Dick

509, Miwako Tsuji, Mitsuhisa Sato, Akifumi Tanabe, Yuji Inagaki and Tetsuo Hashimoto, An Asynchronous Parallel Genetic Algorithm for the Maximum Likelihood Phylogenetic Tree Search

560, Camelia Chira, Anca Gog and David Iclanzan, Evolutionary Detection of Community Structures in Complex Networks a New Fitness Function

618, Zeratul Mohd Yusoh and Maolin Tang, Clustering Composite SaaS Components in Cloud Computing using a Grouping Genetic Algorithm

Wednesday, IEEE CEC, WeC 2-3, 11:00-12:00, Genetic programming 2, Bob (R.I) McKay

449, Miguel Nicolau, Michael O'Neill and Anthony Brabazon, Termination in Grammatical Evolution Grammar Design, Wrapping, and Tails

557, Yoshiko Hanada, Nagahiro Hosokawa, Keiko Ono and Mitsuji Muneyasu, Effectiveness of Multi-step Crossover Fusions in Genetic Programming

710, Kangil Kim, Bob (R.I) McKay and Nguyen Xuan Hoai, Implicit Bias in Grammar-based Estimation of Distribution Genetic Programming The Effects of Recursive Structure

Wednesday, IEEE CEC, WeC 2-4, 11:00-12:00, Heuristics, metaheuristics and hyper-heuristics 2, Sanaz Mostaghim

92, Antonio Bolufe Rohler and Stephen Chen, Multi-swarm hybrid for multi-modal optimization

282, Aldeida Aleti, Irene Moser and Sanaz Mostaghim, Adaptive Range Parameter Control

559, J. J. Liang, X. B, Mao, B. Y Qu, B. Niu and T. J. Chen, Elite Multi-Group Differential Evolution

Wednesday, IEEE CEC, WeC 2-5, 11:00-12:00, Learning classifier systems, Anthony Knittel

124, Anthony Knittel, Learning Feature Hierarchies under Reinforcement

240, Albert Y.S. Lam, Victor O.K. Li and Zhao Wei, Chemical Reaction Optimization for the Fuzzy Rule Learning Problem

745, Henry Williams and Will Browne, Integration of Learning Classifier Systems with Simultaneous Localisation and Mapping for Autonomous Robotics

Wednesday, IEEE CEC, WeC 2-6, 11:00-12:00, Memetic, multi-meme and hybrid algorithms, Eunjin Kim

569, Gareth Jones, Chris Lovell, Steve Gunn, Hywel Morgan and Klaus-Peter Zauner, Enabling the Discovery of Computational Characteristics of Enzyme Dynamics

667, Pavel Bhowmik, Pratyusha Rakshit, Amit Konar, Eunjin Kim and Atulya K. Nagar, DE-TDQL An Adaptive Memetic Algorithm

693, Abhronil Sengupta, Tathagata Chakraborti, Amit Konar, Eunjin Kim and Atulya K. Nagar, An Adaptive Memetic Algorithm Using a Synergy of Differential Evolution and Learning Automata

Wednesday, IEEE CEC, WeC 2-7, 11:00-12:00, Biometrics, bioinformatics and biomedical applications, Simon Poon

596, Josiah Poon, Dawei Yin, Simon Poon, Runshun Zhang, Baoyan Liu and Daniel Sze, Co-evolution of Symptom-Herb Relationship

657, Thayalan Sandran, Nordin Zakaria and Anindya Jyoti Pal, Performance Profile of Some Hybrid Heuristic Search Techniques using Compiler Flag Selection as a Seed Example

752, Hien Nguyen and Ian Wood, Variable selection in statistical models using population-based incremental learning with applications to genome-wide association studies

Wednesday, FUZZ IEEE, WeF 2-1, 11:00-12:00, SS Type-2 Fuzzy Logic Theory 2, Christian Wagner

43, Majid Almaraashi, Robert John and Simon Coupland, Designing Generalised Type-2 Fuzzy Logic Systems Using Interval Type-2 Fuzzy Systems and Simulated Annealing

262, Aysenur Bilgin, Hani Hagras, Areej Malibari, Mohamed Alhaddad and Daniyal Alghazzawi, Towards A General Type-2 Fuzzy Logic Approach for Computing With Words Using Linear Adjectives

440, Simon Miller, Christian Wagner and Jonathan Garibaldi, Constructing General Type-2 Fuzzy Sets from Interval-valued Data

Wednesday, FUZZ IEEE, WeF 2-2, 11:00-12:00, SS Software for Soft Computing 2, Jose M. Alonso

269, Francisco Jose Moreno-Velo, Angel Barriga, Santiago Sanchez-Solano and Iluminada Baturone, XFSMLAn XML-based Modeling Language for Fuzzy Systems

362, Jose M. Cadenas, M. Carmen Garrido and Raquel Martinez, A tool to manage low quality datasets

408, Carmen De Maio, Giuseppe Fenza, Domenico Furno and Vincenzo Loia, f-SPARQL extension and application to support context recognition

Wednesday, FUZZ IEEE, WeF 2-3, 11:00-12:00, SS Fuzzy Interpolation 2, Laszlo Koczy

135, Shangzhu Jin, Ren Diao and Qiang Shen, Backward Fuzzy Interpolation and Extrapolation with Multiple Muti-antecedent Rules

211, Kai Meng Tay, Chee Peng Lim and Tze Ling Jee, Building Monotonicity-Preserving Fuzzy Inference Models with Optimization-Based Similarity Reasoning and a Monotonicity Index

340, Maowen Nie and Woei Wan Tan, Theory of Generalized Fuzzy Discrete Event System

Wednesday, Hybrid, WeH 2-1, 11:00-12:00, Computational Intelligence In Brain Computer Interface (Hybrid) 2, Li-Wei Ko and Chin-Teng Lin

162, Huijuan Yang, Cuntai Guan, Kai Keng Ang, Chuan Chu Wang, Kok Soon Phua and Juanhong Yu, Dynamic Initiation and Dual-Tree Complex Wavelet Feature-based Classification of Motor Imagery of Swallow EEG Signals

251, Kai Keng Ang, Juanhong Yu and Cuntai Guan, Extracting and selecting discriminative features from high density NIRS-based BCI for numerical cognition

272, Chin-Teng Lin, Yu-Kai Wang and Shi-An Chen, A Hierarchal Classifier for Identifying Independent Components

Wednesday, Hybrid, WeH 2-2, 11:00-12:00, Computational Intelligence In Bioinformatics (Hybrid) 2, Michael Lones, Vassilis Plagianakos, Sheridan Houghten

301, Gene M. Ko, A. Srinivas Reddy, Sunil Kumar, Rajni Garg, Barbara A. Bailey and Ahmad R. Hadaegh, Differential Evolution-Binary Particle Swarm Optimization Algorithm for the Analysis of Aryl Beta-Diketo Acids for HIV-1 Integrase Inhibition

344, Rumana Nazmul, Madhu Chetty, Ram Samudrala and David Chalmers, Protein Structure Prediction based on Optimal Hydrophobic Core Formation

467, Leon Palafox and Iba Hitoshi, On the use of Population Based Incremental Learning to do Reverse Engineering on Gene Regulatory Networks

Wednesday, Hybrid, WeH 2-3, 11:00-12:00,Computational Intelligence In Finance, Economics and Management Sciences (Hybrid) 1, Hitoshi Iba

75, Ayub Hanif and Robert Smith, Generation Path-Switching in Sequential Monte-Carlo Methods

85, Chia-Hsuan Yeh and Chun-Yi Yang, Can learning affect the effectiveness of price limits?

196, G A Vijayalakshmi Pai and Thierry Michel, Differential Evolution based optimization of Risk budgeted Equity Market Neutral Portfolios

Wednesday,FUZZ-IEEE Invited Lecture, 13:30-14:30, Chair: Bernadette Bouchon-Meunier
Maria Rifqi, Cognition-inspired fuzzy modelling

Wednesday, IEEE CEC, WeC 3-1, 13:30-14:30, Simulation Model Based Evolutionary Computation and 1ts Application, Qingfu Zhang

97, Diego Bodas-Sagi, Francisco J. Soltero, J. Ignacio Hidalgo, Pablo Fernandez-Blanco and Francisco Fernandez-de-Vega, A Technique for the optimization of the parameters of Technical Indicators with Multi-Objective Evolutionary Algorithms

211, Bo Liu, Qingfu Zhang, Francisco V. Fernandez and Georges Gielen, Self-adaptive Lower Confidence Bound A New General and Effective Prescreening Method for Gaussian Process Surrogate Model Assisted Evolutionary Algorithms

619, Ivo Couckuyt, Dirk Deschrijver and Tom Dhaene, Towards Efficient Multiobjective Optimization Multiobjective Statistical Criterions

Wednesday, IEEE CEC, WeC 3-2, 13:30-14:30, Genetic programming 3, Vic ciesielski

515, Eugene Semenkin and Maria Semenkina, Self-configuring genetic programming algorithm with modified uniform crossover

580, Ngoc Phong Dao, Quang Uy Nguyen, Xuan Hoai Nguyen and R I (Bob) McKay, Evolving Approximations for the Gaussian Q-function by Genetic Programming with Semantic Based Crossover

659, Feng Xie, Andy Song and Vic Ciesielski, Event Detection in Time Series by Genetic Programming

Wednesday, IEEE CEC, WeC 3-3, 13:30-14:30, Heuristics, metaheuristics and hyper-heuristics 3, Stephen Chen

77, Cristian Rotaru and Octav Brudaru, Multi-grid Cellular Genetic Algorithm for Optimizing Variable Ordering of ROBDDs

274, Stephen Chen, Carlos Xudiera and James Montgomery, Simulated Annealing with Thresheld Convergence

551, M. Fatih Tasgetiren, Onder Bulut and M. Murat Fadiloglu, A Discrete Harmony Search Algorithm for the Economic Lot Scheduling Problem with Power of Two Policy

Wednesday, IEEE CEC, WeC 3-4, 13:30-14:30, Optimization, Yu-hui Shi

88, Hassan Bashir and Richard Neville, Convergence Measurement in Evolutionary Computation using Price's Theorem

120, Zhi-hui Zhan, Jun Zhang, Yu-hui Shi and Liu Hai-lin, A Modified Brain Storm Optimization

743, Sanjay Srivastava and Yogesh Anand, An Intelligent System to Address Occupational Health of Workers Exposed to High Risk Jobs

Wednesday, IEEE CEC, WeC 3-5, 13:30-14:30, Hybrid Systems of Computational Intelligence, Oscar J. Romero Lopez

63, Ricardo Rabelo, Ricardo Fernandes and Ivan Silva, Operational Planning of Hydrothermal Systems Based on a Fuzzy-PSO Approach

134, Oscar J. Romero Lopez and Angelica de Antonio, Evolving the way of doing the right thing

753, Sandeep Paul, Satish Kumar and Lotika Singh, Novel Hybrid Compact Genetic Algorithm for Simultaneous Structure and Parameter Learning of Neural Networks

Wednesday, IEEE CEC, WeC 3-6, 13:30-14:30, Art and music, Tang Li

273, Li Yang, Adaptive Learning Evaluation Model For Evolutionary Art

462, Tatsuo Unemi, SBArt4 for an Automatic Evolutionary Art

478, Hsueh En Huang, Yew-Soon Ong and Xianshun Chen, Autonomous Flock Brush for Non-Photorealistic Rendering

Wednesday, Hybrid, WeH 3-1, 13:30-14:30, Computational Intelligence for Cognitive Robotics (Hybrid) 3,aoyuki Kubota, Honghai Liu

21, Rainer Palm and Abdelbaki Bouguerra, Market-Based Algorithms and Fuzzy Methods for the Navigation of Mobile Robots

376, Yinlai Jiang, Isao Hayashi and Shuoyu Wang, Embodied Knowledge Extraction from Human Motion Using Singular Value Decomposition

426, Chern Hong Lim and Chee Seng Chan, A Fuzzy Qualitative Approach for Scene Classification

Wednesday, Hybrid, WeH 3-2, 13:30-14:30,Computational Intelligence for Security, Sureveillance and Defense (Hybrid) 2,Slawo Wesolkowski, Rami Abielmona, and Derek Anderson

128, Kartick Subramanian and Suresh Sundaram, Human Action Recognition using Meta-Cognitive Neuro-Fuzzy Inference System

353, Julio J. Valdes, Catherine Cheung and Matthew Li, Towards conservative helicopter loads prediction using computational intelligence techniques

567, Jingli Li, Son Lam Phung, Fok Hing Chi Tivive and Abdesselam Bouzerdoum, Automatic Classification of Human Motions Using Doppler Radar

Wednesday, IJCNN, WeN 3-1, 13:30-14:30,Active, Incremental and Autonomous Learning: Algorithms and Applications,José García-Rodríguez, Alexandra Psarrou, Andrew Lewis, Natasha Angelopoulou, and Vincent Lemaire

70, Natalia Lyubova and David Filliat, Developmental approach for interactive object discovery

651, Xuelei Hu, Liantao Wang and Bo Yuan, Querying Representative Points from a Pool based on Synthesized Queries

Wednesday, IJCNN, WeN 3-2, 13:30-14:30, Intelligent Embedded Systems, Manuel Roveri and Giacomo Boracchi

340, Afsaneh Doryab and Julian Togelius, Concurrent Activity Recognition For Clinical Work

623, Mrigank Sharad, Charles Augustine, Georois Panagopoulos and Kaushik Roy, Low Power, Programmable Neural Network Hardware Using Spin Devices

631, Cesare Alippi, Ntalampiras Stavros and Manuel Roveri, An HMM-based change detection method for intelligent embedded sensors

Wednesday, IJCNN, WeN 3-3, 13:30-14:30, Machine Learning for Computer Vision 1,Siddhivinayak Kulkarni, Brijesh Verma, and Henry Selvaraj

105, Yongkang Wong, Mehrtash Harandi, Conrad Sanderson and Brian Lovell, On Robust Biometric Identity Verification via Sparse Encoding of Faces Holistic vs Local Approaches

168, Thiago Rocha, Flavio de Barros Vidal and Alexandre Ricardo Soares Romariz, A proposal for human action classification based on motion analysis and artificial neural networks

572, Srikanta Pal, Umapada Pal and Michael Blumenstein, Off-line English and Chinese Signature Identification Using Foreground and Background Features

Wednesday, IJCNN, WeN 3-4, 13:30-14:30, Power Systems Applications 2, Haibo He

133, Shuhui Li, Michael Fairbank, Donald C. Wunsch and Eduardo Alonso, Vector Control of a Grid-Connected Rectifier/Inverter Using an Artificial Neural Network

306, Lian Lian Jiang, Douglas L. Maskell and Jagdish C. Patra, Chebyshev Functional Link Neural Network-Based Modeling and Experimental Verification for Photovoltaic Arrays

538, Jaco Jordaan, Dan Nicolae and Jimoh Adisa, Novel Heuristic and SVM Based Optimization Algorithm for Improving Distribution Feeder Performance

Wednesday, IJCNN, WeN 3-5, 13:30-14:30, Data Mining and Knowledge Discovery 1, David Elizondo

154, Fabricio Breve and Liang Zhao, Particle Competition and Cooperation in Networks for Semi-Supervised Learning with Concept Drift

208, Arnulfo Azcarraga, Michael David Liu and Rudy Setiono, Keyword Extraction Using Backpropagation Neural Networks and Rule Extraction

274, Takayuki Kamei, Keiko Ono, Masahito Kumano and Masahiro Kimura, Predicting Missing Links in Social Networks with Hierarchical Dirichlet Processes

Wednesday, IJCNN, WeN 3-6, 13:30-14:30, Temporal Data Analysis 1, Pablo Estevez

221, Anne Johannet, Line Kong A Siou, Alain Mangin, Valerie BOorrell Estupina, Severin Pistre and Dominique Bertin, Prediction of Spring Discharge by Neural Networks using Orthogonal Wavelet Decomposition

305, Sau Wai Tung, Chai Quek and Cuntai Guan, Traffic Modeling and Identification using a Self-adaptive Fuzzy Inference Network

454, Andre Pereira and Adriano Petry, Data Assimilation using NeuroEvolution of Augmenting Topologies

Wednesday, IEEE CEC Invited Lecture, 14:40-15:40, Chair: Garrison W. Greenwood

Dan Ashlock, Exploring the Issue of Representation in Evolutionary Computation

Wednesday, FUZZ IEEE, WeF 4-1, 14:40-15:40, SS Applications of Type-2 Fuzzy Systems 1, Hani Hagras

247, Hussam Hamrawi, Simon Coupland and Robert John, Parallel Computation of Type-2 Fuzzy Sets using Alpha-cuts

251, Summer Kassem, Hani Hagras, Gilbert Owusu and Sid Shakya, A Type2 Fuzzy Logic System for Workforce Management in the Telecommunications Domain

442, Muhammad Amjad Raza and Frank Chung-Hoon Rhee, Interval Type-2 Approach to Kernel Possibilistic C-Means Clustering

Wednesday, FUZZ IEEE, WeF 4-2, 14:40-15:40, SS Human Symbiotic Systems 1, Yoichiro Maeda

177, Kun Zhang, Yoichiro Maeda and Yasutake Takahashi, Interactive Learning of Social Agents Based on Confidence Degree

216, Takanori Yokoi, Hiromu Takahashi, Tomohiro Yoshikawa and Takeshi Furuhashi, A Study on Classification Performance of Rapid Serial Visual Presentation with Small Choices

332, Yoshihito Maki, Genma Sano, Yusuke Kobashi, Tsuyoshi Nakamura, Masayoshi Kanoh and Koji Yamada, Estimating Subjective Assessments using a Simple Biosignal Sensor

Wednesday, FUZZ IEEE, WeF 4-3, 14:40-15:40, SS Fuzzy Applications to Text Analysis for Awareness Promotion, Kiyota Hashimoto

321, Teiichi Inada and Tokuro Matsuo, The M-DesignerProficient Skilled Material Design Software

326, Hidekazu Yanagimoto and Michifumi Yoshioka, Relationship Strength Estimation for Social Media Using Folksonomy and Network Analysis

411, Yuta Tsuchida, Michifumi Yoshioka, Hidekazu Yanagimoto and Suguru Isaji, Incident Detection from Tweets by Neural Network with GPGPU

Wednesday, Hybrid, WeH 4-1, 14:40-15:40, Computational Intelligence In Bioinformatics (Hybrid) 3,Michael Lones, Vassilis Plagianakos, Sheridan Houghten

34, Shuhei Kimura, Koki Matsumura and Mariko Okada-Hatakeyama, Inference of S-system Models of Genetic Networks by Solving Linear Programming Problems and Sets of Linear Algebraic Equations

475, Jeffrey A. Thompson and Clare Bates Congdon, GAMID Using Genetic Algorithms for the Inference of DNA Motifs That Are Represented in Only a Subset of Sequences of Interest

517, David J. Gagne and Clare Bates Congdon, Preliminary Results for GAMMI Genetic Algorithms for Motif-Module Inference

Wednesday, Hybrid, WeH 4-2, 14:40-15:40,Computational Intelligence In Finance, Economics and Management Sciences (Hybrid) 2, Shu-Heng Chen

248, Shu-Heng Chen and Umberto Gostoli, Coordination in the El Farol Bar Problem The Role of Social Preferences and Social Networks

360, Wei Zhang, Xu Feng, Yongjie Zhang and Xiong Xiong, Information Diffusion and Its Impacts on Artificial Stock Markets in Learning Process

688, Ahmad AlShami, Ahmad Lotfi and Simeon Coleman, Unified Knowledge Based Economy Neural Forecasting Map

Wednesday, Hybrid, WeH 4-3, 14:40-15:40, Computational Intelligence In Communications and Networking (Hybrid) 1, Chuan-Kang Ting

512, Chien-Chih Liao and Chuan-Kang Ting, Extending the Lifetime of Dynamic Wireless Sensor Networks by Genetic Algorithm

522, Pei-Chuan Tsai, Chih-Ming Chen and Ying-ping Chen, Sparse Degrees Analysis for LT Codes Optimization

575, Lucas Benedicic, Mitja Stular and Peter Korosec, Balancing downlink and uplink soft-handover areas in UMTS networks

Wednesday, Hybrid, WeH 4-4, 14:40-15:40, Computational Intelligence Applications In Smart Grid and Micro-grids (Hybrid) 2, Ganesh Kumar Venayagamoorthy

333, Jing Dai, Ganesh Venayagamoorthy, Ronald Harley and Steve Potter, Reservoir-computing-based, Biologically-inspired Artificial Neural Network for Modeling of a Single Machine Infinite Bus Power System

475, Karthikeyan Balasubramaniam, Bipul Luitel and Ganesh Kumar Venayagamoorthy, A Scalable Wide Area Monitoring System using Cellular Neural Networks

652, Jacqueline Llanos, Doris Saez, Rodrigo Palma-Behnke, Alfredo Nunez and Guillermo Jimenez-Estevez, Load Profile Generator and Load Forecasting for a Renewable Based Microgrid Using Self Organizing Maps and Neural Networks

Wednesday, Hybrid, WeH 4-5, 14:40-15:40, Industrial Applications of Evolving Fuzzy and Neural Systems (Hybrid) 1, Yaochu Jin

29, Ying Bai and Dali Wang, Reduce the Effects of Lower-Frequency Nuclear Radiations on Rescuing Robots and Manipulators Using a Nested Fuzzy Controller

338, Frank Jiang, Steve Ling, Kit Yan Chan, Frank Leung and Michael Frater, An Immunology-inspired Multi-engine Anomaly Detection System with Fuzzy-based Optimisations

Wednesday, IJCNN, WeN 4-1, 14:40-15:40,Signal, Image Processing and Multimedia 2, Brijesh Verma

27, Yandre Costa, Luiz Oliveira, Alessandro Koerich and Fabien Gouyon, Comparing Textural Features for Music Genre Classification

336, Michael Biehl, Kerstin Bunte, Frank-Michael Schleif, Petra Schneider and Thomas Villmann, Large Margin Linear Discriminative Visualization by Matrix Relevance Learning

498, Stephane Rigaud, Nicolas Lomenie, Shvetha Sankaran, Sohail Ahmed, Joo-Hwee Lim and Daniel Racoceanu, Neurosphere Fate Prediction an Analysis-Synthesis Approach for Feature Extraction

Wednesday, IJCNN, WeN 4-2, 14:40-15:40, Dynamics In boundary learning and control, Zeng-Guang Hou

52, Zheng Yan and Jun Wang, A Neurodynamic Approach to Bicriteria Model Predictive Control of Nonlinear Affine Systems Based on a Goal Programming Formulation

243, Dongbin Zhao, Yuanheng Zhu and He Haibo, Neural and Fuzzy Dynamic Programming for Under-actuated Systems

330, Fernando Ornelas-Tellez, Edgar N. Sanchez, Ramon Garcia-Hernandez, Jose A. Ruz-Hernandez and Jose L. Rullan-Lara, Neural Inverse Optimal Control for Discrete-Time Uncertain Nonlinear Systems Stabilization

Wednesday, IJCNN, WeN 4-3, 14:40-15:40, Robotics 2, Marley Vellasco

138, Osamu Fukuda, Jonghwan Kim, Isao Nakai and Yasunori Ichikawa, State Transition Control of a Five-fingered Pneumatic Hand Using a Neural network

260, Jeffrey Krichmar, A Biologically Inspired Action Selection Algorithm Based on Principles of Neuromodulation

352, Changjing Shang and Dave Barnes, Support Vector Machine-Based Classification of Rock Texture Images Aided by Efficient Feature Selection

Wednesday, IJCNN, WeN 4-4, 14:40-15:40, Neuromorphic Hardware 1, Giacomo Indiveri

558, Sergio Davies, Javier Navaridas, Francesco Galluppi and Steve Furber, Population-Based Routing in the SpiNNaker Neuromorphic Architecture

592, Sadique Sheik, Elisabetta Chiccca and Giacomo Indiveri, Exploiting Device Mismatch in Neuromorphic VLSI Systems to Implement Axonal Delays

710, John Arthur, Paul Merolla, Filipp Akopyan, Rodrigo Alvarez, Andrew Cassidy, Shyamal Chandra, Steven Esser, Nabil Imam, William Risk, Daniel Rubin, Rajit Manohar and Dharmendra Modha, Building Block of a Programmable Neuromorphic Substrate A Digital Neurosynaptic Core

Wednesday, IJCNN, WeN 4-5, 14:40-15:40, Feature Selection, Extraction and Aggregation 2, Paulo Lisboa

213, Nikhil Ranjan Pal and Mridul Malpani, Redundancy-Constrained Feature Selection with Radial Basis Function Networks

460, Jin Xu, Yafeng Yin, Hong Man and Haibo He, Feature Selection Based on Sparse Imputation

736, Houtao Deng and George Runger, Feature Selection via Regularized Trees

Wednesday, IJCNN, WeN 4-6, 14:40-15:40, SVM and Kernel Methods 2, Carlos Alzate

536, Jorge Lopez and Jose R. Dorronsoro, The Convergence Rate of the MDM Algorithm

562, Trung Le, Dat Tran, Wanli Ma and Dharmendra Sharma, A Unified Model for Support Vector Machine and Support Vector Data Description

704, Carlos Alzate and Johan Suykens, A Semi-Supervised Formulation to Binary Kernel Spectral Clustering

Wednesday, IEEE CEC, Poster WeC, 15:40-17:10, Poster session IEEE CEC, Bob (R.I) McKay

4, Yasin Volkan Pehlivanoglu and Oktay Baysal, Improved Particle Swarm Optimization Catching the Big Wave on the Surf

17, Rituparna Datta, Michael S. Bittermann, Kalyanmoy Deb and Ozer Ciftcioglu, Probabilistic Constraint Handling in the Framework of Joint Evolutionary-Classical Optimization with Engineering Applications

45, Kit Yan Chan, Sai Ho Ling, Hung Nguyen and Frank Jiang, A hypoglycemic episode diagnosis system based on neural networks for Type 1 diabetes mellitus

66, Long Wen, Liang Gao, Xinyu Li, Guohui Zhang and Yang Yang, Application of Free Pattern Search on the Surface Roughness Prediction in End Milling

93, Yao Liu, Yuk Ying Chung and Wei Chang Yeh, Simplified Swarm Optimization with Sorted Local Search for Golf Data Classification

104, Qiang Lu and Qing-Long Han, A Finite-time Particle Swarm Optimization Algorithm

114, Yue-jiao Gong and Jun Zhang, Real-Time Traffic Signal Control for Roundabouts by Using a Novel PSO-Based Fuzzy Controller

125, Yuan Yuan and Hua Xu, HHS/LNS An Integrated Search Method for Flexible Job Shop Scheduling

144, William Raffe, Fabio Zambetta and Xiaodong Li, A Survey of Procedural Terrain Generation Techniques using Evolutionary Algorithms

162, Antonio LaTorre, Santiago Muelas and Jose-Maria Pena, Multiple Offspring Sampling in Large Scale Global Optimization

189, Shing Wa Leung, Xin Zhang and Shiu Yin Yuen, Multiobjective Differential Evolution Algorithm with Opposition-Based Parameter Control

193, Tetsuyuki Takahama and Setsuko Sakai, Differential Evolution with Dynamic Strategy and Parameter Selection by Detecting Landscape Modality

201, Jin Xu, Albert Y.S. Lam, Victor O.K. Li, Qiwei Li and Xiaodan Fan, Short Adjacent Repeat Identification Based on Chemical Reaction Optimization

208, Sriharsha Vathsavayi, Outi Raiha and Kai Koskimies, Using Quality Farms in Multi-Objective Genetic Software Architecture Synthesis

209, Sanderson Vanucci, Rafael Bicalho, Eduardo Carrano and Ricardo Takahashi, A Modified NSGA-II for the Multiobjective Multi-mode Resource-Constrained Project Scheduling Problem

231, Bing Xue, Mengjie Zhang and Will N. Browne, New Fitness Functions in Binary Particle Swarm Optimisation for Feature Selection

234, Fei-yue Qiu, Yu-shi Wu, Li-ping Wang and Bo Jiang, Bipolar Preferences Dominance based Evolutionary Algorithm for Many-Objective Optimization

242, Aram Ter-Sarkisov, Elitism Levels Traverse Mechanism For The Derivation of Upper Bounds on Unimodal Functions

244, Francois Legillon, Arnaud Liefooghe and El-Ghazali Talbi, CoBRA A Cooperative Coevolutionary Algorithm for Bi-level Optimization

250, Wei Fang, Jun Sun, Xiaojun Wu, Wenbo Xu and Palade Vasile, Study on the Compression-Expansion Coefficient in Drift Particle Swarm Optimization

251, Merelo Guervos Juan-J, Mora Antonio M., Cruz Almaguer J. Albert, Esparcia-Alcazar Anna I. and Cotta Carlos, Scaling in distributed evolutionary algorithms with persistent population

252, Xiangjuan Yao, Dunwei Gong, Yongjin Luo and Ming Li, Test Data Reduction Based on Dominance Relations of Target Statements

264, Shui Xinguo, Zuo Xingquan and Chen Cheng, A Cultural Clonal Selection Algorithm based Fast Vehicle Scheduling Approach

278, Rodrigo Faccioli, Ivan Nunes da Silva, Leandro Bortot and Alexandre Delbem, A Mono-Objective Evolutionary Algorithm with GROMACS for Protein Structure Prediction in Structural and Energetic Contexts

285, Yanjuan Li and Maozu Guo, Phase Transition and New Fitness Function Based Genetic Inductive Loigc Programming Algorithm

286, Rommel Saraiva and Placido Pinheiro, A novel application of crossover operator to a hybrid optimization framework investigation into cutting problems

331, Shuzhen Wan, Shengwu Xiong and Yi Liu, Prediction based Multi-strategy Differential Evolution Algorithm for Dynamic Environments

347, Jesus Conesa-Munoz, Angela Ribeiro, Dionisio Andujar, Cesar Fernandez-Quintanilla and Jose Dorado, Multi-Path Planning Based on a NSGA-II for a Fleet of Robots to Work on Agricultural Tasks

349, Tsu-Wang Shen, Ting-Fong Laio and Shao-Tsu Chen, Hormone Concentration Inception Development an Artificial Immune System with Immunomodulator (AISI) Intervention

350, Yi-Ling Wu, Tsu-Feng Ho, Shyong Jian Shyu and Bertrand M. T. Lin, Discrete particle swarm optimization for materials acquisition in multi-unit libraries

351, Jiacheng Ni, Li Li, Fei Qiao and Qidi Wu, A Novel Memetic Algorithm based on the Comprehensive Learning PSO

379, Aderemi Adewumi, Nigel Budlender and Micheal Olusanya, Optimizing the Assignment of Blood in a Blood Banking System Some Initial Results

382, Douglas Dias and Marco Aurelio Pacheco, Describing Quantum-Inspired Linear Genetic Programming from Symbolic Regression Problems

389, Jing Liu and Weicai Zhong, Continuous Game Dynamics on Populations with a Cycle Structure under Weak Selection

395, Arnab Ghosh, Arkabandhu Chowdhury, Subhajit Sinha, Athanasios V. Vasilakos and Swagatam Das, A Genetic lbest PSO with Dynamically Varying Subswarm topology

404, Laurence Amaral and Estevam Hruschka, Never-Ending Learning Principles in Gene Ontology Classification using Genetic Algorithms

429, Kee Tong Chang, Kim On Chin, Jason Teo and James Mountstephens, Game AI Generation using Evolutionary Multi-Objective Optimization

448, Takeshi Uchitane and Toshiharu Hatanaka, Experimental Study for Multi-Objective PSO with Single Objective Guide Selection

459, Jenn-Long Liu, Yu-Tzu Hsu and Chih-Lung Hung, Development of Evolutionary Data Mining Algorithms and their Applications to Cardiac Disease Diagnosis

471, Wei-Chang Yeh, Yuan-Ming Yeh, Chun-Hua Chou, Y.Y. Chung and Xiangjian He, A Radio Frequency Identification Network Design Methodology for the Decision Problem in Mackay Memorial Hospital Based on Swarm Optimization

494, Lifeng Zhang and Chenxi Zhou, Self Organized Parallel Genetic Algorithm to Automatically Realize Diversified Convergence

499, Marco Mussetta, Francesco Grimaccia and Riccardo E. Zich, Comparison of different optimization techniques for the design of electromagnetic devices

519, Anguluri Rajasekhar, Swagatam Das and P. N. Suganthan, Design of Fractional Order Controller for a Servohydraulic Positioning System with Micro Artificial Bee Colony Algorithm

524, Tzung-Pei Hong, Feng-Shih Lin and Chun-Hao Chen, Using the Group Genetic Algorithm for Attribute Clustering

534, Chung-Ming Ou and C.R. Ou, Immune Memory with Associativity Perspectives on Dynamical Systems

625, Md Nasir, Soumyadip Sengupta, Swagatam Das and Ponnuthurai N Suganthan, An improved Multi-objective Optimization Algorithm based on Fuzzy Dominance for Risk Minimization in Biometric Sensor Network

637, David Iclanzan and Camelia Chira, Modeling and Replicating Higher-Order Dependencies in Genetic Algorithms

643, Zdenek Vasicek and Lukas Sekanina, On Area Minimization of Complex Combinational Circuits Using Cartesian Genetic Programming

699, Chun-Kit Au and Ho-Fung Leung, Eigenspace sampling in the mirrored variant of $(1,lambda)$-CMA-ES

708, Susana Vieira, Luis Mendonca, Goncalo Farinha and Joao Sousa, Metaheuristics for feature selection application to sepsis outcome prediction

712, Shafiq Alam, Dobbie Gillian, Patricia Riddle and Yun Sing Koh, Hierarchical PSO Clustering Based Recommender System

725, Myeong-Chun Lee and Sung-Bae Cho, Interactive Differential Evolution for Image Enhancement Application in Smart Phone

755, Florian Siegmund, Amos H.C. Ng and Kalyanmoy Deb, Finding a preferred diverse set of Pareto-optimal solutions for a limited number of function calls

Wednesday, FUZZ IEEE, WeF 5-1, 16:10-17:10, SS Applications of Type-2 Fuzzy Systems 2, Simon Coupland

58, Dongrui Wu, An Overview of Alternative Type-Reduction Approaches for Reducing the Computational Cost of Interval Type-2 Fuzzy Logic Controllers

89, Xue Tao Chen and Woei Wan Tan, Adaptive Interval Type-2 Fuzzy Logic Observer for Dynamic Positioning

131, Xue Tao Chen and Woei Wan Tan, Tracking Control of Surface Vessels via Adaptive Backstepping Interval Type-2 Fuzzy Logic Control

Wednesday, FUZZ IEEE, WeF 5-2, 16:10-17:10, SS Human Symbiotic Systems 2, Daisuke Katagami

50, Mojdeh Nasir, Saeid Nahavandi and Douglas Creighton, Fuzzy Simulation of Pedestrian Walking Path Considering Local Environmental Stimuli

401, Koh Nishimura, Naoyuki Kubota and Jinseok Woo, Design Support System for Emotional Expression of Robot Partners using Interactive Evolutionary Computation

463, Yoshitaka Furuta, Masayoshi Kanoh, Taro Shimizu, Masaru Shimizu and Tsuyoshi Nakamura, Subjective Evaluation of Use of Babyloid for Doll Therapy

Wednesday, FUZZ IEEE, WeF 5-3, 16:10-17:10, Fuzzy Intelligence, Valerie Cross

80, Min Chen and Simone Ludwig, Fuzzy-guided Genetic Algorithm applied to the Web Service Selection Problem

183, Alberto Perez Garcia-Plaza, Victor Fresno and Raquel Martinez, Fitting Document Representation to Specific Datasets by Adjusting Membership Functions

220, Enrique Munoz and Enrique Ruspini, Using Fuzzy Queuing Theory to Analyze the Impact of Electric Vehicles on Power Networks

Wednesday, Hybrid, WeH 5-1, 16:10-17:10, Computational Intelligence In Bioinformatics (Hybrid) 4,Michael Lones, Vassilis Plagianakos, Sheridan Houghten

178, Sidath Ravindra Liyanage, Cuntai Guan, Haihong Zhang, Kai Keng Ang, Jian-Xin Xu and Tong Heng Lee, Dynamically Weighted Classification with Clustering to Tackle Non-stationarity in Brain Computer Interfacing

223, Frank-Michael Schleif, Andrej Gisbrecht and Barbara Hammer, Relevance learning for short high-dimensional time series in the life sciences

504, Michele Donato, Zhonghui Xu, Alin Tomoiaga, Peter Westfall, Roberto Romero and Sorin Draghici, A method for analysis and correction of cross-talk effects in pathway analysis

Wednesday, Hybrid, WeH 5-2, 16:10-17:10, Computational Intelligence In Biometrics (Hybrid) 2, Eliza Yingzi Du, Eric Granger, and Qinghan Xiao

443, Miguel De-la-Torre, Eric Granger, Paulo V. W. Radtke, Robert Sabourin and Dmitry O. Gorodnichy, Incremental Update of Biometric Models in Face-Based Video Surveillance

610, Christophe Pagano, Eric Granger, Robert Sabourin and Dmitry Gorodnichy, Detector Ensembles for Face Recognition in Video Surveillance

656, Luis Afonso, Joao Papa, Ahmad Poursaberi, Svetlana Yanushkevich and Aparecido Marana, A Fast Large Scale Iris Database Classification with Optimum-Path Forest Technique A Case Study

Wednesday, Hybrid, WeH 5-3, 16:10-17:10, Computational Intelligence for Intelligent Agents (Hybrid) 1,Hani Hagras, Vincenzo Loia

242, Giovanni Acampora and Autilia Vitiello, Improving Agent Interoperability through a Memetic Ontology AlignmentA Comparative Study

384, Yu Hosoya and Motohide Umano, Dynamic Fuzzy Q-Learning with Facility of Tuning and Removing Fuzzy Rules

539, Paolo Arena, Luca Patane' and Alessandra Vitanza, Autonomous Learning of collaboration among robots

Wednesday, Hybrid, WeH 5-4, 16:10-17:10, Computational Intelligence In Social Media Analysis and Mining (Hybrid), Basabi Chakraborty, Sushmita Mitra

383, Pavel Kromer, Vaclav Snasel, Jan Platos, Milos Kudelka and Zdenek Horak, An ACO Inspired Weighting Approach for the Spectral Partitioning of Co-authorship Networks

459, Marie-Jeanne Lesot, Francois Nel, Thomas Delavallade, Philippe Capet and Bernadette Bouchon-Meunier, Two Methods for Internet Buzz Detection Exploiting the Citation Graph

698, Yu Zong, Guandong Xu, Ping Jin, Xun Yi, Enhong Chen and Zongda Wu, A Projective Clustering algorithm based on Significant Local Dense Areas

Wednesday, Hybrid, WeH 5-5, 16:10-17:10, Computational Intelligence In Communications and Networking (Hybrid) 2, Chuan-Kang Ting

171, Paris Mastorocostas, Constantinos Chilas, Stergiani Dova and Dimitris Varsamis, Forecasting of Telecommunications Time-series via an Orthogonal Least Squares-based Fuzzy Model

444, Tao Ban, Shanqing Guo, Masashi Eto, Daisuke Inoue and Koji Nakao, A Study on Cost-Effective P2P Traffic Classification

691, Michael Kampouridis, Tim Glover, Ali Rais Shaghaghi and Edward Tsang, Using a Genetic Algorithm as a Decision Support Tool for the Deployment of Fiber Optic Networks

Wednesday, IJCNN, WeN 5-1, 16:10-17:10, Unsupervised Learning and Clustering 2, Pablo Estevez

28, Franck Dufrenois and Jean charles Noyer, A one class kernel Fisher discriminant for automatic outlier identification

469, Yang Yan, Lihui Chen and Duc Thang Nguyen, Semi-Supervised Clustering with Multi-Viewpoint based Similarity Measure

661, Pablo Aguilera-Bonet, Ivan Duran-Diaz, Auxiliadora Sarmiento and Sergio Cruces, Bounded Component Analysis of the Training Error

Wednesday, IJCNN, WeN 5-2, 16:10-17:10, Analysis of Neurophysiological and Neuroanatomical Data, Yaozhang Pan

75, Misako Komatsu, Jun Namikawa, Jun Tani, Zenas C. Chao, Yasuo Nagasaka, Naotaka Fujii and Kiyohiko Nakamura, Estimation of functional brain connectivity from electrocorticograms using an artificial network model

571, Yaozhang Pan, Cuntai Guan, Kai Keng Ang, Kok Soon Phua, Huijuan Yang, Dong Huang and Shih-Hui Lim, Seizure Detection based on Spatiotemporal Correlation and Frequency Regularity of Scalp EEG

737, Wonsang You, Sophie Achard, Joerg Stadler, Bernd Brueckner and Udo Seiffert, Fractal analysis of resting state functional connectivity of the brain

Wednesday, IJCNN, WeN 5-3, 16:10-17:10, Neural Models of Perception, Cognition and Action, DeLiang Wang

119, Jian-Xin Xu and Xin Deng, Complex Chemotaxis Behaviors of C. elegans with Speed Regulation Achieved by Dynamic Neural Networks

192, Hui Wei, Yuan Ren and Zheyan Wang, A Group-decision Making Model of Orientation Detection

315, Young-Min Jang, Mallipeddi Rammohan, Sangil Lee, Ho-Wan Kwak and Minho Lee, Human Implicit Intent Transition Detection Based on Eyeball Movement Pattern Analysis

Wednesday, IJCNN, WeN 5-4, 16:10-17:10, Feature Extraction and Classification Systems, Guy Littlefair

86, Fabio Dall Cortivo, Ezzat Selim Chalhoub and Haroldo Fraga Campos Velho, A Committee of MLP with Adaptive Slope Parameter Trained by the quasi-Newton Method to Solve Problems in Hydrologic Optics

147, Shah Atiqur Rahman, I. Song and M. K. H. Leung, Negative Space Template A Novel Feature to Describe Activities in Video

170, Li Wang, Nandita Bhattacharjee and Bala Srinivasan, Fingerprint Reference Point Detection Based on Local Ridge Orientation Patterns of Fingerprints

Wednesday, IJCNN, WeN 5-5, 16:10-17:10, Data Mining and Knowledge Discovery 2, Irwin King

23, Md Geaur Rahman, Md Zahidul Islam, Terry Bossomaier and Junbin Gao, CAIRAD A Co-appearance based Analysis for Incorrect Records and Attribute-values Detection

46, Guang Ling, Haiqin Yang, Irwin King and Michael R. Lyu, Online Learning for Collaborative Filtering

406, Upuli Gunasinghe and Damminda Alahakoon, Sequence Learning using the Adaptive Suffix Trie Algorithm

Thursday 14th of June 2012

Risto Miikkulainen, Multiagent Learning Through Neuroevolution

Bernard De Baets, The quest for transitivity, a showcase of fuzzy relational calculus

Thursday, IEEE CEC, ThC 1-1, 9:20-10:20, Evolutionary Computation In Dynamic and Uncertain Environments 1, Shengxiang Yang

198, Chun-Wei Seah, Yew-Soon Ong, Ivor W. Tsang and Siwei Jiang, Pareto Rank Learning in Multi-objective Evolutionary Algorithms

263, Sheldon Hui and Ponnuthurai Nagaratnam Suganthan, Ensemble Differential Evolution with Dynamic Subpopulations and Adaptive Clearing for solving Dynamic Optimization Problems

518, Julien Lepagnot, Amir Nakib, Hamouche Oulhadj and Patrick Siarry, A Dynamic Multi-Agent Algorithm Applied to Challenging Benchmark Problems

Thursday, IEEE CEC, ThC 1-2, 9:20-10:20, Evolutionary Computation for Creative Intelligence 1, Chuan-Kang Ting

308, Md Asafuddoula, Tapabrata Ray, Ruhul Sarker and Khairul Alam, An Adaptive Constraint Handling Approach Embedded MOEA/D

504, Chien-Hung Liu and Chuan-Kang Ting, Polyphonic Accompaniment Using Genetic Algorithm with Music Theory

721, Palle Dahlstedt, Turn-Based Evolution as a Proposed Implementation of Artistic Creative Process

Thursday, IEEE CEC, ThC 1-3, 9:20-10:20,Heuristics, metaheuristics and hyper-heuristics 4, Daniel Molina

101, Yunzhi Jiang, Pohsiang Tsai, Zhifeng Hao and Longbing Cao, A Novel Auto-Parameters Selection Process For Image Segmentation

214, Xiaoyan Sun, Lei Yang, Dunwei Gong and Ming Li, Interactive Genetic Algorithm Assisted with Group Decision Making-based Collective Intelligence

237, Amilkar Puris, Rafael Bello, Daniel Molina and Francisco Herrera, Optimising real parameters using the information of a mesh of solutions VMO algorithm

Thursday, IEEE CEC, ThC 1-4, 9:20-10:20,Classification, clustering, data analysis and data mining 1, Alex A. Freitas

427, Aruanda S. G. Meiguins, Roberto C. Limao, Bianchi S. Meiguins, Samuel F. Sousa Junior and Alex A. Freitas, AutoClustering - An Estimation of Distribution Algorithm for the Automatic Generation of Clustering Algorithms

497, Xiangrong Zhang, Erlei Zhang and Runxin Li, Optimized Feature Extraction by Immune Clonal Selection Algorithm

760, Benjamin Daniels, Steven Corns and Elizabeth Cudney, A Comparison of Representations for the Prediction of Ground-Level Ozone Concentration

Thursday, IEEE CEC, ThC 1-5, 9:20-10:20, Genetic programming 4, Mark Johnston

299, Fahmi Abdulhamid, Andy Song, Kourosh Neshatian and Mengjie Zhang, Evolving Genetic Programming Classifiers with Loop Structures

408, Isac Sandin, Guilherme Andrade, Felipe Viegas, Daniel Madeira, Leonardo Rocha, Thiago Salles and Marcos Andre Goncalves, Aggressive and Effective Feature Selection using Genetic Programming

454, Wenlong Fu, Mark Johnston and Mengjie Zhang, Genetic Programming for Edge Detection via Balancing Individual Training Images

Thursday, IJCNN, ThN 1-1, 9:20-10:20, Data Analysis and Pattern recognition 3, Anne Canuto

53, Fangshi Zhu, Songyun Xie, Jiadong Xu and Huabing He, Various Artifacts Reduction Algorithms for EEG Recorded in Continuous fMRI Scan Environment

505, Yury Tsoy, Evolving Linear Neural Networks for Features Space Dimensionality Reduction

569, Alexandros Iosifidis, Anastasios Tefas and Ioannis Pitas, Neural representation and learning for multi-view human action recognition

Thursday, IJCNN, ThN 1-2, 9:20-10:20, Machine Learning for Computer Vision 2,Siddhivinayak Kulkarni, Brijesh Verma, and Henry Selvaraj

83, Elliackin Figueiredo, Rafael Mesquita, Teresa Ludermir and George Cavalcanti, Application of the IPSONet in Face Detection

362, Babak N. Araabi and Zhabiz Gharibshah, Face recognition with manifold-based kernel discriminant analysis

517, Kartick Subramanian, Suresh Sundaram and Venkatesh Babu Radhakrishnan, Meta-Cognitive Neuro Fuzzy Inference System for Human Emotion Recognition

Thursday, IJCNN, ThN 1-3, 9:20-10:20, Soft Computing and Pattern Recognition Algorithms for Structured Patterns, Antonello Rizzi and Alireza Sadeghian

316, Yangyang Chen, Bao-Liang Lu and Hai Zhao, Parallel Learning of Large-scale Multi-Label Classification Problems with Min-Max Modular Liblinear

363, Antonello Rizzi, Guido Del Vescovo, Lorenzo Livi and Fabio Massimo Frattale Mascioli, A New Granular Computing Approach for Sequences Representation and Classification

537, Lorenzo Livi and Antonello Rizzi, Parallel Algorithms for Tensor Product-based Inexact Graph Matching

Thursday, IJCNN, ThN 1-4, 9:20-10:20, Temporal Data Analysis 2, Huisheng Zhu

197, Vu-Anh Nguyen, Janusz A. Starzyk and Wooi-Boon Goh, Sequence Recognition with Spatio-Temporal Long Term Memory Organization

201, Huisheng Zhu, Peng Wang, Wei Wang and Baile Shi, Discovering Frequent Closed Episodes from an Event Sequence

241, Mashud Rana and Irena Koprinska, Electricity Load Forecasting Using Non-decimated Wavelet Prediction Methods With Two-Stage Feature Selection

Thursday, IJCNN, ThN 1-5, 9:20-10:20, Brain Machines Interfaces 1, Kai Keng Ang

29, Neethu Robinson, Vinod Achutavarrier Prasad, Cuntai Guan, Kai Keng Ang and Keng Peng Tee, A Modified Wavelet-Common Spatial Pattern Method for Decoding Hand Movement Directions in Brain Computer Interfaces

142, Kian Ng, Andrew Bradley and Ross Cunnington, Enhancing the classification accuracy of Steady-State Visual Evoked Potential-based Brain-Computer Interface using Component Synchrony Measure

296, Mahnaz Arvaneh, Cuntai Guan, Kai Keng Ang and Chai Quek, Robust EEG Channel Selection across Sessions in Brain-Computer Interface Involving Stroke Patients

Thursday, IJCNN, ThN 1-6, 9:20-10:20, Data Regularisation, fault and Anomaly Detection, Isolation and Mitigation,Huanhuan Chen, Peter Tino and Xin Yao

165, Teresa Escobet, Joseba Quevedo and Vicenc Puig, A Fault/Anomaly System Prognosis using a Data-driven Approach considering Uncertainty

312, Cesare Alippi, Giacomo Boracchi and Manuel Roveri, On-line reconstruction of missing data in sensor/actuator networks by exploiting temporal and spatial redundancy

594, Vasso Reppa, Marios Polycarpou and Christos Panayiotou, A Distributed Architecture for Sensor Fault Detection and Isolation using Adaptive Approximation

Thursday, IJCNN, Poster ThN, 10:20-12:00, Poster session IJCNN, Bob (R.I) McKay

12, Mingbo Zhao, Zhao Zhang, W. S. Tommy Chow and Zhou Wu, On the Theoretical and Computational Analysis between Trace Ratio LDA and Null-space LDA

25, Longlong Ma, On-line Handwritten Chinese Character Recognition Based on Inter-Radical Stochastic Context-Free Grammar

33, Chih-Lyang Hwang, Hybrid Neural Network Under-Actuated Sliding-Mode Control for Trajectory Tracking of Quad-Rotor Unmanned Aerial Vehicle

35, Yu Cheng and Jinglu Hu, Nonlinear System Identification Based on SVR with Quasi-linear Kernel

50, Xichun Yuan, Honggui Han and Junfei Qiao, The Sludge Volume Index Soft Sensor Model Based on PCA-ElmanNN

60, Senzhang Wang, Zhoujun Li, Wenhan Chao and Qinghua Cao, Applying Adaptive Over-sampling Technique Based on Data Density and Cost-Sensitive SVM to Imbalanced Learning

63, Rafael Pinto, Paulo Engel and Milton Heinen, One-Shot Learning in the Road Sign Problem

68, Yueyue Na and Jian Yu, Kernel and Spectral Methods for Solving the Permutation Problem in Frequency Domain BSS

113, Antonio Arista-Jalife and Roberto A. Vazquez, Implementation of configurable and multipurpose spiking neural networks on GPUs

126, Mohammed Al-Naeem and Asad Khan, A Novel Target Recognition Scheme for WSNs

148, Min Han and Xinying Wang, A Modified Fast Recursive Hidden Nodes Selection Algorithm for ELM

160, Mo Zhao, Huaguang Zhang, Zhiliang Wang and Yanhong Luo, A simple synchronization criterion for a complex network based on the feedback

194, Sutharshan Rajasegarar, James C Bezdek, Masud Moshtaghi, Christopher Leckie, Timothy C Havens and Marimuthu Palaniswami, Measures for Clustering and Anomaly Detection in Sets of Higher Dimensional Ellipsoids

220, Levy Boccato, Diogo C. Soriano, Romis Attux and Fernando J. Von Zuben, Performance Analysis of Nonlinear Echo State Network Readouts in Signal Processing Tasks

222, Long Ma, Chunheng Wang and Baihua Xiao, Sparse Representation based on Matrix Rank Minimization and K-Means Clustering for Recognition

224, Francesco Galluppi, Sergio Davies, Terry Stewart, Chris Eliasmith and Steve Furber, Real Time On-Chip Implementation of Dynamical Systems with Spiking Neurons

277, Kou-Yuan Huang, Liang-Chi Shen, Kai-Ju Chen and Ming-Che Huang, Multilayer Perceptron Learning with Particle Swarm Optimization for Well Log Data Inversion

283, Juha Karhunen, Tele Hao and Jarkko Ylipaavalniemi, A Generalized Canonical Correlation Analysis Based Method for Blind Source Separation from Related Data Sets

292, Sergio Queiroz, Francisco de A. T. de Carvalho and Yves Lechevallier, Multicriteria Clustering with Weighted Tchebycheff Distances for Relational Data

332, Paolo Arena and Luca Patane', A spiking network for object and ego-motion detection in roving robots

339, Leandro Minku and Xin Yao, Using Unreliable Data for Creating More Reliable Online Learners

342, Tommi Vatanen, Mikael Kuusela, Eric Malmi, Tapani Raiko, Timo Aaltonen and Yoshikazu Nagai, Semi-Supervised Detection of Collective Anomalies with an Application in High Energy Particle Physics

357, Ulf Johansson and Tuve Lofstrom, Producing Implicit Diversity in ANN Ensembles

383, Shun Nishide, Jun Tani, Hiroshi G. Okuno and Tetsuya Ogata, Self-organization of Object Features Representing Motion Using Multiple Timescales Recurrent Neural Network

393, Nopriadi Nopriadi and Yukihiko Yamashita, Extended Maximum a Posteriori-based Kernel Classification Trained by Linear Programming (MAPLP) with Adjustment Parameter (MAPLP-P) and Difference-type Objective Function (MAPLP-D)

410, Tzu-Ping Kao, Jeen-Shing Wang, Che-Wei Lin, Ya-Ting Yang and Fang-Chen Chuang, Using Bootstrap AdaBoost with KNN for ECG-baed Automated Obstructive Sleep Apnea Detection

415, Kenny Hong, Stephan Chalup and Robert King, An Experimental Evaluation of Pairwise Adaptive Support Vector Machines

416, Evan Kriminger, Choudur Lakshminarayan and Jose Principe, Nearest Neighbor Distributions for Imbalanced Classification

428, Cleber Zanchettin, Byron Bezerra and Washington Azevedo, A KNN-SVM Hybrid Model for Cursive Handwriting Recognition

430, Saulo Henrique Napoles and Cleber Zanchettin, Offline Handwritten Signature Verification through Network Radial Basis Functions optimized by Differential Evolution

437, Rosha Pokharel and Jose Principe, Kernel Classifier with Correntropy Loss

446, Hiran Ganegedara and Damminda Alahakoon, Redundancy reduction in self-organising map merging for scalable data clustering

458, Shin-ichi Ito, Katsuya Sato and Shoichiro Fujisawa, Learning Algorithm for Self-Organizing Map Classification of Electroencephalogram Patterns with Individual Differences

474, Xueyi Wang, A New Model for Measuring the Accuracies of Majority Voting Ensembles

516, Chihiro Ikuta, Yoko Uwate and Yoshifumi Nishio, Multi-Layer Perceptron with Positive and Negative Pulse Glial Chain for Solving Two-Spirals Problem

523, Rocco Langone, Carlos Alzate and Johan A. K. Suykens, Kernel Spectral Clustering for Community Detection in Complex Networks

527, Carlos W. D. de Almeida, Renata M. C. R. Souza and Ana L. B. Candeias, IFKCN Applying Fuzzy Kohonen Clustering Network to Interval Data

565, Shuyuan Yang, Yue Han and Xiangrong Zhang, A Sparse Kernel Representation Method for Image Classification

573, Yu-Lin Liao, Ya-Fu Peng and Chih-Hui Chiu, Adaptive Dynamic TSKCMAC Neural Networks for Prediction and Identification

582, Goktug Cinar and Jose Principe, Hidden State Estimation using the Correntropy Filter with Fixed Point Update and Adaptive Kernel Size

595, Ryosuke Shigenaka, Bisser Raytchev, Toru Tamaki and Kazufumi Kaneda, Face Sequence Recognition Using Grassmann Distances and Grassmann Kernels

634, Nistor Grozavu, Younes Bennani and Lazhar Labiod, Feature space transformation for transfer learning

638, Thomas Rauber, Lucas Sousa Mello and Flavio M. Varejao, Kernel Enhanced Multilayer Perceptron for Industrial Process Diagnosis

677, Erion Hasanbelliu, Kittipat Kampa, James Cobb and Jose Principe, Online learning using a Bayesian surprise metric

678, Guenael Cabanes and Younes Bennani, Change detection in data streams through unsupervised learning

681, Helyane Borges and Julio Cesar Nievola, Multi-Label Hierarchical Classification using a Competitive Neural Network for Protein Function Prediction

728, Chenhui Yang, Sijia Wang, Bing Cheng, Yuan Yuan and Jennie Si, A Neural Correlate to Learning Decision and Control using Functional Synaptic Efficacy

Thursday, IEEE CEC, ThC 2-1, 11:00-12:00, Evolutionary Computation In Dynamic and Uncertain Environments 2, David Pelta

141, Changhe Li, Shengxiang Yang and Ming Yang, Maintaining Diversity by Clustering in Dynamic Environments

57, Julien Duhain and Andries Engelbrecht, Towards a More Complete Classification System for Dynamically Changing Environments

168, Marde Helbig and Andries Engelbrecht, Analyses of Guide Update Approaches for Vector Evaluated Particle Swarm Optimisation on Dynamic Multi-Objective Optimisation Problems

Thursday, IEEE CEC, ThC 2-2, 11:00-12:00, Evolutionary Computation for Intelligent Network Systems, Jun Zhang

152, Wei-Huai Hsu and Tsung-Che Chiang, A Multiobjective Evolutionary Algorithm with Enhanced Reproduction Operators for the Vehicle Routing Problem with Time Windows

523, Xin-Lan Liao and Chuan-Kang Ting, Evolutionary Algorithms Using Adaptive Mutation for the Selective Pickup and Delivery Problem

258, Michalis Mavrovouniotis and Shengxiang Yang, Ant colony optimization with memory-based immigrants for the dynamic vehicle routing problem

Thursday, IEEE CEC, ThC 2-3, 11:00-12:00, Evolutionary Computation for Creative Intelligence 2, Palle Dahlstedt

359, Atilim Gunes Baydin and Ramon Lopez de Mantaras, Evolution of Ideas A Novel Memetic Algorithm Based on Semantic Networks

661, B. Rosario Campomanes-Alvarez, Sergio Damas and Oscar Cordon, Mesh Simplification for 3D Modeling using Evolutionary Multi-Objective Optimization

738, Vinh Bui, Axel Bender and Hussein Abbass, An Expressive GL-2 Grammar for Representing Story-like Scenarios

Thursday, IEEE CEC, ThC 2-4, 11:00-12:00,Differential Evolution: Past, Present and Future 1, James Montgomery

71, David Koloseni, Jouni Lampinen and Pasi Luukka, Differential Evolution Classifier with Optimized Distance Measures from a Pool of Distances

267, Chih-Li Huo, Yean-Shain Lien, Yu-Hsiang Yu and Tsung-Ying Sun, Effectively Multi-Swarm Sharing Management for Differential Evolution

281, James Montgomery and Stephen Chen, A Simple Strategy for Maintaining Diversity and Reducing Crowding in Differential Evolution

Thursday, IEEE CEC, ThC 2-5, 11:00-12:00, Memetic Computing 1, Ferrante Neri

89, Hassan Bashir and Richard Neville, A Hybrid Evolutionary Computation Algorithm for Global Optimization

165, Liang Feng, Yew Soon Ong, Ivor Tsang and Ah Hwee Tan, An Evolutionary Search Paradigm that Learns with Past Experiences

525, Jih-Yiing Lin and Ying-ping Chen, When and What Kind of Memetic Algorithms Perform Well

Thursday, IEEE CEC, ThC 2-6, 11:00-12:00,Classification, clustering, data analysis and data mining 2, Jie Yang

135, Ali Vahdat, Malcolm I. Heywood and A. Nur Zincir-Heywood, Symbiotic Evolutionary Subspace Clustering

458, Lin Zhu, Longbing Cao and Jie Yang, Multiobjective Evolutionary Algorithm-Based Soft Subspace Clustering

737, Wilfried Segretier, Manuel Clergue, Martine Collard and Luis Izquierdo, An evolutionary data mining approach on hydrological data with classifier juries

Thursday, FUZZ IEEE, ThF 2-1, 11:00-12:00, SS Type-2 Fuzzy Logic Control, Robert John

190, Nazanin Sahab and Hani Hagras, Towards Comparing Adaptive Type-2 Input Based Non-Singleton Type-2 FLS and Non-Singleton FLSs Employing Gaussian Inputs

217, Aysenur Bilgin, James Dooley, Luke Whittington, Hani Hagras, Martin Henson, Christian Wagner, Areej Malibari, Abdullah Al-Ghamdi, Mohammed Alhaddad and Danniyal Alghazzawi, Dynamic Profile-Selection for zSlices Based Type-2 Fuzzy Agents Controlling Multi-User Ambient Intelligent Environments

356, Naisan Benatar, Uwe Aickelin and Jonathan M. Garibaldi, An investigation into the relationship between type-2 FOU size and environmental uncertainty in robotic control

Thursday, FUZZ IEEE, ThF 2-2, 11:00-12:00, SS Fuzzy algebraic and relational structures – theory and applications 1,Branimir Seselja, Andreja Tepavcevic

102, Aleksandar Krapez, Branimir Seselja and Andreja Tepavcevic, Pexider Equations and Fuzzy Relational Equations

103, Branka Budimirovic, Vjekoslav Budimirovic, Branimir Seselja and Andreja Tepavcevic, Fuzzy Equational Classes

465, Peter Sussner and Carlos Renato Medeiros, An Introduction to Morphological Associative Memories in Complete Lattices and Inf-Semilattices

Thursday, FUZZ IEEE, ThF 2-3, 11:00-12:00, Hybrid fuzzy systems 1, Pietro Ducange

201, Andre Fialho, Uzay Kaymak, Rui Almeida, Federico Cismondi, Susana Vieira, Shane Reti, Joao Sousa and Stan Finkelstein, Probabilistic Fuzzy Prediction of Mortality in Intensive Care Units

431, Zsolt Danyadi, Peter Foldesi and Laszlo T. Koczy, A Fuzzy Bacterial Evolutionary Solution for Crisp Three-Dimensional Bin Packing Problems

473, Gautam Kumar and Satish Kumar, Evolutionary Optimization of Fuzzy Map Formation using Sonar Data from Robot Swarms

Thursday, FUZZ IEEE, ThF 2-4, 11:00-12:00, SS Fuzzy Logic and Intelligent Web, Marek Reformat

228, Kazuaki Shimamura, Shinichiro Ito, Tomohiro Takagi, Hiroshi Yoshida, Tomoya Suzuki and Kaoru Kato, Predicting hit movie concepts using news articles

306, Valerie Cross and Xueheng Hu, Fuzzy Set and Semantic Similarity in Ontology Alignment

327, Parisa D. Hossein Zadeh and Marek Z. Reformat, Feature-based Similarity Assessment in Ontology using Fuzzy Set Theory

Thursday, FUZZ IEEE, ThF 2-5, 11:00-12:00, SS Fuzzy systems and control: Stability analysis and controller design 1, Jun Yoneyama

92, Luka Eciolaza and Michio Sugeno, On-line Design of LUT Controllers Based on Desired Closed Loop PlantVertex Placement Principle

97, Qing Gao, Xiao-Jun Zeng, Gang Feng and Yong Wang, Universal fuzzy models and universal fuzzy controllers based on generalized T-S fuzzy models

158, Hugang Han, A Discrete Adaptive Controller for a Class of T-S Fuzzy Models

Thursday, Hybrid, ThH 2-1, 11:00-12:00,Computational Intelligence In Finance, Economics and Management Sciences (Hybrid) 3, Shu-Heng Chen

392, Anthony Brabazon, Arlindo Silva and Michael O'Neill, Optimal Patent Design An Agent-based Approach

469, Garnett Wilson, Derek Leblanc and Wolfgang Banzhaf, Using Sector Information with Linear Genetic Programming for Intraday Equity Price Trend Analysis

513, Vishal Soam, Leon Palafox and Hitoshi Iba, Multi-Objective Portfolio Optimization and Rebalancing Using Genetic Algorithms with Local Search

Thursday, Hybrid, ThH 2-2, 11:00-12:00, Ensemble Methods In Computational Intelligence (Hybrid) 1, P. N. Suganthan

112, Bo Yuan and Xiaoli Ma, Sampling + Reweighting Boosting the Performance of AdaBoost on Imbalanced Datasets

673, Mark Embrechts, Christopher Gatti, Jonathan Linton, Thiemo Gruber and Bernhard Sick, Forecasting Exchange Rates with Ensemble Neural Networks and Ensemble K-PLS A Case Study for the US Dollar per Indian Rupee

715, Diego Nascimento and Anne Canuto, A Genetic-Based Approach to Features Selection for Ensembles Using a Hybrid and Adaptive Fitness Function

Thursday, Hybrid, ThH 2-3, 11:00-12:00, Computational Intelligence for Intelligent Agents (Hybrid) 2,Hani Hagras, Vincenzo Loia

270, Sylvain Cussat-Blanc, Stephane Sanchez and Yves Duthen, Simultaneous cooperative and conflicting behaviors handled by a Gene Regulatory Network

435, Anhong Zhang and Rob Saunders, Towards the Evolution of a Language for Creative Design

701, Sune S. Nielsen, Bernabe Dorronsoro, Gregoire Danoy and Pascal Bouvry, Novel Efficient Asynchronous Cooperative Co-evolutionary Multi-Objective Algorithms

Thursday, IEEE-CEC Invited Lecture, 13:30-14:30, Chair: Xiaodong Li
KC Tan, Probabilistic Graphical Approaches for Learning, Modeling, and Sampling in Evolutionary Multi-objective Optimization

Thursday, FUZZ IEEE, ThF 3-1, 13:30-14:30, Type-2 fuzzy logic 1, Woei-Wan Tan

108, Jerry Mendel, Plotting 2-1/2 D Figures for General Type-2 Fuzzy Sets by Hand or by PowerPoint

123, Babak Rezae, A Multi-Objective Approach to Design of Interval Type-2 Fuzzy Logic Systems

148, Abbas Khosravi, Saeid Nahavandi, Doug Creighton and Reihaneh Naghavizadeh, Prediction Interval Construction Using Interval Type-2 Fuzzy Logic Systems

Thursday, FUZZ IEEE, ThF 3-2, 13:30-14:30, SS Fuzzy algebraic and relational structures – theory and applications 2,Branimir Seselja, Andreja Tepavcevic

107, Jiri Rachunek and Dana Salounova, State Operators on Commutative Basic Algebras

281, Martin Stepnicka and Michal Holcapek, Arithmetics of Extensional Fuzzy Numbers - Part IIntroduction

283, Michal Holcapek and Martin Stepnicka, Arithmetics of Extensional Fuzzy Numbers - Part IIAlgebraic framework

Thursday, FUZZ IEEE, ThF 3-3, 13:30-14:30, Hybrid fuzzy systems 2, Oscar Cordon

83, Faa-Jeng Lin, Kuang-Hsiung Tan and Jian-Hsing Chiu, Active Islanding Detection Method Using Wavelet Fuzzy Neural Network

264, Eiji Mizutani, A block-approximate local Hessian-matrix analysis for CANFIS neuro-fuzzy modular network learning

277, Ren Diao and Qiang Shen, A Harmony Search Based Approach to Hybrid Fuzzy-rough Rule Induction

Thursday, FUZZ IEEE, ThF 3-4, 13:30-14:30, SS Computational Intelligence for the Digital Economy,Christian Wagner, Jonathan Garibaldi

115, John T. Rickard, Michael A. Berry, Ty Rickard, David G. Morgenthaler, Chris Berry and Rick Holland, Computing With Words for Discovery Investing

255, Jordi Soria-Comas and Josep Domingo-Ferrer, Probabilistic k-Anonymity through Microaggregation and Data Swapping

344, Christian Wagner and Derek T. Anderson, Extracting Meta-Measures from Data for Fuzzy Aggregation of Crowd Sourced Information

Thursday, FUZZ IEEE, ThF 3-5, 13:30-14:30, SS Fuzzy systems and control: Stability analysis and controller design 2, Hiroshi Ohtake

170, Dawei Zhang, Qing-Long Han and Xinchun Jia, Network-based Static Output Feedback Tracking Control for Fuzzy-model-based Nonlinear Systems

295, Tadanari Taniguchi and Michio Sugeno, Design of LUT-controllers for Nonlinear Systems with PB Models Based on I/O Linearization

358, Hiroshi Ohtake, Sho Machida, Kazuo Tanaka and Hua Wang, A Descriptor System Approach to Servo Control for Nonlinear Systems

Thursday, Hybrid, ThH 3-1, 13:30-14:30, Industrial Applications of Evolving Fuzzy and Neural Systems (Hybrid) 2, Frank Jiang

11, Phyo San, Sai Ling and Hung Nguyen, Hybrid Particle Swarm Optimization Based Normalized Radial Basis Function Neural Network For Hypoglycemia Detection

293, Ginny Y. Wong, Frank H.F. Leung and Sai-Ho Ling, Predicting Protein-Ligand Binding Site with Differential Evolution and Support Vector Machine

387, Lien B. Nguyen, Anh V. Nguyen, Sai Ho Ling and Hung T. Nguyen, A Particle Swarm Optimization-based Neural Network for Detecting Nocturnal Hypoglycemia Using Electroencephalography Signals

Thursday, Hybrid, ThH 3-2, 13:30-14:30, Computational Intelligence for Cognitive Robotics (Hybrid) 4, aoyuki Kubota, Honghai Liu

495, Fady S. Alnajjar, Yuichi Yamashita and Jun Tani, Static and Dynamic Memory to Simulate Higher-Order Cognitive Tasks

528, Gaoxiang Ouyang, Zhaojie Ju and Honghai Liu, Surface EMG Signals Determinism Analysis Based on Recurrence Plot for Hand Grasps

679, Alessandro Di Nuovo, Vivian De La Cruz, Santo Di Nuovo, Davide Marocco and Angelo Cangelosi, Mental practice and verbal instructions execution a cognitive robotics study

Thursday, Hybrid, ThH 3-3, 13:30-14:30, Ensemble Methods In Computational Intelligence (Hybrid) 2, P. N. Suganthan

228, Maria Perez-Ortiz, Pedro Antonio Gutierrez, Cesar Hervas-Martinez, Javier Briceno and Manuel de la Mata, An Ensemble Approach for Ordinal Threshold Models applied to Liver Transplantation

591, Albert Vilamala, Lluis Belanche and Alfredo Vellido, Classifying malignant brain tumours from 1H-MRS data using Breadth Ensemble Learning

665, Natthakan Iam-On and Tossapon Boongoen, Improved Link-Based Cluster Ensembles

Thursday, Hybrid, ThH 3-4, 13:30-14:30, Ensemble Methods In Computational Intelligence and Applications (Hybrid), Tapabrata Ray

74, Noha Hamza, Ruhul Sarker and Daryl Essam, Differential Evolution with a mix of Constraint Consensus Methods for Solving a Real-World Optimization Problem

381, Catherine Cheung, Julio J. Valdes and Matthew Li, Use of evolutionary computation techniques for exploration and prediction of helicopter loads

622, Armin Gruenewald, Simon Hardt, Matthias Mielke and Rainer Brueck, A decentralized Charge Management for Electric Vehicles using a Genetic Algorithm

Thursday, Hybrid, ThH 3-5, 13:30-14:30,Computational Intelligence In Finance, Economics and Management Sciences (Hybrid) 4, Pauline Haddow

88, Karen Villaverde, Nagwa Albehery, Tonghui Wang and Vladik Kreinovich, Semi-Heuristic Poverty Measures Used by EconomistsJustification Motivated by Fuzzy Techniques

590, Haken Jevne, Pauline Haddow and Alexei Gaivoronski, Evolving Constrained mean-VaR Efficient Frontiers

632, Aki-Hiro Sato, Japanese International Air Travel The Relationship between Flight Ticket Price and Geodesic Distance

Thursday, IJCNN, ThN 3-1, 13:30-14:30, Supervised Learning 4, Anne Johannet

152, Cristiano Cabrita, Antonio Ruano, Pedro Ferreira and Laszlo Koczy, Extending the functional training approach for B-Splines

514, Zalan Bodo and Lehel Csato, Improving Kernel Locality-Sensitive Hashing Using Pre-Images and Bounds

Thursday, IJCNN, ThN 3-2, 13:30-14:30, Recurrent Neural Networks 2, Er Meng Joo

7, Ailong Wu and Zhigang Zeng, Dynamic Behaviors of Hybrid Lotka-Volterra Recurrent Neural Networks with Memristor Characteristics

399, Zhao Xu, Qing Song, Haijin Fan and Danwei Wang, Online Prediction of Time Series Data with Recurrent Kernels

604, Guangpu Huang and Meng Joo Er, Model-based Articulatory Phonetic Features for Improved Speech Recognition

Thursday, IJCNN, ThN 3-3, 13:30-14:30, Brain Machines Interfaces 2, Robi Polikar

114, Mototaka Yoshioka, Tsuyoshi Inoue and Jun Ozawa, Brain Signal Pattern of Engrossed Subjects using Near Infrared Spectroscopy (NIRS) and its Application to TV commercial Evaluation

590, Suh-Yeon Dong and Soo-Young Lee, Understanding Human Implicit Intention Based on Frontal Electroencephalography (EEG)

648, Matthieu Duvinage, Thierry Castermans, Mathieu Petieau, Guy Cheron and Thierry Dutoit, Are current gait-related artifact removal techniques useful for low-complexity BCIs?

Thursday, IJCNN, ThN 3-4, 13:30-14:30, Real World Applications of Reinforcement Learning 1, Peter Vrancx

151, Petar Kormushev, Sylvain Calinon, Barkan Ugurlu and Darwin G. Caldwell, Challenges for the Policy Representation when Applying Reinforcement Learning in Robotics

365, Andrea Castelletti, Francesca Pianosi and Marcello Restelli, Tree-based Fitted Q-Iteration for Multi-Objective Markov Decision Problems

584, Tobias Jung, Sylvain Martin, Damien Ernst and Guy Leduc, Contextual Multi-armed Bandits for Web Server Defense

Thursday, IJCNN Invited Lecture, 14:40-15:40, Chair: Marcus Randall

Vladimir Cherkassky, Predictive Learning, Knowledge Discovery and Philosophy of Science

Thursday, IEEE CEC, ThC 4-1, 14:40-15:40, Evolutionary Computation for Large Scale Global Optimization 1, Ke Tang

370, Janez Brest, Borko Boskovic, Ales Zamuda, Iztok Fister and Mirjam Sepesy Maucec, Self-Adaptive Differential Evolution Algorithm with a Small and Varying Population Size

453, Shi-Zheng Zhao and P. N. Suganthan, Comprehensive Comparison of Convergence Performance of Optimization Algorithms based on Nonparametric Statistical Tests

548, Tetsuyuki Takahama and Setsuko Sakai, Large Scale Optimization by Differential Evolution with Landscape Modality Detection and a Diversity Archive

Thursday, IEEE CEC, ThC 4-2, 14:40-15:40, Differential Evolution: Past, Present and Future 2, J. J. Liang

80, Ming-Liang Chen and Feng-Sheng Wang, Fuzzy optimization for a batch simultaneous saccharification and co-fermentation process by hybrid differential evolution

402, Josafath Espinosa Ramos and Roberto A. Vazquez, A New Objective Function to build Seismic Networks using Differential Evolution

502, Pravesh Kumar and Millie Pant, Enhanced Mutation Strategy for Differential Evolution

Thursday, IEEE CEC, ThC 4-3, 14:40-15:40, Memetic Computing 2, Yew Soon Ong

486, Minh Nghia Le, Yew Soon Ong, Stefan Menzel, Chun-Wei Seah and Bernhard Sendhoff, Multi Co-objective Evolutionary Optimization Cross Surrogate Augmentation for Computationally Expensive Problems

529, Zexuan Zhu, Wenmin Liu, Zhen Ji and Shan He, Memetic Clustering Based on Particle Swarm Optimizer and K-Means

547, J. J. Liang, S. T. Ma, B. Y Qu and Ben Niu, Strategy Adaptative Memetic Crowding Differential Evolution For Multimodal Optimization

Thursday, IEEE CEC, ThC 4-4, 14:40-15:40, Artificial Bee Colony Algorithm 1, Swagatam Das

161, Bahriye Akay and Ibrahim Kirmizi, Structural Optimization of Wavelet Packets using Swarm Algorithms

339, Emrah Hancer, Celal Ozturk and Dervis Karaboga, Artificial Bee Colony Based Image Clustering

411, Angela Hsiang-Ling Chen, Yun-Chia Liang and Chia-Chien Liu, An Artificial Bee Colony Algorithm for the Cardinality-Constrained Portfolio Optimization Problems

Thursday, IEEE CEC, ThC 4-5, 14:40-15:40, Ant colony optimization 1, Tim Hendtlass

262, Cassio Rodrigo Conti, Mauro Roisenberg and Guenther Schwedersky Neto, ACOR-V - an Algorithm that Incorporates the Visibility Heuristic to the ACO in Continuous Domain

313, Ferani E. Zulvia, R.J. Kuo and Tung-Lai Hu, Solving CVRP with Time Window, Fuzzy Travel Time and Demand Via A Hybrid Ant Colony Optimization and Genetic Algortihm

538, Christopher Beer, Tim Hendtlass and James Montgomery, Improving Exploration in Ant Colony Optimisation with Antennation

Thursday, IEEE CEC, ThC 4-6, 14:40-15:40, Numerical optimization, Hideyuki Takagi

205, Yan Pei and Hideyuki Takagi, Fourier Analysis of the Fitness Landscape for Evolutionary Search Acceleration

297, James J.Q. Yu, Albert Y.S. Lam and Victor O.K. Li, Real-Coded Chemical Reaction Optimization with Different Perturbation Functions

319, Chi Kin Chow and Shiu Yin Yuen, Continuous Non-revisiting Genetic Algorithm with Overlapped Search Sub-Region

Thursday, IEEE CEC, ThC 4-7, 14:40-15:40, Evolved neural networks 1, Paulo Henrique Pisani

68, Mitchell Yuwono, Steven W. Su, Bruce Moulton and Hung Nguyen, Method for increasing the computation speed of an unsupervised learning approach for data clustering

406, Paulo Henrique Pisani and Ana Carolina Lorena, Evolutionary Neural Networks Applied to Keystroke Dynamics Genetic and Immune Based

492, Lifeng Zhang, Rong He and Mengling Yan, Heterogeneous double populations based hybrid genetic algorithm design for training feedforward neural networks

Thursday, FUZZ IEEE, ThF 4-1, 14:40-15:40, Type-2 fuzzy logic 2, Woei-Wan Tan

8, Jerry M. Mendel and Xinwang Liu, New Closed-form Solutions for Karnik-Mendel Algorithm+Defuzzification of an Interval Type-2 Fuzzy Set

45, Ondrej Linda and Milos Manic, On the Accuracy of Input-Output Uncertainty Modeling with Interval Type-2 Fuzzy Logic Systems

279, Shen Wang and Mahdi Mahfouf, A New Computationally Efficient Mamdani Interval Type-2 Fuzzy Modelling Framework

Thursday, FUZZ IEEE, ThF 4-2, 14:40-15:40, Fuzzy systems for robotics, Sansanee Auephanwiriyakul

59, Chih-Lyang Hwang and Chau Jan, Fuzzy Decentralized Sliding-Mode Under-Actuated Trajectory-Tracking Control for Quadrotor Unmanned Aerial Vehicle

367, Boonyarit Samakrob, Sansanee Auephanwiriyakul and Nipon Theera-Umpon, Extracting Route Information from Hand-Drawn Map Using Fuzzy Vector

385, Jongdae Jung, Hyoung-Ki Lee and Hyun Myung, Fuzzy-Logic-Assisted Interacting Multiple Model (FLAIMM) for Mobile Robot Slip Compensation

Thursday, FUZZ IEEE, ThF 4-3, 14:40-15:40, Fuzzy systems modelling, Maria Rifqi

127, Stephen Stubberud and Kathleen Kramer, Resource Allocation With Uncertain Sensor Models

393, Majid Abdollahzade, Arash Miranian and Shahnaz Faraji, Application of Emotional Learning Fuzzy Inference Systems and Locally Linear Neuro-Fuzzy Models for Prediction and Simulation in Dynamic Systems

407, Duc Thang Ho and Jonathan M, Garibaldi, Context modelling in fuzzy systems

Thursday, Hybrid, ThH 4-1, 14:40-15:40,Computational Intelligence In Finance, Economics and Management Sciences (Hybrid) 5, Shu-Heng Chen

143, Wladyslaw Homenda and Agnieszka Jastrzebska, Modeling Consumer's Choice Theory Using Fuzzy Sets and their Generalizations

226, Yu-Chia Hsu and An-Pin Chen, Futures Hedging Using Clusters with Dynamic Behavior of Market Fluctuation

560, Yin Song and Longbing Cao, Graph-based Coupled Behavior Analysis A Case Study on Detecting Collaborative Manipulations in Stock Markets

Thursday, Hybrid, ThH 4-2, 14:40-15:40, Ensemble Methods In Computational Intelligence (Hybrid) 3, P. N. Suganthan

18, Haiping Ma, Minrui Fei, Zhiguo Ding and Jing Jin, Biogeography-Based Optimization with Ensemble of Migration Models for Global Numerical Optimization

26, Saber Elsayed, Ruhul Sarker and Tapabrata Ray, Parameters Adaptation in Differential Evolution

36, Kaizhou Gao, Ponnuthurai Nagaratnam Suganthan and Zhenqiang Bao, A composite heuristic for the no-wait flow shop scheduling

Thursday, Hybrid, ThH 4-3, 14:40-15:40, Industrial Applications of Evolving Fuzzy and Neural Systems (Hybrid) 3, Yaochu Jin

46, Saghar Khadem, Kit Yan Chan and Tharam Dillon, Optimization of neural network configurations for short-term traffic flow forecasting using orthogonal design

232, Sai Ho Ling, Hung Nguyen, Frank H.F. Leung, Kit Yan Chan and Frank Jiang, Intelligent Fuzzy Particle Swarm Optimization with Cross-Mutated Operation

669, Andrea Pirisi, Francesco Grimaccia, Marco Mussetta and Riccardo E. Zich, An Evolutionary Optimized Device for Energy Harvesting from Traffic

Thursday, FUZZ IEEE, Poster ThF, 15:40-17:10, Poster session FUZZ IEEE, Bob (R.I) McKay

10, Chiang-Cheng Chiang and Cheng-Chieh Liu, Output Feedback Tracking Control of Uncertain Nonlinear Systems with Non-Symmetric Dead-Zone Input

14, Chiang-Cheng Chiang and Chia-Chen Hu, Output Tracking Control for Uncertain Underactuated Systems Based on Fuzzy Sliding Mode Control Approach

37, Chiang-Cheng Chiang and Chun-Hsuan Liu, Observer-Based Robust Adaptive Fuzzy Controller for Strict-Feedback Nonlinear Uncertain Systems

46, Ondrej Linda and Milos Manic, Shadowed Type-2 Fuzzy Sets -Type-2 Fuzzy Sets with Shadowed Secondary Membership Functions

53, Chih-Lyang Hwang and Hsiu-Ming Wu, Hybrid Fuzzy Sliding-Mode Under-Actuated Control for Trajectory Tracking of Mobile Robot in the Presence of Friction and Uncertainty

66, David Harel, Assaf Marron, Amir Nissim and Gera Weiss, A Software Engineering Framework for Switched Fuzzy Systems

79, Soeren Georg, Horst Schulte and Harald Aschemann, Control-Oriented Modelling of Wind Turbines Using a Takagi-Sugeno Model Structure

101, Shilian Han, Xiuzhi Sang, Xinwang Liu and Yong Qin, Direct centroid computation of fuzzy numbers

134, Tomoe Entani and Katsuhiro Honda, Group Decision Support by Interval AHP With Uncertainty-based Hierarchical Clustering

147, Geun Bum Koo, Jin Bae Park and Young Hoon Joo, Decentralized fuzzy controller for large-scale fuzzy systems with packet lossesguaranteed cost control approach

451, Joabe Silva and Ginalber Serra, A New Methodology for Fuzzy Model Based Robust Control for Nonlinear Systems

474, Shin-Jye Lee and Xiao-Jun Zeng, A Similarity-Based Learning Algorithm For Fuzzy System Identification With A Two-Layer Optimization Scheme

Thursday, IEEE CEC, ThC 5-1, 16:10-17:10, Evolutionary Computation for Large Scale Global Optimization 2, Zhenyu Yang

170, Kaibo Zhang and Bin Li, Cooperative Coevolution with Global Search for Large Scale Global Optimization

229, Shi Cheng, Yuhui Shi and Quande Qin, Dynamical Exploitation Space Reduction in Particle Swarm Optimization for Solving Large Scale Problems

341, Iztok Fister, Iztok Jr. Fister, Janez Brest and Viljem Zumer, Memetic Artificial Bee Colony Algorithm for Large-Scale Global Optimization

Thursday, IEEE CEC, ThC 5-2, 16:10-17:10, Artificial Bee Colony Algorithm 2, M. Fatih Tasgetiren

363, Mohammed El-Abd, Generalized Opposition-Based Artificial Bee Colony Algorithm

496, Tarun Kumar Sharma, Millie Pant and Jagdish Chand Bansal, Artificial Bee Colony with Mean Mutation Operator for Better Exploitation

550, Korhan Karabulut and M. Fatih Tasgetiren, A Discrete Artificial Bee Colony Algorithm for the Traveling Salesman Problem with Time Windows

Thursday, IEEE CEC, ThC 5-3, 16:10-17:10, Ant colony optimization 2, Jun Zhang

123, Wen-guan Wang, Ying-biao Ling, Jun Zhang and Yu-ping Wang, Ant Colony Optimization Algorithm for Analog Filter Design

241, Jialiang Kou, Shengwu Xiong, Zhixiang Fang, Xinlu Zong and Feifei Bian, Positive Point Charge Potential Field based ACO algorithm for Multi-objective Evacuation Routing Optimization Problem

654, Vasco M.C. Esteves, Joao M.C. Sousa, Carlos A. Silva, Ana P. B. Povoa and Maria Isabel Gomes, SCant-Design Closed Loop Supply Chain Design using Ant Colony Optimization

Thursday, IEEE CEC, ThC 5-4, 16:10-17:10, Artificial Immune systems 2, Leandro N. de Castro

30, Ederson Borges, Daniel G. Ferrari and Leandro N. de Castro, Silhouette-Based Clustering using an Immune Network

440, Luiz Antonio Carraro and Leandro Nunes de Castro de Castro, A Clonal Selection Algorithm to Minimize Reshuffling in Container Stacking Operations

614, Antonio Nascimento and Germano Vasconcelos, An Experimental Investigation of Artificial Immune System Algorithms for Credit Risk Assessment Applications

Thursday, IEEE CEC, ThC 5-5, 16:10-17:10, Particle swarm optimization 7, Sean P. Fitzgibbon

287, Alexandr Sergeevich and Stephen Bartlett, Optimizing qubit Hamiltonian parameter estimation algorithm using PSO

505, Ping-Che Hsiao, Tsung-Che Chiang and Li-Chen Fu, Particle Swarm Optimization for the Minimum Energy Broadcast Problem in Wireless Ad-Hoc Networks

Thursday, IEEE CEC, ThC 5-6, 16:10-17:10, Intelligent systems applications, Irene Moser

191, Fan Jianchao and Han Min, Nonliear Model Predictive Control of Ball-Plate System based on Gaussian Particle Swarm Optimization

342, Kattan Ahmed and Fatima Shaheen, PSO as a Meta-Search for Hyper-GA System to Evolve Optimal Agendas for Sequential Multi-Issue Negotiation

528, Jan Richter and Irene Moser, A Distributed Multiobjective Approach to Negotiations in Semi-Competitive Environments

Thursday, IEEE CEC, ThC 5-7, 16:10-17:10, Multi-objective evolutionary algorithms 6, Qingfu Zhang

213, Adriana Menchaca-Mendez and Carlos A. Coello Coello, Solving Multi-Objective Optimization Problems using Differential Evolution and a Maximin Selection Criterion

224, Aimin Zhou, Qingfu Zhang and Guixu Zhang, A Multiobjective Evolutionary Algorithm based on Decomposition and Probability Model

582, Rituparna Datta and Kalyanmoy Deb, An Adaptive Normalization based Constrained Handling Methodology with Hybrid Bi-Objective and Penalty Function Approach

Thursday, Hybrid, ThH 5-1, 16:10-17:10, Computational Intelligence In Bioinformatics (Hybrid) 5,Michael Lones, Vassilis Plagianakos, Sheridan Houghten

215, Fu Xin, Travis Kim, Neagu Daniel, Ridley Mick and Shen Qiang, Fuzzy Complex Number Aided Evaluation of Predictive Toxicology Models

633, Sambu Seo, Johannes Mohr, Hauke Heekeren, Andreas Heinz, Ben Eppinger, Shu-Chen Li and Klaus Obermayer, A Voxel Selection Method for the Multivariate Analysis of Imaging Genetics Data

743, Marco Masseroli, Davide Chicco and Pietro Pinoli, Probabilistic Latent Semantic Analysis for prediction of Gene Ontology annotations

756, Siamak Tafavogh, Paul J.Kennedy and Daniel R.Catchpoole, Determining Cellularity Status of Tumors based on Histopathology using Hybrid Image Segmentation

Thursday, IJCNN, ThN 5-1, 16:10-17:10, Self-Organizing Maps 2, Timo Honkela

171, Teck-Hou Teng, Ah-Hwee Tan, Yuan-Sin Tan and Adrian Yeo, Self-organizing neural networks for learning air combat maneuvers

356, Gaurav Gupta, Alexandra Psarrou, Anastasia Angelopoulou and Jose Garcia Rodriguez, Region Analysis through Close Contour Transformation using Growing Neural Gas

739, Timo Honkela, Juha Raitio, Krista Lagus, Ilari Nieminen, Nina Honkela and Mika Pantzar, Subjects on Objects in Contexts Using GICA Method to Quantify Epistemological Subjectivity

Thursday, IJCNN, ThN 5-2, 16:10-17:10, Radial Basis Functions Networks 2, Manuel Roveri

145, Sateesh Babu Giduthuri, Savitha Ramasamy and Suresh Sundaram, A Projection Based Learning in Meta-cognitive Radial Basis Function Network for Classification Problems

379, Efrain Castillo-Muniz and Eduardo Bayro-Corrochano, Geometric Spherical Networks for Visual Data Processing

693, Habib Dhahri, Adel M. Alimi and Ajith Abraham, Designing Beta Basis Function Neural Network for Optimization Using Artificial Bee Colony (ABC)

Thursday, IJCNN, ThN 5-3, 16:10-17:10, Reservoir Networks 2, Oliver Obst

385, Jun Yin and Yan Meng, Self-Organizing Reservoir Computing with Dynamically Regulated Cortical Neural Networks

512, Scott Notley and Andre Gruning, Improved Spike-Timed Mappings using a Tri-Phasic Spike Timing-Dependent Plasticity Rule

639, Junichi Kuwabara, Kohei Nakajima, Rongjie Kang, David Branson, Emanuele Guglielmino, Darwin Caldwell and Rolf Pfeifer, Timing-Based Control via Echo State Network for Soft Robotic Arm

Thursday, IJCNN, ThN 5-4, 16:10-17:10, Chaotic Neural Networks, Huaguang Zhang

422, Yuko Osana, Chaotic Quaternionic Associative Memory

439, Motoyuki Onagi and Yuko Osana, Pattern Dependency of One-to-Many Association Ability in Chaotic Complex-Valued Multidirectional Associative Memory with Variable Scaling Factor

549, Fernando Corinto, Alon Ascoli and Marco Gilli, Memristor models for chaotic neural networks

Thursday, IJCNN, ThN 5-5, 16:10-17:10, Neuromorphic Hardware 2, Giacomo Indiveri

32, Mostafa Rahimi Azghadi, Said Al-Sarawi, Nicolangelo Iannella and Derek Abbott, Design and Implementation of BCM Rule Based on Spike-Timing Dependent Plasticity

445, Saeed Afshar, Omid Kavehei, Jonathan Tapson, Andre van Schaik, Stan Skafidas and Tara Hamilton, Emergence of Competitive Control in a Memristor-Based Neuromorphic Circuit

689, Dane Corneil, Daniel Sonnleithner, Emre Neftci, Elisabetta Chicca, Matthew Cook, Giacomo Indiveri and Rodney Douglas, Function approximation with uncertainty propagation in a VLSI spiking neural network

Thursday, IJCNN, ThN 5-6, 16:10-17:10, Interpretable Models for the Analysis of Health Data,Alexandru Floares, Adam Gaweda, and Paulo Lisboa

645, Alexandru Floares and Adriana Birlutiu, Decision Tree Models for Developing Molecular Classifiers for Cancer Diagnosis

658, Federico Cismondi, Andre S. Fialho, Susana M. Vieira, James E. Gray, Shane R. Reti, Joao M. C. Sousa, Stan N. Finkelstein and Lu Xiaoning, ANN Validation System for ICU Neonatal Data

670, Hector Ruiz, Sandra Ortega-Martorell, Ian Jarman, Alfredo Vellido, Jose Martin, Enrique Romero and Paulo Lisboa, Towards Interpretable Classifiers with Blind Signal Separation

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Friday, IEEE CEC, FrC 1-1, 8:15-9:15, Algorithms and Optimization 1, Saman Halgamuge

87, Jayantha Siriwardana and Saman Halgamuge, Fast Shortest Path Optimization Inspired by Shuttle Streaming of Physarum Polycephalum

107, Hongqing Cao, Friedrich Recknagel and Philip T. Orr, The Experimental Study of Population-based Parameter Optimization Algorithms on Rule-based Ecological Modelling

261, Xin Wei and Shigeru Fujimura, Parallel Quantum Evolutionary Algorithms with Client-Server Model for Multi-Objective Optimization on Discrete Problems

Friday, IEEE CEC, FrC 1-2, 8:15-9:15, Swarm Intelligence In Data Mining, Yuhui Shi

354, Shi Cheng, Yuhui Shi and Quande Qin, Particle Swarm Optimization based Semi-Supervised Learning on Chinese Text Categorization

571, Hanan Alghamdi, Lilian Tang and Saleh Alshomrani, Hybrid ACO and TOFA Feature Selection Approach for Text Classification

679, Swee Chuan Tan, Simplifying and Improving Swarm-based Clustering

Friday, IEEE CEC, FrC 1-3, 8:15-9:15, Evolutionary Algorithms with Statistical & Machine Learning Techniques, Aimin Zhou

151, David Haynes, Steven Corns and Ganesh Venayagamoorthy, An Exponential Moving Average Algorithm Evolutionary Algorithms Applied to Sudoku Puzzles

530, Roberto Santana, Alexander Mendiburu and Jose A. Lozano, Structural transfer using EDAs An application to multi-marker tagging SNP selection

552, Yanghui Wu, John McCall, David Corne and Olivier Regnier-Coudert, Landscape Analysis for Hyperheuristic Bayesian Network Structure Learning on Unseen Problems

Friday, IEEE CEC, FrC 1-4, 8:15-9:15, Theory and 1mplementation 1, Clinton Woodward

32, Tao Gong and Lan Shuai, A Cross-Model Study on the Effect of Power-Laws on Language Evolution

133, Stephen Kelly, Peter Lichodzijewski and Malcolm I. Heywood, On Run Time Libraries and Hierarchical Symbiosis

321, Shannon Pace, Andrew Cain and Clinton Woodward, A Consolidated Model of Particle Swarm Optimisation Variants

Friday, FUZZ IEEE, FrF 1-1, 8:15-9:15, Fuzzy logic, Sandra Sandri

74, John T. Rickard, Janet Aisbett and Jerry M. Mendel, Rule-Based Fuzzy Systems with Weighted Power Mean Firing Operator as Universal Approximators

120, Anderson Cruz, Benjamin Bedregal and Regivan Santiago, The law x leq I(y,x) and the three main classes of fuzzy implications

263, David Coufal, A Sufficient Condition on Coherence of S-shaped Radial Implicative Fuzzy Systems

Friday, FUZZ IEEE, FrF 1-2, 8:15-9:15, Classification, Tomohiro Yoshikawa

360, Izumi Suzuki, Proposal of Fuzzy Coverage Region Classifier as an Extension of the Naive Bayes Classifier and Improvement of its Zero-one Loss

369, Trung Le, Dat Tran, Wanli Ma and Dharmendra Sharma, Fuzzy Multi-sphere Support Vector Data Description

427, Nele Verbiest, Chris Cornelis and Richard Jensen, Fuzzy Rough Positive Region based Nearest Neighbour Classification

Friday, FUZZ IEEE, FrF 1-3, 8:15-9:15,SS Fuzzy Logic on Medical, Immune and Health Technology 1, Kouki Nagamune

382, Toyoshima Takayasu, Nagamune Kouki, Matsumoto Tomoyuki, Kubo Seiji, Matsushita Takehiko, Kuroda Ryosuke and Kurosaka Masahiro, A Development of Navigation System with Image Segmentation in Mosaicplasty of the Knee

387, Shogo Kawaguchi, Kouki Nagamune, Daisuke Araki, Tomoyuki Matsumoto, Seiji Kubo, Takehiko Matsushita, Ryosuke Kuroda and Masahiro Kurosaka, An Automated Calibration by Using Fuzzy Control for a Measurement System of Lachman Test

389, Mohd Hanafi Mat Som, Shogo Kawaguchi, Kouki Nagamune, Keisuke Oe, Sang Yang Lee, Takahiro Niikura, Ryosuke Kuroda and Masahiro Kurosaka, Lateral Supra-acetabular External Fixation for Unstable Pelvic Ring FractureA Biomechanical Assessments

Friday, IJCNN, FrN 1-1, 8:15-9:15, Recurrent Neural Networks 3, Kazuaki Masuda

329, Artur d'Avila Garcez and Gerson Zaverucha, Multi-instance Learning using Recurrent Neural Networks

448, Kazuaki Masuda, Bunpei Fukui and Kenzo Kurihara, A Weighting Approach for Autoassociative Memories to Improve Accuracy in Memorization

625, Florian Jug, Matthew Cook and Angelika Steger, Recurrent Competitive Networks Can Learn Locally Excitatory Topologies

Friday, IJCNN, FrN 1-2, 8:15-9:15, Unsupervised Learning and Clustering 3, Alessandro Sperduti

9, Thiago Silva and Liang Zhao, Detecting Overlapping Structures via Network-based Competitive Learning

502, Jae Hyun Lim, Hansol Choi, Jun-Cheol Park, Jae Young Jun and Dae-shik Kim, Learning Spatio-temporally Invariant Representations from Video

641, KyungHyun Cho and Nima Reyhani, An iterative algorithm for singular value decomposition on noisy incomplete matrices

Friday, IJCNN, FrN 1-3, 8:15-9:15, Dynamic Programming and Markov Chains, Huaguang Zhang

122, Derong Liu, Hongliang Li and Ding Wang, H-infinity Control of Unknown Discrete-Time Nonlinear Systems with Control Constraints Using Adaptive Dynamic Programming

231, Michael Fairbank and Eduardo Alonso, Value-Gradient Learning

232, Michael Fairbank and Eduardo Alonso, The Divergence of Reinforcement Learning Algorithms with Value-Iteration and Function Approximation

Friday, IJCNN, FrN 1-4, 8:15-9:15,Signal, Image Processing and Multimedia 3, Khan M. Iftekharuddin

79, Xi Xu, Hong-Wei Hao, Xu-Cheng Yin, Ning Liu and Shawkat Hasan Shafin, Automatic Segmentation of Cervical Vertebrae in X-Ray Images

668, Juan Colonna, Afonso Ribas, Eulanda Santos and Eduardo Nakamura, Feature Subset Selection for Automatically Classifying Anuran Calls Using Sensor Networks

719, Teddy Salan and Khan Iftekharuddin, Large Pose Invariant Face Recognition Using Feature-based Recurrent Neural Network

Friday, IJCNN, FrN 1-5, 8:15-9:15, Predicting mechanisms In Dynamic Environments, Nikitas Dimopoulos

144, Juan Manuel Adan-Coello and Carlos Tobar, OntoHop An Information Filtering Agent Using Hopfield Nets and Ontologies

367, Adrian Letchford, Junbin Gao and Lihong Zheng, Optimizing The Moving Average

447, Babak Keshavarz Hedayati, Rafael Parra-Hernandez, Nikitas Dimopoulos, Polyxeni Alexiou and Vassilis Demopoulos, An Improved Neural Network Ensemble Model of Aldose Reductase Inhibitory Activity

Friday, IEEE CEC, FrC 2-1, 9:20-10:20, Evolutionary based Hyper-Heuristics and Their Applications, Andries P. Engelbrecht

138, Su Nguyen, Mengjie Zhang, Mark Johnston and Tan Kay Chen, A Coevolution Genetic Programming Method to Evolve Scheduling Policies for Dynamic Multi-objective Job Shop Scheduling Problems

562, Ping-Che Hsiao, Tsung-Che Chiang and Li-Chen Fu, A VNS-based Hyper-heuristic with Adaptive Computational Budget of Local Search

732, Jacomine Grobler, Andries P. Engelbrecht, Graham Kendall and Sarma Yadavalli, Investigating the Use of Local Search for Improving Meta-Hyper-Heuristic Performance

Friday, IEEE CEC, FrC 2-2, 9:20-10:20, Complex Networks and Evolutionary Computation, Jing Liu

143, Maoguo Gong, Qing Cai, Yangyang Li and Jingjing Ma, An Improved Memetic Algorithm for Community Detection in Complex Networks

296, Ruochen Liu, Yong Liu and Yangyang Li, An Improved Method for Multi-objective Clustering Ensemble Algorithm

579, Ryosuke Sano, Takuya Shindo, Kenya Jin'no and Toshimichi Saito, PSO-based Multiple Optima Search Systems with Switched Topology

Friday, IEEE CEC, FrC 2-3, 9:20-10:20, Theory and 1mplementation 2, Richard J. Duro

197, Chengyong Si, Lei Wang and Qidi Wu, Mapping Constrained Optimization Problems to Algorithms and Constraint Handling Techniques

333, Renato Maia, Leandro De Castro and Walmir Caminhas, Bee Colonies as Model for Multimodal Continuous Optimization The OptBees Algorithm

660, Pilar Caamano, Francisco Bellas, Jose A. Becerra, Vicente Diaz and Richard J. Duro, Experimental Analysis of the Relevance of Fitness Landscape Topographical Characterization

Friday, IEEE CEC, FrC 2-4, 9:20-10:20, Cultural algorithms, Robert G. Reynolds

500, Eduardo Vazquez-Fernandez, Carlos Coello and Feliu Sagols, An Evolutionary Algorithm coupled with the Hooke-Jeeves Algorithm for Tuning a Chess Evaluation Function

749, Mostafa Ali, Ayad Salhieh and Robert Reynolds, Socio-Cultural Evolution via Neighborhood restructuring in Intricate Multi-Layered Networks

756, Robert Reynolds and Yousef Gawasmeh, Evolving Heterogeneous Social Fabrics for the Solution of Real-Valued Optimization Problems using Cultural Algorithms

Friday, FUZZ IEEE, FrF 2-1, 9:20-10:20, SS Inter-Relation Between Interval and Fuzzy Techniques,Vladik Kreinovich, Karen Villaverde

93, Jaime Nava, Olga Kosheleva and Vladik Kreinovich, Why Bernstein Polynomials Are BetterFuzzy-Inspired Justification

458, Kuo-Ping Chiao, Trapezoidal Interval Type-2 Fuzzy Set Extension of Analytic Hierarchy Process

Friday, FUZZ IEEE, FrF 2-2, 9:20-10:20, Fuzzy clustering 1, Marie-Jeanne Lesot

41, Thomas Runkler and James Keller, Fuzzy Approaches To Hard c-Means Clustering

329, Jun Wang, Shitong Wang, Zhaohong Deng and Fu-Lai Chung, Double Indices Induced FCM Clustering and Its Integration with Fuzzy Subspace Clustering

417, Valmir Macario and Francisco de Assis Tenorio De Carvalho, An adaptive semi-supervised fuzzy clustering algorithm based on objective function optimization

Friday, FUZZ IEEE, FrF 2-3, 9:20-10:20,SS Fuzzy Logic on Medical, Immune and Health Technology 2, Kouki Nagamune

163, Yusho Kaku, Kei Kuramoto, Kobashi Syoji and Hata Yutaka, Asthmatic Attacks Prediction Considering Weather Factors Based on Fuzzy-AR Model

198, Hideaki Tanii, Hiroshi Nakajima, Naoki Tsuchiya, Kei Kuramoto, Syoji Kobashi and Yutaka Hata, A Fuzzy-AR Model to Predict Human Body Weights

199, Yuya Takashima, Tomomoto Ishikawa, Kei Kuramoto, Syoji Kobashi and Yutaka Hata, Ultrasonic Thickness Evaluation of Seminiferous Tubule by Fuzzy Inference

Friday, IJCNN, FrN 2-1, 9:20-10:20, Active and Hybrid Learning, Sung-Bae Cho

381, Tengfei Shen and Dingyun Zhu, Layered_CasPer Layered Cascade Artificial Neural Networks

642, Araken Santos and Anne Canuto, Using Semi-Supervised Learning in Multi-label Classification Problems

747, Josu Maiora and Manuel Grana, Abdominal CTA Image Analisys Through Active Learning and Decision Random Forests Aplication to AAA Segmentation

Friday, IJCNN, FrN 2-2, 9:20-10:20, Neural and Fuzzy Control, Fernando Gomide

130, Kazuyoshi Tsutsumi, Kenta Nakane and Yuuko Miyaura, Experimental Study on Human-Machine Interaction for Dynamical Balancing Control Based on a Building Block Type Device with Parallel Two-Wheeled Vehicles

195, Yutaka Maeda, Akihiro Ito and Hidetaka Ito, Central Pattern Generator and Its Learning Via Simultaneous Perturbation Method

321, Xuemei Ding, Yuhua Li, Ammar Belatreche and Liam Maguire, Constructing Minimum Volume Surfaces using Level Set Methods for Novelty Detection

Friday, IJCNN, FrN 2-3, 9:20-10:20, Hardware 1mplementation of Neural Networks, Andre' van Schaik

81, Sergio Orts-Escolano, Jose Garcia-Rodriguez, Vicente Morell-Gimenez, Jorge Azorin-Lopez and Juan Manuel Garcia-Chamizo, Multi-GPU Based Camera Network System Keeps Privacy using Growing Neural Gas

564, Ralf Joost and Ralf Salomon, Time Coding Output Neurons in Digital Artificial Neural Networks

587, Josep L. Rossello, Vincent Canals and Antoni Morro, Probabilistic-Based Neural Network Implementation

Friday, IJCNN, FrN 2-4, 9:20-10:20, Sparse Representation and Highly Dimensional Systems, Zhengping Ji

125, Shiping Wen, Zhigang Zeng and Tingwen Huang, Passivity and passification for a class of singularly perturbed nonlinear systems via neural networks

358, Andrej Gisbrecht, Bassam Mokbel and Barbara Hammer, Linear Basis-Function t-SNE for Fast Nonlinear Dimensionality Reduction

434, Zhengping Ji, Wentao Huang and Steven P. Brumby, Learning Sparse Representation via a Nonlinear Shrinkage Encoder and a Linear Sparse Decoder

Friday, IJCNN, FrN 2-5, 9:20-10:20, Complex-Valued Neural Networks 2,Igor Aizenberg, Akira Hirose, Danilo Mandic, and Jacek M. Zurada

4, Xia Hong, Sheng Chen and Chris J. Harris, Modelling and Inverting Complex-Valued Wiener Systems

520, Kartick Subramanian, Savitha Ramasamy and Suresh Sundaram, Complex neuro fuzzy inference system for wind prediction

636, Abdul Rahman Abdul Ghani, Md Faijul Amin and Kazuyuki Murase, Using Complex-Valued Levenberg-Marquardt Algorithm for Learning and Recognizing Various Hand Gestures

Friday, IEEE CEC, FrC 3-1, 11:00-12:00, Theory and 1mplementation 3, Daniel Ashlock

40, Steve Dower, Automatic Implementation of Evolutionary Algorithms on GPUs using ESDL

166, Daniel Ashlock and Wendy Ashlock, Impact of Regulatory Genes On Optimization Behavior

390, Olivier Regnier-Coudert and John McCall, An Island Model Genetic Algorithm for Bayesian Network Structure Learning

Friday, IEEE CEC, FrC 3-2, 11:00-12:00, Engineering applications 1, Uday Chakraborty

147, Deqing Huang, Jian-Xin Xu, Xin Deng, Venkatakrishnan Venkataramanan and Huynh The Cat Tuong, GA Based High-Order Peak Filter Design With Application to Compensation of Contact-Induced Vibration in HDD Servo Systems

149, Lin Wang, Bo Yang, Yuehui Chen and Xiuyang Zhao, Predict the Hydration of Portland Cement using Differential Evolution

455, Uday Chakraborty, Sajal Das and Travis Abbott, Energy-Efficient Routing in Hierarchical Wireless Sensor Networks Using Differential-Evolution-Based Memetic Algorithm

Friday, IEEE CEC, FrC 3-3, 11:00-12:00, Real-world applications 1, Marcin Seredynski

581, Vladimir Bukhtoyarov and Eugene Semenkin, Neural Networks Ensemble Approach for Detecting Attacks in Computer Networks

647, Marcin Seredynski, Gregoire Danoy, Tabatabaei Masoud, Pascal Bouvry and Pigne Yoann, Generation of Realistic Mobility for VANETs Using Genetic Algorithms

680, Ahmad Almakhlafi and Joshua Knowles, Benchmarks for Maintenance Scheduling Problems in Power Generation

Friday, IEEE CEC, FrC 3-4, 11:00-12:00, Multi-objective evolutionary algorithms 7, Andrei Petrovski

178, Subhrajit Roy, Saul Zapotecas MartInez, Carlos A. Coello Coello and Soumyadip Sengupta, A Multi-Objective Evolutionary Approach for Linear Antenna Array Design and Synthesis

358, Saul Zapotecas MartInez and Carlos A. Coello Coello, A Direct Local Search Mechanism for Decomposition-based Multi-Objective Evolutionary Algorithms

409, Noura Al Moubayed, Bashar Awwad Shiekh hasan, John Q. Gan, Andrei Petrovski and John McCall, Continuous Presentation for Multi-Objective Channel Selection in Brain-Computer Interfaces

Friday, FUZZ IEEE, FrF 3-1, 11:00-12:00, Fuzzy fundamentals, G. A. Vijayalakshmi Pai

64, Jozsef Dombi, On a Certain Type of Unary Operators

155, Fang Zhigeng and Yang Yingjie, A new method for operations of interval numbers

331, Tzung-Pei Hong, Chun-Wei Lin, Tsung-Ching Lin and Shyue-Liang Wang, Incremental Multiple Fuzzy Frequent Pattern Tree

Friday, FUZZ IEEE, FrF 3-2, 11:00-12:00, Fuzzy clustering 2, Thomas Runkler

90, Marcelo Ferreira and Francisco De Carvalho, Kernel fuzzy clustering methods based on local adaptive distances

195, Yuan Miao, Visualising Fuzzy Cognitive Maps

421, Alexandre Szabo, Leandro Nunes de Castro and Myriam Regattieri Delgado, FaiNetAn Immune Algorithm for Fuzzy Clustering

Friday, FUZZ IEEE, FrF 3-3, 11:00-12:00, SS New Directions In Fuzzy Adaptive Control, Christophe Marsala

52, Chih-Min Lin and Hsin-Yi Li, Adaptive Wavelet Fuzzy Cerebellar Model Articulation Control System Design for Voice Coil Motors

60, Tsung-Chih Lin, Chia-Hao Kuo and Valentina Emilia Balas, Real-Time Recurrent Interval Type-2 Fuzzy-Neural System Identification Using Uncertainty Bounds

68, Norali Pernalete, Shan-Ming Chang and Fuyuan Cheng, Fuzzy Logic Based Evaluation Function for Haptic Tasks

Friday, FUZZ IEEE, FrF 3-4, 11:00-12:00, Real-world applications 5, Daniel Leite

284, Abhishek Mahnot and Mihail Popescu, FUMIL-Fuzzy Multiple Instance Learning For Early Illness Recognition

354, Hazlina Hamdan and Jonathan Garibaldi, A Framework for Automatic Modelling of Survival using Fuzzy Inference

405, Jing Rung Yu, You Wei Dong, Yi Hsuan Chang and Fang-Mei Tseng, Comparison of Innovation Diffusion Models A Case Study on the DRAM Industry

Friday, IJCNN, FrN 3-1, 11:00-12:00, Self-Organiziation In natural and artificial networks, Akira Hirose

172, Walter J Freeman, Robert Kozma and Giuseppe Vitiello, Adaptation of the Generalized Carnot Cycle to Describe Thermodynamics of Cerebral Cortex

259, Dror Cohen and Andrew Paplinski, A comparative evaluation of the Generative Topographic Mapping and the Elastic Net for the formation of Ocular Dominance stripes

529, Johannes Bauer, Cornelius Weber and Stefan Wermter, A SOM-Based Model for Multi-Sensory Integration in the Superior Colliculus

Friday, IJCNN, FrN 3-2, 11:00-12:00, Unsupervised Model-based Learning from High Dimensional and Functional Data, Faicel Chamroukhi

278, Aneesha Bakharia and Vladimir Nikulin, A nonparametric criterion for the selection of the number of factors and nonnegative extension for gradient-based matrix factorization

628, Faicel Chamroukhi and Herve Glotin, Mixture model-based functional discriminant analysis for curve classification

700, Dorra Trabelsi, Samer Mohammed, Latifa Oukhellou and Yacine Amirat, Activity Recognition Using Body Mounted Sensors An Unsupervised Learning based Approach

Friday, IJCNN, FrN 3-3, 11:00-12:00, Neuromorphic Science, Technology and Applications, Robinson E. Pino and Robert Kozma

275, Mostafa Rahimi Azghadi, Said Al-Sarawi, Nicolangelo Iannella and Derek Abbott, Efficient Design of Triplet Based Spike-Timing Dependent Plasticity

429, Alexander Rast, Luis A Plana, Stephen R Welbourne and Steve B Furber, Event-Driven MLP Implementation on Neuromimetic Hardware

509, William Chan and Jason Lohn, Spike Timing Dependent Plasticity with Memristive Synapse in Neuromorphic Systems

Friday, IJCNN, FrN 3-4, 11:00-12:00, Real World Applications of Reinforcement Learning 2, Peter Vrancx

89, Martin Riedmiller, Sascha Lange and Arne Voigtlaender, Autonomous reinforcement learning on raw visual input data in a real world application

618, Hung Ngo, Matthew Luciw, Alexander Forster and Juergen Schmidhuber, Learning Skills from Play Artificial Curiosity on a Katana Robot Arm

714, Kevin Van Vaerenbergh, Abdel Rodriguez, Matteo Gagliolo, Peter Vrancx, Ann Nowe, Julian Stoev, Stijn Goossens, Gregory Pinte and Wim Symens, Improving wet clutch engagement with Reinforcement Learning

Friday, IEEE CEC, FrC 4-1, 13:30-14:30, Algorithms and optimization 2, Hisashi Handa

450, Kate Smith-Miles and Thomas Tan, Measuring Algorithm Footprints in Instance Space

501, Tarun Kumar Sharma, Millie Pant and Jagdish Chand Bansal, Some Modifications to Enhance the Performance of Artificial Bee Colony

746, Hisashi Handa, Use of Graph Kernels in Estimation of Distribution Algorithms

Friday, IEEE CEC, FrC 4-2, 13:30-14:30, Applications of Evolutionary Computation In Biomedical Engineering, Jose A. Lozano

535, Hiroaki Yamaguchi, Tomoyuki Hiroyasu, Sakito Nunokawa, Noriko Koizumi, Naoki Okumura, Hisatake Yokouchi, Mitsunori Miki and Masato Yoshimi, Comparison Study of Controlling Bloat Model of GP in Constructing Filter for Cell Image Segmentation Problems

583, Jonathan Goh, Lilian Tang, Tunde Peto and George Saleh, An Evolutionary Approach for Determining Hidden Markov Model for Medical Image Analysis

605, Roberto Santana, Alexander Mendiburu and Jose A. Lozano, An analysis of the use of probabilistic modeling for synaptic connectivity prediction from genomic data

Friday, IEEE CEC, FrC 4-3, 13:30-14:30, Engineering applications 2, Edward Tsang

172, Ricardo Rabelo, Marcus Lemos and Daniel Barbosa, Power System Harmonics Estimation using Particle Swarm Optimization

401, Ricardo Britto, Pedro Santos Neto, Ricardo Rabelo, Werney Ayala and Thiago Soares, A Hybrid Approach to Solve the Agile Team Allocation Problem

638, Marlon Lima, Eduardo Carrano and Ricardo Takahashi, Multiobjective Planning of Wireless Local Area Networks (WLAN) Using Genetic Algorithms

Friday, IEEE CEC, FrC 4-4, 13:30-14:30, Real-world applications 2, Frank Neumann

84, Wesam Herbawi and Michael Weber, The ridematching problem with time windows in dynamic ridesharing A model and a genetic algorithm

96, Kalyan Veeramachaneni, Markus Wagner, Una-May O'Reilly and Frank Neumann, Optimizing Energy Output and Layout Costs for Large Wind Farms using Particle Swarm Optimization

219, Yi Sun, Albert Y.S. Lam, Victor O.K. Li, Jin Xu and Jame J.Q. Yu, Chemical Reaction Optimization for the Optimal Power Flow Problem

Friday, FUZZ IEEE, FrF 4-1, 13:30-14:30, Fuzzy applications, Masayoshi Kanoh

82, Syibrah Naim, Hani Hagras and Jonathan M. Garibaldi, A Fuzzy Logic Based Multi-Criteria Group Decision Making System for the Assessment of Umbilical Cord Acid-Base Balance

287, Qiong Wu, Chunyan Miao and Zhiqi Shen, A Curious Learning Companion in Virtual Learning Environment

391, Anisha Halder, Pratyusha Rakshit, Sumantra Chakraborty, Amit Konar, Eunjin Kim and Atulya K. Nagar, Reducing Uncertainty in Interval Type-2 Fuzzy Sets for Qualitative Improvement in Emotion Recognition from Facial Expressions

Friday, FUZZ IEEE, FrF 4-2, 13:30-14:30, Fuzzy clustering 3, Tomoe Entani

16, Miin-Shen Yang, Hsien-Chun Kuo and Wen-Liang Hung, A Robust Clustering Algorithm for Interval Data

36, Francisco De Carvalho and Julio Pimentel, A Fuzzy clustering algorithm based on adaptive city-block distances

258, Rashmi Dutta Baruah and Plamen Angelov, Evolving Local Means Method for Clustering of Streaming Data

Friday, FUZZ IEEE, FrF 4-3, 13:30-14:30, Fuzzy mathematical programming, Ricardo Coelho Silva

233, Yuan Yuan, Fuchun Sun and Yenan Hu, Decentralized Multi-objective Robust Control of Interconnected Fuzzy Singular Perturbed Model with Multiple Perturbation Parameters

328, Mohamed K. Omar, Muzalna Mohd Jusoh and Mohd Omar, Investigating the Benefits of Fuzzy Mathematical Programming Approach for Solving Aggregate Production Planning

403, Christian Arnold, Steven Lambeck and Christoph Ament, Multistage fuzzy control using trapezoidal membership functions and dynamic programming

Friday, IJCNN, FrN 4-1, 13:30-14:30, Models of Synaptic Learning, Lubica Benuskova

127, Sebastian Risi and Kenneth Stanley, A Unified Approach to Evolving Plasticity and Neural Geometry

412, Lubica Benuskova, Why is it Hard to Induce Long-Term Depression?

534, Joseph Chrol-Cannon, Andre Gruning and Yaochu Jin, The Emergence of Polychronous Groups under Varying Input Patterns, Plasticity Rules and Network Connectivities

Friday, IJCNN, FrN 4-2, 13:30-14:30, SVM and Kernel Methods 3, James Kwok

59, Xiaoqiang Zhu, Pinghua Gong, Zengshun Zhao and Changshui Zhang, Learning Similarity Metric with SVM

163, Balamurugan Palaniappan, Shirish Shevade and Ravindra Babu Tallamraju, Efficient Algorithms for Linear Summed Error Structural SVMs

699, Giovanni Da San Martino, Nicolo' Navarin and Alessandro Sperduti, A Memory Efficient Graph Kernel

Friday, IJCNN, FrN 4-3, 13:30-14:30, Cognitive and Spiking Neural Networks Learning,Andre Gruning, Scott Notley, Yaochu Jin

116, Kiruthika Ramanathan, Madhurima Battacharya and Prahlad Vadakkepat, Stimulus dependent habituation in a bottom - up brain inspired model of learning and memory

535, Paolo Arena, Luca Patane' and Pietro Savio Termini, Modeling attentional loop in the insect Mushroom Bodies

580, Jenia Jitsev, Abigail Morrison and Marc Tittgemeyer, Learning from Positive and Negative Rewards in a Spiking Neural Network Model of Basal Ganglia

Friday, IJCNN, FrN 4-4, 13:30-14:30, Robust Learning In Kernel Methods, Franck Dufrenois and Carlos Alzate

135, Kris De Brabanter, Jos De Brabanter, Johan A.K. Suykens, Joos Vandewalle and Bart De Moor, Robustness of Kernel Based Regression Influence and Weight Functions

265, Lei Zhu, Shaoning Pang, Gang Chen and Abdolhossein Sarrafzadeh, Class Imbalance Robust Incremental LPSVM for Data Streams Learning

279, Haijin Fan, Qing Song and Zhao Xu, An Information Theoretic Kernel Algorithm for Robust Online Learning

Friday, IJCNN, FrN 4-5, 13:30-14:30, Feature Selection, Extraction and Aggregation 3, Sung-Bae Cho

24, Zhao Zhang, Mingbo Zhao and Tommy W. S. Chow, Extracting the Informative Constraints for Semi-Supervised Marginal Projections in Multimodal Dimensionality Reduction

78, Ashwini Shikaripur Nadig and Brian Potetz, A Hierarchical Bayesian Model for Pattern Recognition

419, Junlin Hu and Ping Guo, Learning Multiple Pooling Combination for Image Classification

Friday, IEEE CEC, FrC 5-1, 14:40-15:40, Classification, clustering, data analysis and data mining 3, Dimitris Tasoulis

108, Wang Lutao, Xu Wei, Mabu Shingo and Hirasawa Kotaro, Rule Accumulation Method Based on Credit Genetic Network Programming

220, Tzai-Der Wang, Xiaochuan Wu and Colin Fyfe, Comparative Study of Visualisation Methods for Temporal Data

683, Sotiris Tasoulis, Michael Epitropakis, Vassilis Plagianakos and Dimitris Tasoulis, Density Based Projection Pursuit Clustering

Friday, IEEE CEC, FrC 5-2, 14:40-15:40, Real-world applications 3, Sameer Alam

564, Yuichiro Toda, Tsubasa Narita and Naoyuki Kubota, Information Visualization based on 3D Modeling for Human-friendly Teleoperation

621, Jiangjun Tang, Sameer Alam, Chris Lokan and Hussein Abbass, A Multi-objective Evolutionary Method for Dynamic Airspace Re-sectorization using Sectors Clipping and Similarities

649, Ozgur Ulker and Dario Landa-Silva, Evolutionary Local Search for Solving the Office Space Allocation Problem

Friday, IEEE CEC, FrC 5-3, 14:40-15:40, Real-world applications 4, Thomas Baeck

373, Stefan Wink, Thomas Baeck and Michael Emmerich, A Meta-Genetic Algorithm for Solving the Capacitated Vehicle Routing Problem

441, Joseph Shelton, Gerry Dozier, Joshua Adams and Aniesha Alford, Permutation-Based Biometric Authentication Protocols for Mitigating Replay Attacks

388, Keisuke Murakami, A Genetic Algorithm for Probe Testing Problem on High-density PCB

Friday, IEEE CEC, FrC 5-4, 14:40-15:40, Multiobjective optimization 2, Ricardo H. C. Takahashi

185, Yangyang Li, Jing Chen, Ruochen Liu and Jianshe Wu, A Spectral Clustering-Based Adaptive Hybrid Multi-Objective Harmony Search Algorithm for Community Detection

686, Thiago Santos, Ricardo H. C. Takahashi and Gladston J. P. Moreira, A CMA Stochastic Differential Equation Approach for Many-Objective Optimization

716, Ahmed Kafafy, Ahmed Bounekkar and Stephane Bonnevay, Hybrid Metaheuristics based on MOEA/D for 0/1 Multiobjective Knapsack Problems A comparative study

Friday, IJCNN, FrN 5-1, 14:40-15:40, Supervised Learning 5, Lipo Wang

161, Simone Fiori, Tetsuya Kaneko and Toshihisa Tanaka, Learning on the Compact Stiefel Manifold by a Cayley-Transform-Based Pseudo-Retraction Map

675, Corneliu Arsene and Paulo Lisboa, Bayesian Neural Network With and Without Compensation for Competing Risks

695, Carlos M. Alaiz, Alvaro Barbero and Jose R. Dorronsoro, Sparse Methods for Wind Energy Prediction

Friday, IJCNN, FrN 5-2, 14:40-15:40, Recurrent Neural Networks 4, Kazuaki Masuda

19, Sanfeng Chen, Li Shuai, Liu Bo, Liang Yongsheng and Lou Yuesheng, A Discrete-time Switching Neural Network for Quadratic Programming

683, Tae-Hyung Kim and Donald C. Wunsch II, Modified Cellular Simultaneous Recurrent Networks with Cellular Particle Swarm Optimization

741, Malte Schilling, Jan Paskarbeit, Axel Schneider and Holk Cruse, Flexible internal body models for Motor Control - On the Convergence of constrained Dual Quaternion Mean of Multiple Computation Networks

Friday, IJCNN, FrN 5-3, 14:40-15:40, Neural Computing for Human Friendly Robot Applications,ChuKiong Loo, Masuta Hiroyuki

104, Yousefi Bardia and Chukiong Loo, Development of Fast Incremental Slow Feature Analysis (F-IncSFA)

294, Hiroyuki Masuta, Yasuto Tamura and Hun-ok Lim, A Direct Perception for Decision Making of A Service Robot

530, Jinseok Woo and Naoyuki Kubota, Interactive Categorization of Living Space based on Simultaneous Localization and Mapping

Friday, IJCNN, FrN 5-4, 14:40-15:40, Decentralized and Neurofuzzy Control, Long Cheng

169, Ali Heydari and S.N. Balakrishnan, Decentralized Control of Nonlinear Multi-Agent Systems Using Single Network Adaptive Critics

318, Hung-Ching Lu and Ming-Hung Chang, Design of The Self-Constructing Fuzzy Neural Network Controller for a Sliding Door System

593, David Renfrew and Xiao-Hua Yu, Traffic Signal Optimization Using Ant Colony Algorithm