IEEE CEC 2016 Program

Session MA-12: Biometrics, Bioinformatics and Biomedical Applications
Monday, July 25, 8:00AM-10:00AM, Room: 202, Chair: Marcio Dorn / Hamid R Tizhoosh

8:00AM Evolutionary Projection Selection for Radon Barcodes [#16420]
Hamid Reza Tizhoosh and Shahryar Rahnamayan
University of Waterloo, Canada; University of Ontario Institute of Technology, Canada

8:20AM Improving protein tertiary structure prediction with conformational propensities of amino acid residues [#17031]
Bruno Borguesan, Jonas da Silveira Bohrer, Mariel Barbachan e Silva, Leonardo Correa and Marcio Dorn
Federal University of Rio Grande do Sul, Brazil

8:40AM Breast Cancer Detection with Logistic Regression improved by features constructed by Kaizen Programming in a hybrid approach [#16380]
Vinicius De Melo
Federal University of Sao Paulo, Brazil

9:00AM A Genetic Programming Methodology for Disease Gene Association using Centrality Measures [#16444]
Ashkan Entezari Heravi and Sheridan Houghten
Brock University, Canada

9:20AM GPU-powered and settings-free parameter estimation of biochemical systems [#16727]
Marco Nobile, Andrea Tangherloni, Daniela Besozzi and Paolo Cazzaniga
University of Milano-Bicocca, Italy; University of Bergamo, Italy

9:40AM A swarm intelligence based scheme for reduction of false positives in inferred gene regulatory networks [#16394]
Abhinandan Khan, Goutam Saha and Rajat Kumar Pal
University of Calcutta, India; North Eastern Hill University, India

Session MA-13: Differential Evolution
Monday, July 25, 8:00AM-10:00AM, Room: 203, Chair: Defu Zhang / Rammohan Mallipeddi

8:00AM An Adaptive Differential Evolution with Adaptive Archive Selection and Hill-Valley Detection [#16789]
Tetsuyuki Takahama and Setsuko Sakai
Hiroshima City University, Japan; Hiroshima Shudo University, Japan

8:20AM Discrete Differential Evolutionary Algorithm for Job-Shop Scheduling Problem with Minimizing Total Weighted Tardiness [#16481]
Furong Ye, Zhen You, Defu Zhang and Stephen C.H. Leung
Department of Computer Science, Xiamen University, China; Faculty of Engineering, The University of Hong Kong, China

8:40AM Exploration Enhancement in Ensemble Micro-Differential Evolution [#16525]
Hojjat Salehinejad, Shahryar Rahnamayan and Hamid R. Tizhoosh
Univ of Ontario Inst of Tech, Canada; University of Waterloo, Canada

9:00AM Using Opposition-based Learning to Enhance Differential Evolution: A Comparative Study
Wenjun Wang, Hui Wang, Hui Sun and Shahryar Rahnamayan
Nanchang Institute of Technology, China; University of Ontario Institute of Technology, Canada

Rammohan Mallipeddi and Krithikaa Mohanarangam
Kyungpook National University, Korea (South)

9:40AM Content-Based Image Retrieval Optimization by Differential Evolution [#16580]
Rafal Grycuk, Marcin Gabryel, Robert Nowicki and Rafal Scherer
Czestochowa University of Technology, Poland

Session MA-14: Heuristics, Metaheuristics and Hyper-heuristics
Monday, July 25, 8:00AM-10:00AM, Room: 204, Chair: Fengji Luo / Dongni Li

8:00AM A New Metaheuristic Algorithm for Real-Parameter Optimization: Natural Aggregation Algorithm [#16117]
Fengji Luo, Junhua Zhao and Zhao Yang Dong
Centre for Intelligent Electricity Networks, the University of Newcastle, Australia; Chinese University of Hong Kong (Shen Zhen), China; School of Electrical and Information Engineering, the University of Sydney, Australia

8:20AM How Effective Are Meta-heuristics for Recognising Hand Gestures [#16228]
Shahrzad Saremi, Seyedali Mirjalili and Andrew Lewis
Griffith University, Australia

8:40AM An Artificial Bee Colony with Self-adaptive Operators and Alterable Search Depth Approach for Intercell Scheduling [#16316]
Yanbin Jiang, Pengyu Zhou, Rongxin Zhan, Xiang Li and Dongni Li
Beijing Institute of Technology, China

9:00AM Search Based Recommender System Using Many-Objective Evolutionary Algorithm [#16353]
Bingdong Li, Chao Qian, Jilong Li, Ke Tang and Xin Yao
University of Science and Technology of China, China; the University of Birmingham, United Kingdom

9:20AM A Comparative Study of Fuzzy Parameter Control in a General Purpose Local Search Metaheuristic [#16688]
Warren G. Jackson, Ender Ozcan and Robert I. John
University of Nottingham, United Kingdom

9:40AM An Investigation of Tuning a Memetic Algorithm for Cross-domain Search [#16700]
Duriye Betul Gumus, Ender Ozcan and Jason Atkin
The University of Nottingham, United Kingdom

Session MA-15: Genetic Algorithms
Monday, July 25, 8:00AM-10:00AM, Room: 205, Chair: Hanne Thomas / Roozbeh Razavi-Far

8:00AM Uniform and Non-Uniform Pseudorandom Number Generators in a Genetic Algorithm Applied to an Order Picking Problem [#16165]
Michael Stauffer, Hanne Thomas and Dornberger Rolf
University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

8:20AM Distributed Quadratic Programming Solver for Kernel SVM using Genetic Algorithm [#16271]
   Dinesh Singh and C. Krishna Mohan
   Indian Institute of Technology Hyderabad, India

8:40AM A supervised cooperative clustering scheme for diagnosing process faults in an industrial plant [#16387]
   Mohammad Anvaripour, Sima Soltanpour, Roozbeh Razavi-Far, Mehrdad Saif and Q.M. Jonathan Wu
   University of Windsor, Canada

9:00AM Verification of Thermo-dynamical Genetic Algorithm to Solve the Function Optimization Problem through Diversity Measurement [#16079]
   Ryouei Takahashi
   Hachinohe Institute of Technology, Japan

9:20AM Time Warping of Apneic ECG Signals using Genetic Algorithm [#16536]
   Ga Ching Lui, Degang Wu, Ka Wai Cheung, Ho Fai Ma and Kwok Yip Szeto
   Hong Kong University of Science and Technology, Hong Kong

9:40AM Parallel Memetic Genetic Algorithms for Sorting Unsigned Genomes by Translocations [#16376]
   Mauricio Ayala-Rincon, Jose Luis Soncco-Alvarez and Lucas Angelo da Silveira
   Universidade de Brasilia, Brazil

Session MA-16: SS CEC-05A: Evolutionary Scheduling and Combinatorial Optimization
Monday, July 25, 8:00AM-10:00AM, Room: 206, Chair: Su Nguyen / Yi Mei

8:00AM Learning from the opposite: Strategies for Ants that solve Multidimensional Knapsack Problem [#16892]
   Nicolas Rojas-Morales, Maria-Cristina Riff and Elizabeth Montero
   Universidad Tecnica Federico Santa Maria, Chile

8:20AM Evolutionary Web Service Composition with Graph-based Memetic Algorithm [#17089]
   Longfei Yan, Yi Mei, Hui Ma and Mengjie Zhang
   Victoria University of Wellington, New Zealand

8:40AM Many-Objective Genetic Programming for Job-Shop Scheduling [#17024]
   Atiya Masood, Yi Mei, Gang Chen and Mengjie Zhang
   Victoria University of Wellington, New Zealand

9:00AM A New MBS Representation for Resource-Constrained Project Scheduling Problems [#16198]
   Xingxing Hao and Jing Liu
   Key Laboratory of Intelligent Perception and Image Understanding of Ministry of Education,
   Xidian University, China

9:20AM Finding Robust Solutions for Resource Constrained Project Scheduling Problems Involving Uncertainties [#16158]
   Shelvin Chand, Hemant Singh and Tapabrata Ray
   The University of New South Wales, Australia

Session MA-17: Classification, Clustering, Data Analysis and Data Mining
Monday, July 25, 8:00AM-10:00AM, Room: 207, Chair: Regina Berretta / Fernando Lezama
Cruzvillasante

8:00AM  Optimising Weights for Heterogeneous Ensemble of Classifiers with Differential Evolution [#16106]
Mohammad Nazmul Haque, Nasimul Noman, Regina Berretta and Pablo Moscato
The University of Newcastle, Australia

8:20AM  Load Pattern Clustering Using Differential Evolution with Pareto Tournament [#17008]
Fernando Lezama, Ansel Y. Rodriguez-Gonzalez and Enrique Munoz de Cote
Instituto Nacional de Astrofisica, Optica y Electronica, Mexico

8:40AM  A Differential Evolution Optimization Algorithm for Reducing Time Series Dimensionality [#16642]
Muhammad Marwan Muhammad Fuad
Aarhus University, Denmark

9:00AM  Evolutionary Rank Aggregation for Recommender Systems [#16950]
Samuel Oliveira, Victor Diniz, Anisio Lacerda and Gisele L. Pappa
Universidade Federal de Minas Gerais, Brazil; Centro Federal de Educacao Tecnologica de Minas Gerais, Brazil

9:20AM  View-Based Text Representation [#17093]
Chahine Koleejan and Xiaoying Gao
Victoria University of Wellington, New Zealand

9:40AM  An Automatic Framework for Entity Matching in Bibliographic Databases [#16397]
Sumit Mishra, Sriparna Saha and Samrat Mondal
Indian Institute of Technology Patna, India

Session MA-18: Workshop-01A: The 3rd International Workshop on Computational Energy Management in Smart Grids
Monday, July 25, 8:00AM-10:00AM, Room: 208-209, Chair: Stefano Squartini / XiaoJun Zeng

8:00AM  A PSO Algorithm for Transient Dynamic Modeling of Lithium Cells through a Nonlinear RC Filter [#16244]
Massimiliano Luzi, Maurizio Paschero, Antonello Rizzi and Fabio Massimo Frattale Mascioli
University of Rome "La Sapienza", Italy

8:20AM  A Bilevel Optimization Approach to Demand Response Management for the Smart Grid [#16392]
Fan-Lin Meng and Xiao-Jun Zeng
University of Manchester, United Kingdom

8:40AM  Exploiting Temporal Features and Pressure Data for Automatic Leakage Detection in Smart Water Grids [#16611]
Marco Fagiani, Stefano Squartini, Roberto Bonfigli, Marco Severini and Francesco Piazza
Universita' Politecnica delle Marche, Italy

9:00AM  Improving the performance of the AFAMAP algorithm for Non-Intrusive Load Monitoring [#16719]
Roberto Bonfigli, Marco Severini, Stefano Squartini, Marco Fagiani and Francesco Piazza
Universita' Politecnica delle Marche, Italy

9:20AM  A Comparative Analysis of Centralized and Decentralized Multi-agent Architecture for Service Restoration [#16760]
Anurag Sharma, Dipti Srinivasan and Dhivya Sampath Kumar  
National University of Singapore, Singapore
9:40AM Multi Objective Optimization of a Fuzzy Logic Controller for Energy Management in Microgrids [#16981]  
Leonori Stefano, De Santis Enrico, Rizzi Antonello and Frattale Mascioli Fabio Massimo  
Dept. of Information Engineering, Electronics, and Telecommunications, Sapienza University of Rome, Italy

**Plenary Talk MPlen: IEEE CEC Plenary**  
*Monday, July 25, 1:00PM-2:00PM, Room: Ballroom C, Speaker: Xin Yao*

**Session MM-12: SS CDCI-05A: Computational Intelligence and Games**  
*Monday, July 25, 2:30PM-4:30PM, Room: 202, Chair: Daniel Ashlock / Garrison Greenwood*

2:30PM Evolving Polyomino Puzzles [#16517]  
Daniel Ashlock and Lauren Taylor  
University of Guelph, Canada
2:50PM Further Analysis on Strange Evolution Behavior of 7-bit Binary String Strategies in Iterated Prisoner's Dilemma Game [#17178]  
Takahiko Sudo, Kazushi Goto, Yusuke Nojima and Hisao Ishibuchi  
Osaka Prefecture University, Japan
3:10PM Generalized Divide the Dollar [#16337]  
Daniel Ashlock and Garrison Greenwood  
University of Guelph, Canada; Portland State University, United States of America
3:30PM On the Use of Spatial Games in Explaining Human Cooperation [#16053]  
Garrison Greenwood  
Portland State University, United States of America
3:50PM Classification of Monte Carlo Tree Search Variants [#16253]  
Cameron McGuinness  
University of Guelph, Canada
4:10PM The Impact of Elite Fraction and Population Size on Evolved Iterated Prisoner's Dilemma Agents [#16366]  
Daniel Ashlock and Eun-Youn Kim  
University of Guelph, Canada; Hanbat National University, Korea (South)

**Session MM-13: Real-world Applications**  
*Monday, July 25, 2:30PM-4:30PM, Room: 203, Chair: Shaukat Ali / Cem Tutum*

2:30PM An Evolutionary Multi-Objective Topology Optimization Framework for Welded Structures [#16989]  
David Guirguis and Mohamed Aly  
American University in Cairo, Egypt
2:50PM Generating Boundary Values from OCL Constraints using Constraints Rewriting and Search Algorithms [#16089]  
Shaukat Ali, Tao Yue, Xiang Qiu and Hong Lu
Simula Research Laboratory, Norway; Simula Research Laboratory and the University of Oslo, Norway; Beihang University, China

3:10PM Surrogate-based Evolutionary Optimization for Friction Stir Welding [#17174]  
Cem C Tutum, Shaayaan Sayed and Risto Miikkulainen  
University of Texas at Austin, United States of America

3:30PM Traffic signal optimization and coordination using neighborhood mutation [#17135]  
Rolando Armas, Hernan Aguirre, Fabio Daolio and Tanaka Kiyoshi  
Shinshu University, Japan

3:50PM A New Irregular Spatial Cluster Detection through Multi-objective Particle Swarm Optimization [#17029]  
Denis Xavier, Gladston Moreira, Eduardo Luz and Marcone Souza  
Universidade Federal de Ouro Preto, Brazil

4:10PM Smartphone Gait Fingerprinting Models via Genetic Programming [#16827]  
James Alexander Hughes, Joseph Alexander Brown and Adil Mehmood Khan  
University of Western Ontario, Canada; Innopolis University, Russia

Session MM-14: Particle Swarm Optimization  
Monday, July 25, 2:30PM-4:30PM, Room: 204, Chair: Xinchao Zhao / Andries Engelbrecht

2:30PM New Modified Bare-bones Particle Swarm Optimization [#16048]  
Xinchao Zhao, Huiping Liu, Dongyue Liu, Wenbao Ai and Xingquan Zuo  
School of Science, Beijing University of Posts and Telecommunications, Beijing 100876, China; School of Computer Science, Beijing University of Posts and Telecommunications Beijing 100876, China

2:50PM Analysis of Activation Functions for Particle Swarm Optimised Feedforward Neural Networks [#16442]  
Andrich Van Wyk and Andries Engelbrecht  
University of Pretoria, South Africa

3:10PM The Sad State of Self-Adaptive Particle Swarm Optimizers [#16174]  
Kyle Robert Harrison, Andries P. Engelbrecht and Beatrice M. Ombuki-Berman  
University of Pretoria, South Africa; Brock University, Canada

3:30PM Dynamic Sampling in Training Artificial Neural Networks with Overlapping Swarm Intelligence [#16281]  
Shehzad Qureshi and John Sheppard  
Johns Hopkins University, United States of America; Montana State University, United States of America

3:50PM Unified Particle Swarm Optimizer: Convergence Analysis [#16261]  
Christopher Cleghorn and Andries Engelbrecht  
University of Pretoria, South Africa

4:10PM Particle Swarm Optimization-based Solution Updating Strategy for Biogeography-based Optimization [#16243]  
Li Dongyang, Guo Weian, Wang Lei and Chen Ming  
Tongji University, China

Session MM-15: Multi-objective Evolutionary Algorithms
Monday, July 25, 2:30PM-4:30PM, Room: 205, Chair: Jun Zhang / Steffen Limmer

2:30PM Angle-based Constrained Dominance Principle in MOEA/D for Constrained Multi-objective Optimization Problems [#16479]
Zhun Fan, Wenji Li, Xinye Cai, Kaiwen Hu, Huibiao Lin and Hui Li
Department of Electronic Engineering Shantou University Guangdong, Shantou, China; College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics Jiangsu, Nanjing, China; School of Mathematics and Statistics Xi'an Jiaotong University Xi'an, Shaanxi, China

2:50PM A Random-Based Dynamic Grouping Strategy for Large Scale Multi-objective Optimization [#16487]
An Song, Qiang Yang, Wei-Neng Chen and Jun Zhang
South China University of Technology, and Sun Yat-sen University, China; South China University of Technology and, Sun Yat-sen University, China; South China University of Technology, China

3:10PM Investigation of Strategies for an Increasing Population Size in Multi-objective CMA-ES [#16606]
Steffen Limmer and Dietmar Fey
Friedrich-Alexander University Erlangen-Nuernberg, Germany

3:30PM Design of Selective Cationic Antibacterial Peptides: A multiobjective genetic algorithm approach [#16713]
Jesus A Beltran and Carlos Brizuela
CICESE Research Center, Mexico

3:50PM Adaptive Indicator-based Evolutionary Algorithm for Multiobjective Optimization Problems [#26007]
Siwei Jiang, Liang Feng, Chen Kim Heng, Quoc Chinh Nguyen, Yew-Soon Ong, Allan NengSheng Zhang and Puay Siew Tan
Singapore Institute of Manufacturing Technology (SIMTech), Singapore, Singapore; College of Computer Science, Chongqing University, China, China; School of Computer Engineering, Nanyang Technological University (NTU), Singapore, Singapore

4:10PM Towards Adaptive Weight Vectors for Multiobjective Evolutionary Algorithm by Decomposition [#26008]
Siwei Jiang, Liang Feng, Dazhi Yang, Yew-Soon Ong, Allan NengSheng Zhang, Puay Siew Tan, Zhihua Cai and Chen Kim Heng
Singapore Institute of Manufacturing Technology (SIMTech), Singapore, Singapore; College of Computer Science, Chongqing University, China, China; School of Computer Engineering, China University of Geosciences (CUG), Wuhan, China, China

Session MM-16: SS CEC-28A: Complex Networks and Evolutionary Computation
Monday, July 25, 2:30PM-4:30PM, Room: 206, Chair: Jing Liu / Yangyang Li

2:30PM A Bio-Inspired Method for Locating the Diffusion Source with Limited Observers [#16847]
Yuxin Liu, Chao Gao, Xinyan She and Zili Zhang
Southwest University, China

2:50PM An Opposition-Based Learning Competitive Particle Swarm Optimizer [#16399]
Jianhong Zhou and Wei Fang
Jiangnan University, China
3:10PM  Optimization of Disintegration Strategy for Multi-edges Complex Networks [#16996]
Xiaoke Zhang, Jun Wu, Hao Wang, Wei Huang and Kewei Yang
College of Information System and Management National University of Defense Technology, China; Leiden Institute of Advance Computer Science (LIACS)\Leiden University, Netherlands

3:30PM  Optimum Redesign of Scale-free Networks with Robustness and Cost Considerations [#16069]
Quang Nhat Huynh, Hemant Kumar Singh and Tapabrata Ray
The University of New South Wales, Australia

3:50PM  Multi-objective Population-Based Incremental Learning for Community Structure Detection [#16289]
Wenping Ma, Yue Wu and Jie Yun
Key Laboratory of Intelligent Perception and Image Understanding of Ministry of Education, International Research Center for Intelligent Perception and Computation, Joint International Research Laboratory of Intelligent Perception and Computation, Xidian , China

4:10PM  Soft Subspace Clustering Using Differential Evolutionary Algorithm [#16446]
Yangyang Li, Yujing Lu and Licheng Jiao
Xidian University, China

Session MM-17: SS CEC-27A: Evolutionary Computation in Dynamic and Uncertain Environments
Monday, July 25, 2:30PM-4:30PM, Room: 207, Chair: David Pelta / Zhi-Hui Zhan

2:30PM  Integrated Home Health Care Optimization via Genetic Algorithms and Mathematical Programming [#16885]
Thi Viet Ly Nguyen and Roberto Montemanni
Dalle Molle Institute for Artificial Intelligence (IDSIA - USI/SUPSI), Switzerland

2:50PM  Ensemble Dominance for Solving Interval Programming Problems [#16740]
Jing Sun, Dunwei Gong, Zhuang Miao, Zhigang Xu and Heng Zhang
HuaiHai Institute of Technology, China; China University of Mining and Technology, China

3:10PM  Dynamic Optimization with Restricted and Unrestricted Moves Between Changes: a Study on The Dynamic Maximal Covering Location Problem [#16729]
Jenny Fajardo Calderin, Antonio D. Masegosa and David A. Pelta
Dept. of Artificial Intelligenceand Infrastructure and Systems, Polytech. Higher Inst. Jose A. Echeverria, Cuba, Cuba; Deusto Institute of Technology, University of Deusto, 48007, IKERBASQUE, Basque Foundation for Science, 48011, Bilbao, Spain, Spain; Dept. of Computer Science and AI, University of Granada, Spain

3:30PM  A Radius-Free Quantum Particle Swarm Optimization Technique for Dynamic Optimization Problems [#16435]
Kyle Robert Harrison, Beatrice M. Ombuki-Berman and Andries P. Engelbrecht
University of Pretoria, South Africa; Brock University, Canada

3:50PM  Competitive Coevolutionary Algorithm for Robust Multi-Objective Optimization: The Worst Case Minimization [#16690]
Ivan Reinaldo Meneghini, Frederico Gadelha Guimaraes and Antonio Gaspar-Cunha
Federal University of Minas Gerais, Brazil; Universidade Federal de Minas Gerais, Brazil; University of Minho, Portugal

4:10PM  Orthogonal Learning Particle Swarm Optimization with Variable Relocation for Dynamic
Optimization [#16701]
Zi-Jia Wang, Zhi-Hui Zhan, Ke-Jing Du, Zhi-Wen Yu and Jun Zhang
South China University of Technology, China

Session MM-18: Recent Advances in CI: Best Regular Paper Competition
Monday, July 25, 2:30PM-4:30PM, Room: 208-209

2:30PM Adaptive Learning of Dynamic Movement Primitives through Demonstration [IJCNN #16838]
Raj Samant, Laxmidhar Behera and Gaurav Pandey

2:50PM EEG-based Mind Driven Type Writer by Fuzzy Radial Basis Function Neural Classifier [IJCNN #16935]
Snehalika Lall, Anuradha Saha, Amit Konar, Mousumi Laha, Anca Ralescu, Kalyan Mallik and Atulya K. Nagar

3:10PM On the Satisfaction of Moser-Navara Axioms for Fuzzy Inference Systems [FUZZ-IEEE #16425]
Martin Stepnicka
University of Ostrava, IRAFM, Czech Republic

3:30PM A Similarity-based Inference Engine for Non-Singleton Fuzzy Logic Systems [FUZZ-IEEE #16143]
Christian Wagner, Amir Pourabdollah, Josie McCulloch, Robert John and Jonathan M. Garibaldi
University of Nottingham, United Kingdom

3:50PM A Multi-phase Multiobjective Approach Based on Decomposition for Sparse Reconstruction [IEEE CEC #16556]
Hui Li, YuanYuan Fan, Qingfu Zhang, Zongben Xu and Jingda Deng
School of Mathematics and Statistics, Xi'an Jiaotong University, China; Department of Computer Science, City University of Hong Kong, Hong Kong

4:10PM Analyzing coevolutionary games with dynamic fitness landscapes [IEEE CEC #16173]
Hendrik Richter
HTWK Leipzig University of Applied Sciences, Germany

Session MP-12: SS CDCI-05B: Computational Intelligence and Games / SS CDCI-08: Computational Intelligence Techniques for the Analysis of Big and Streaming Data in Complex Systems
Monday, July 25, 4:30PM-6:30PM, Room: 202, Chair: Diego Perez Liebana / Barbara Hammer

4:30PM Learning a Multi-Player Chess Game with TreeStrap [#16445]
Diogo Real and Alan Blair
University of New South Wales, Australia

4:50PM Multi-Objective Tree Search Approaches for General Video Game Playing [#17165]
Diego Perez, Sanaz Mostaghim and Simon Lucas
University of Essex, United Kingdom; Otto von Guericke University Magdeburg, Germany

5:10PM A Myopic Monte Carlo Strategy for the Partially Observable Travelling Salesman Problem [#26040]
Andrew Buck and James Keller
University of Missouri, United States of America

5:30PM  Evolutionary Undersampling for Extremely Imbalanced Big Data Classification under Apache Spark [#16712]
Isaac Triguero, Mikel Galar, David Merino, Jesus Mailllo, Humberto Bustince and Francisco Herrera
Ghent University, Belgium; Universidad Publica de Navarra, Spain; University of Granada, Spain

5:50PM  A Scalable Complex Event Analytical System with Incremental Episode Mining over Data Streams [#17078]
Jerry Tseng, Jia-Yuan Gu, Ping-Feng Wang, Ching-Yu Chen, Chu-Feng Li and Vincent Tseng
Department of Computer Science and Information Engineering, National Cheng Kung University, Taiwan; Institute for Information Industry, Taiwan; Department of Computer Science, National Chiao Tung University, Taiwan

6:10PM  Predicting Recurrence in Clear Cell Renal Cell Carcinoma [#16791]
Gargi Mukherjee, Gyan Bhanot, Kevin Raines, Srikanth Sastry, Sebastian Doniach and Michael Biehl
Rutgers University, United States of America; Rutgers Cancer Institute New Jersey, United States of America; Stanford University, United States of America; Jawaharlal Nehru Centre Bengaluru, India; University of Groningen, Netherlands

Session MP-13: SS CEC-22: Evolutionary Robotics
Monday, July 25, 4:30PM-6:30PM, Room: 203, Chair: Patricia A. Vargas / Rahul Kala

4:30PM  Sampling based Mission Planning for Multiple Robots [#16448]
Rahul Kala
Robotics and Artificial Intelligence Laboratory, Indian Institute of Information Technology Allahabad, India

4:50PM  Multi-objective Topology and Weight Evolution of Neuro-controllers [#16724]
Omer Abramovich and Amiram Moshaiov
Tel-Aviv University, Israel

5:10PM  A novel efficient task-assign route planning method for AUV guidance in a dynamic cluttered environment [#16739]
Somaiyeh MahmoudZadeh, David M. W. Powers and AmirMehdi Yazdani
Flinders University, Australia

5:30PM  Noise-Resistant Particle Swarm Optimization for the Learning of Robust Obstacle Avoidance Controllers using a Depth Camera [#16411]
Inaki Navarro, Ezequiel Di Mario and Alcherio Martinoli
EPFL, Switzerland

5:50PM  Effects of Model Parameter Interactions on Naive Creatures Success of Learning to Cross a Highway [#16707]
Anna T. Lawniczak, Leslie Ly, Fei Yu and Shengkun Xie
University of Guelph, Canada; Ryerson University, Canada

6:10PM  An Empirical Study of the Co-Evolution of Utility and Predictive Ability [#16307]
Kevin Korb, Lachlan Brumley and Carlo Kopp
Monash University, Australia
Session MP-14: Multiobjective Optimization  
*Monday, July 25, 4:30PM-6:30PM, Room: 204, Chair: Matthew Curtis / Amin Ibrahim*

4:30PM The Effect of Bias on Particle Behaviour for MOPSO [#16230]
Mathew Curtis and Andrew Lewis  
School of Information and Communication Technology, Griffith University, Australia

4:50PM Balancing Risk and Expected Gain in Kriging-based Global Optimization [#16871]
Hao Wang, Michael Emmerich and Thomas Baeck  
Leiden University, Netherlands

5:10PM A Novel Bi-objective Model with Particle Swarm Optimizer for Structural Balance Analytics in Social Networks [#16503]
Jianan Yan, Shasha Ruan, Qing Cai, Jiao Shi, Zhao Wang and Maoguo Gong  
Xidian University, China; Northwestern Polytechnical University, China

5:30PM 3D-RadVis: Visualization of Pareto Front in Many-Objective Optimization [#16920]
Amin Ibrahim, Shahryar Rahnamayan, Miguel Vargas Martin and Kalyanmoy Deb  
University of Ontario Institute of Technology, Canada; Michigan State University, Canada

5:50PM Application of NSGA-II framework to the Travel Planning Problem using real-world travel data [#17019]
Breno Beirigo and Andre Santos  
Departamento de Informatica - UFV - Universidade Federal de Vicosa, Brazil

6:10PM Multi-objective Model to Address Planning in a RTS Game [#16749]
Caio de Oliveira, Elizabeth Goldbarg and Marco Goldbarg  
Federal University of Rio Grande do Norte, Brazil

*Monday, July 25, 4:30PM-6:30PM, Room: 205, Chair: Wei-Chang Yeh / Xingxing Hao*

4:30PM Decision Support for Cooperative Carriers based on Clustering Requests and Discrete Particle Swarm Optimization [#16297]
Fu-Shiung Hsieh  
Chaoyang University of Technology, Taiwan

4:50PM Improving the Efficiency of PSOVina for Protein-Ligand Docking by Two-Stage Local Search [#16476]
Hio Kuan Tai, Hang Lin and Shirley W. I. Siu  
Department of Computer and Information Science, University of Macau, Macau

5:10PM Simplified Swarm Optimization with Modular Search for the General Multi-level Redundancy Allocation Problem in Series-parallel Systems [#16160]
Wei-Chang Yeh, Chyh-Ming Lai, Cyuan-Yu Luo, Chi-Ting Hsu, Jsen-Shung Lin and Yuk Ying Chung  
National Tsing Hua University, Taiwan; Central Police University Dept. of Information Management, Taiwan; School of Information Technology University of Sydney, Australia

5:30PM Emergency Logistics Scheduling in Disaster Relief based on a Multi-agent Genetic Algorithm [#16498]
Gan Xiaohui, Liu Jing and Hao Xingxing
Xidian University, China

5:50PM A MOEA/D based Approach for Hospital Department Layout Design [#16741]
Ma Yanmei, Zuo Xingquan, Huang Xuewen, Gu Fulai, Wang Chunlu and Zhao Xinchao
Beijing University of Posts and Telecommunications, China; Dalian University of Technology, China

6:10PM Application of Route Flexibility in Data-Starved Vehicle Routing Problem with Time Windows [#26026]
Heng Chen Kim, Abhishek Gupta, Da Bingshui, Yew-Soon Ong, Quoc Chinh Nguyen, Siwei Jiang and Puay Siew Tan
Singapore Institute of Manufacturing Technology, Singapore; Nanyang Technological University, Singapore

Session MP-16: SS CEC-28B: Complex Networks and Evolutionary Computation / SS CEC-35 Parallel and Distributed Evolutionary Computation in the Inter-Cloud Era
Monday, July 25, 4:30PM-6:30PM, Room: 206, Chair: Masaharu Munetomo / Keiko Ono

4:30PM On the use of immune clone optimization for unconstrained multi-objective resource allocation in the cognitive OFDMA networks [#16207]
Ronghua Shang, Weitong Zhang, Wen Ailing, Kun Zhang and Licheng Jiao
Xidian University, China

4:50PM evoVersion: Visualizing Evolutionary Histories [#16977]
Justin Kelly and Christian Jacob
University of Calgary, Canada

5:10PM Parallel Differential Evolution approach for Cloud Workflow placements under Simultaneous Optimization of Multiple Objectives [#16342]
Daniel Balouek-Thomert, Arya Bhattacharya, Eddy Caron, Karunakar Gadireddy and Laurent Lefevre
University of Lyon, France; Mahindra Ecole Centrale, India

5:30PM Numerical Assessment of the Parallelization Scalability on 200 MINLP Benchmarks [#16563]
Martin Schlueter and Masahara Munetomo
Hokkaido University, Japan

5:50PM Distributed Light Brightness Control based on cuSASGP [#16480]
Keiko Ono and Yoshiko Hanada
Ryuoku University, Japan; Kansai University, Japan

6:10PM Development of a Multi-player Interactive Genetic Algorithm-based 3D Modeling System for Glasses [#16566]
Takahito Seyama and Masahara Munetomo
Hokkaido University, Japan

Session MP-17: SS CEC-27B: Evolutionary Computation in Dynamic and Uncertain Environments / SS CEC-10: Computational Intelligence in Aerospace Science and Engineering
Monday, July 25, 4:30PM-6:30PM, Room: 207, Chair: Michalis Mavrovouniotis / Massimiliano Vasile

4:30PM Empirical Study on the Effect of Population Size on MAX - MIN Ant System in Dynamic Environments [#16469]
Michalis Mavrovouniotis and Yang Shengxiang

file:///Users/VsonicV/Downloads/CEC-2016-program_20160429.php.htm
De Montfort University, United Kingdom

4:50PM  A Synthesized Ranking-assisted NSGA-II for Interval Multi-objective Optimization [#16703]
Pengfei Zhang, Ruidong Xu, Xiaoyan Sun, Dunwei Gong, Jong Choi and Zhang Yong
School of Information and Electrical Engineering, China Uni. of Min. and Tech., China; Oak
Ridge National Laboratory, United States of America

5:10PM  Global Solution of Multi-Objective Optimal Control Problems with Multi Agent Collaborative
Search and Direct Finite Elements Transcription [#16925]
Lorenzo A. Ricciardi, Massimiliano Vasile and Christie Maddock
University of Strathclyde, United Kingdom

5:30PM  Packing Programming of Space Station Spacewalk Events Based on Bin Packing Theory and
Differential Evolution Algorithm [#16511]
Yuehe Zhu, Yazhong Luo and Jin Zhang
National University of Defense Technology, China

5:50PM  Towards Uncertainty Quantification and Management in Multi-Disciplinary Design
Optimisation [#16810]
Joseph Loxham, Timos Kipouros and Mark Savill
 Cranfield University, United Kingdom

6:10PM  Time-Series Optimization Methodology and Knowledge Discovery of Decend Trajectory for
Civil Aircraft [#16976]
Kanazaki Masahiro and Othman Norazila
Tokyo Metropolitan University, Japan

Session MP-18: Recent Advances in CI: Best Student Paper Competition
Monday, July 25, 4:30PM–6:30PM, Room: 208-209

4:30PM  Spin Torque Nano-Oscillator based Oscillatory Neural Network [IJCNN #16573]
Chamika Liyanagedera, Karthik Yogendra, Deliang Fan and Kaushik Roy

4:50PM  Detection of False Data Attacks in Smart Grid with Supervised Learning [IJCNN #16558]
Jun Yan, Bo Tang and Haibo He

5:10PM  An Analytical Approach for Solving Type-1 and Type-2 Fully Fuzzy Linear Systems of
Equations [FUZZ-IEEE #16508]
Sheriff Sadiqbatcha and Saeed Jafarzadeh
California State University Bakersfield, United States

5:30PM  Measuring the Similarity between zSlices General Type-2 Fuzzy Sets with Non-Normal
Secondary Membership Functions [FUZZ-IEEE #16137]
Josie McCulloch and Christian Wagner
University of Nottingham, United Kingdom

5:50PM  Evolvability as a Quality Criterion for Linear Deformation Representations in Evolutionary
Optimization [IEEE CEC #17092]
Andreas Richter, Jascha Achenbach, Stefan Menzel and Mario Botsch
Bielefeld University, Germany; Honda Research Institute Europe, Germany

6:10PM  Social-Insect-Inspired Adaptive Task Allocation for Many-Core Systems [IEEE CEC #16367]
Matthew Rowlings, Andy Tyrrell and Martin Trefzer
Session TA-12: Genetic Algorithms

Tuesday, July 26, 8:00AM-10:00AM, Room: 202, Chair: Zahid Islam / Ronghua Shang

8:00AM The Importance of Diversity in the Application of Evolutionary Algorithms to the Sudoku Problem [#16660]
- Carlos Segura, S. Ivvan Valdez, Salvador Botello Rionda and Arturo Hernandez Aguirre
- Centro de Investigacion en Matematicas, A.C. (CIMAT), Mexico

8:20AM A Genetic Algorithm for a Workforce Scheduling and Routing Problem [#16955]
- Haneen Algethami, Rodrigo Lankaites-Pinheiro and Dario Landa-Silva
- School of Computer Science, ASAP Research Group, The University of Nottingham, United Kingdom

8:40AM A Genetic Algorithm with a Mutation Mechanism based on a Gaussian and Uniform Distribution to Minimize Addition Chains for Small Exponents [#17075]
- Eduardo Vazquez-Fernandez, Carlos Cadena and David Reyes-Gomez
- IPN ESIME Culhuacan, Mexico

9:00AM An intuitionistic fuzzy possibilistic C-means clustering based on genetic algorithm [#16211]
- Ronghua Shang, Tian Pingping, Wen Ailing, Wenzhan Liu and Licheng Jiao
- Xidian University, China

9:20AM A Novel Genetic Algorithm-Based Clustering Technique and its Suitability for Knowledge Discovery from a Brain Dataset [#16896]
- Abul Hashem Beg and Md Zahidul Islam
- Charles Sturt University, Australia

9:40AM An Improved Partheno-Genetic Algorithm for the Multi-constrained Problem of Curling Match Arrangement [#16385]
- Rui Ding, Hong Bin Dong, Jun He and Yu Xin Dong
- College of Computer Science and Technology Harbin Engineering University, and Mudanjiang Normal University, China; College of Computer Science and Technology Harbin Engineering University, China; Department of Computer Science Aberystwyth University, England

Session TA-13: Multi-objective Evolutionary Algorithms

Tuesday, July 26, 8:00AM-10:00AM, Room: 203, Chair: Chuan-Kang Ting / Martin Pilat

8:00AM General Tuning of Weights in MOEA/D [#16924]
- Martin Pilat and Roman Neruda
- Charles University in Prague, Faculty of Mathematics and Physics, Czech Republic; Institute of Computer Science, Academy of Sciences of the Czech Republic, Czech Republic

8:20AM EliteNSGA-III: An Improved Evolutionary Many-Objective Optimization Algorithm [#16916]
- Amin Ibrahim, Shahryar Rahnamayan, Miguel Vargas Martin and Kalyanmoy Deb
- University of Ontario Institute of Technology, Canada; Michigan State University, United States of America

8:40AM MOEA/D Using Covariance Matrix Adaptation Evolution Strategy for Complex Multi-Objective Optimization Problems [#17077]
- Ting-Chen Wang, Rung-Tzuo Liaw and Chuan-Kang Ting
- National Chung Cheng University, Taiwan
9:00AM  Indicator-Based Cooperative Coevolution for Multi-objective Optimization [#26032]
        Luis Miguel Antonio and Carlos Coello Coello
        CINVESTAV-IPN, Mexico

9:20AM  IGD+-EMOA: A Multi-Objective Evolutionary Algorithm based on IGD+ [#26033]
        Edgar Manoatl Lopez and Carlos Coello Coello
        CINVESTAV-IPN, Mexico

9:40AM  Hybrid Knowledge-based Evolutionary Many-Objective Optimization [#16647]
        Bin Zhang, Kamran Shafi and Hussein Abbass
        University of New South Wales, Canberra, Australia

Session TA-14: SS CEC-26: Evolutionary Computation and Other Computational Intelligence
Techniques for Cyber Security / SS CDCI-14: Computational Intelligence for Security, Surveillance,
and Defense
Tuesday, July 26, 8:00AM-10:00AM, Room: 204, Chair: Hongmei He or Mary He / Derek T. Anderson

8:00AM  The Security Challenges in the IoT enabled Cyber-Physical Systems and Opportunities for
        Evolutionary Computing and Other Computational Intelligence [#16640]
        Hongmei He, Casten Maple, Tim Watson, Ashutosh Tiwari, Jorn Mehnen, Yaochu Jin and
        Bogdan Gabrys
        Cranfield University, United Kingdom; University of Warwick, United Kingdom; University of
        Surrey, United Kingdom; University of Burnemough, United Kingdom

8:20AM  Incremental Information Gain Analysis of Input Attribute Impact on RBF-Kernel SVM Spam
        Detection [#16254]
        Hongmei He, Ashutosh Tiwari, Jorn Mehnen, Tim Watson, Carsten Maple, Yaochu Jin and
        Bogdan Gabrys
        Cranfield University, United Kingdom; University of Warwick, United Kingdom; University of
        Surrey, United Kingdom; University of Burnemough, United Kingdom

8:40AM  Genetic Boosting Classification for Malware Detection [#16705]
        Alejandro Martin, David Camacho and Hector D. Menendez
        Universidad Autonoma de Madrid, Spain; University College London, United Kingdom

9:00AM  Feature Selection and Neural Network Architecture Evaluation for Real-Time Video Object
        Classification [#16137]
        Phillip Curtis, Moufid Harb, Rami Abielmona and Emil Petriu
        University of Ottawa, EECS, Canada; Larus Technologies Corporation, R and E, Canada

9:20AM  Binary max-sum for clustering-based task allocation in the RMASBench platform [#16495]
        Abel Correa
        Universidade Federal do Rio Grande do Sul, Brazil

9:40AM  Multiple Instance Choquet Integral for Classifier Fusion [#26013]
        Xiaoxiao Du, Alina Zare, James Keller and Derek Anderson
        University of Missouri, United States of America; Mississippi State University, United States
        of America

Session TA-15: Engineering Applications
Tuesday, July 26, 8:00AM-10:00AM, Room: 205, Chair: Michael Mayo / Carlos Henggeler Antunes

8:00AM  A Differential Evolution Algorithm with Double-mode Crossover for Supply Chain Scheduling
in Cold Rolling [#16681]
Shengnan Zhao, Yang Yang, Qingxin Guo and Lixin Tang
The Institute of Industrial Engineering and Logistics Optimization, Northeastern University, China

8:20AM A new constraint handling method for differential evolution solving non-convex economic dispatch problems with valve loading effect [#17010]
Chunjiang Zhang, Yang Wu, Liang Gao and Xinyu Li
State Key Lab of Digital Manufacturing Equipment and Technology, Huazhong University of Science and Technology, China; State Key Lab of Digital Manufacturing Equipment and Technology, Huazhong University of Science and Technology, China

8:40AM An Operation Optimization Method Based on Improved EDA for BOF End-point Control [#16125]
Chang Liu, Xiangman Song, Te Xu and Lixin Tang
Northeastern University, China

9:00AM BlockCopy-based operators for evolving efficient wind farm layouts [#16041]
Michael Mayo and Chen Zheng
University of Waikato, New Zealand

9:20AM Sensor location in water distribution networks to detect contamination events - a multiobjective approach based on NSGA-II [#16671]
Carlos Henggeler Antunes and Margarida Dolores
University of Coimbra, Portugal; INESC Coimbra, Portugal

9:40AM A WNN Model Trained with Orthogonal Colliding Bodies Optimization for Accurate Identification of Hammerstein Plant [#16229]
Arnapurna Panda and Sabyasachi Pani
School of Basic Sciences, Indian Institute of Technology Bhubaneswar, India

Session TA-16: SS CEC-08A: Many-Objective Optimization
Tuesday, July 26, 8:00AM-10:00AM, Room: 206, Chair: Hiroyuki Sato / Akira Oyama

8:00AM Sensitivity of Performance Evaluation Results by Inverted Generational Distance to Reference Points [#16433]
Hisao Ishibuchi, Hiroyuki Masuda and Yusuke Nojima
Osaka Prefecture University, Japan

8:20AM Characteristics of Many-Objective Test Problems and Penalty Parameter Specification in MOEA/D [#17046]
Hisao Ishibuchi, Ken Doi and Yusuke Nojima
Osaka Prefecture University, Japan

8:40AM Discrete Many-objective Optimization Problems: The case of the Pickup and Delivery Problem [#17047]
Antonio Lopez Jaimes and Abel Garcia Najera
Universidad Autonoma Metropolitana - Cuajimalpa, Mexico

9:00AM Clustering based Online Automatic Objective Reduction to aid Many-Objective Optimization [#17086]
Monalisa Pal, Sriparna Saha and Sanghamitra Bandyopadhyay
Indian Statistical Institute, Kolkata, India; Indian Institute of Technology, Patna, India

9:20AM Evolutionary computation for many-objective optimization problems using massive population
sizes on the K supercomputer [#16775]
Tomoaki Tatsukawa, Takeshi Watanabe and Akira Oyama
Tokyo University of Science, Japan; ISAS/JAXA, Japan

9:40AM How to Compare Many-Objective Algorithms under Different Settings of Population and Archive Sizes [#16798]
Hisao Ishibuchi, Yu Setoguchi, Hiroyuki Masuda and Yusuke Nojima
Osaka Prefecture University, Japan

Session TA-17: SS CEC-42A: Special Session Associated with Competition on Bound Constrained Single Objective Numerical Optimization
Tuesday, July 26, 8:00AM-10:00AM, Room: 207, Chair: Ponnuthurai Nagaratnam Suganthan / Thomas Stützle

8:00AM A hybrid ABC for expensive optimizations: CEC 2016 competition benchmark [#16437]
Enrico Ampellio and Luca Vassio
Politecnico di Torino, Italy

8:20AM Single Phase Multi-Group Teaching Learning Algorithm for Single Objective Real-Parameter Numerical Optimization (CEC2016) [#17043]
Remya Kommadath, Sivadurgaprasad Chinta and Prakash Kotecha
Indian Institute of Technology Guwahati, India

8:40AM Self-adaptive Search Equation-based Artificial Bee Colony Algorithm on the CEC 2014 Benchmark Functions [#16716]
Gurcan Yavuz, Dogan Aydin and Thomas Stuetzle
Dumlupinar University, Computer Engineering Department, Turkey; IRIDIA laboratory at CODE, Universite Libre de Bruxelles, Belgium

9:00AM Evaluating the Performance of L-SHADE with Competing Strategies on CEC2014 Single Parameter-operator Test Suite [#16491]
Radka Polakova, Josef Tvrdik and Petr Bujok
University of Ostrava, Czech Republic

9:20AM iL-SHADE: Improved L-SHADE Algorithm for Single Objective Real-Parameter Optimization [#16699]
Janez Brest, Mirjam Sepesy Maucec and Borko Boskovic
University of Maribor, Slovenia

9:40AM Cooperative Framework Fireworks Algorithm with Covariance Mutation [#16441]
Chao Yu, Ling Chen Kelley and Ying Tan
Peking University, China; Tsinghua University, China

Session TA-18: Workshop-02: International Workshop on Neuromorphic Computing and Cyborg Intelligence / Workshop-04: Computational Intelligence Approaches for Multi-view Data Analytics
Tuesday, July 26, 8:00AM-10:00AM, Room: 208-209, Chair: Huajin Tang / Giovanni Montana

8:00AM Robot-to-human Handover With Obstacle Avoidance Via Continuous Time Recurrent Neural Network [#16500]
Huajin Tang, Boon Hwa Tan and Rui Yan
College of Computer Science, Sichuan University, China; Institute for Infocomm Research, Singapore
8:20AM  Hebbian Learning Analysis of a Grid Cell Based Cognitive Mapping System [#16863]
        Jun Hu, Miaolong Yuan, Huajin Tang and Wei Yun Yau
        Institute for Infocomm Research, Singapore; Sichuan University, China

8:40AM  Path Planning using a Spiking Neuron Algorithm with Axonal Delays [#16190]
        Jeffrey Krichmar
        University of California, Irvine, United States of America

9:00AM  Classification Study on Eye Movement Data: Towards A New Approach in Depression Detection [#16466]
        Xiaowei Li, Tong Cao, Shuting Sun, Bin Hu and Martyn Ratcliffe
        School of Information Science and Engineering, Lanzhou University,, China; School of Computing, Telecommunications and Networks, Birmingham City University,, United Kingdom

9:20AM  Time Aware Knowledge Extraction to Analyze NanoSafety Cluster Scientific Activities [#16710]
        Carmen De Maio, Mimmo Parente, Giuseppe Fenza and Dario Greco
        Department of Information Engineering, Electrical Eng. and Applied Mathematics (DIEM), University of Salerno, 84084 Fisciano (SA), Italy, Italy; Department of Management and Innovation Systems, University of Salerno, 84084 Fisciano (SA), Italy, Italy; Unit of Systems Toxicology and Nanosafety Research Center, Finnish Institute of Occupational Health, Helsinki, Finland, Finland

9:40AM  Hierarchical Clustering of the Electroencephalogram Spectral Coherence to Study the Changes in Brain Connectivity in Alzheimer's Disease [#16899]
        Nadia Mammone, Lilla Bonanno, Simona De Salvo, Alessia Bramanti, Placido Bramanti, Hojjat Adeli, Cosimo Ieracitano, Maurizio Campolo and Francesco C. Morabito
        IRCCS Centro Neurolesi Bonino-Pulejo, Via Palermon c/da Casazza, SS. 113, 98124 Messina, Italy; Ohio State University, College of Engineering, 470 Hitchcock Hall, 2070 Neil Avenue, Columbus, Ohio, United States of America; DICEAM Department, Mediterranean University of Reggio Calabria, Via Graziella Feo di Vito, 89060 Reggio Calabria, Italy

**Plenary Talk TPlen: IEEE CEC Plenary**
*Tuesday, July 26, 1:00PM-2:00PM, Room: Ballroom C, Speaker: Una-May O’Reilly*

**Plenary Poster Session TPost: CDCI Poster Session**
*Tuesday, July 26, 2:00PM-6:00PM, Room: Ballroom D*

P101  Optimization of Photovoltaic Power Self-Consumption using Genetic Algorithm [#16939]
      Rodrigo Martins and Petr Musilek
      Department of Electrical and Computer Engineering, University of Alberta, Edmonton AB, Canada, Canada; Department of Electrical and Computer Engineering, University of Alberta, Edmonton AB, Canada and Faculty of Electrical Engineering and Computer Science, VSB-Technical University, Ostrava, Czech Republic, Canada

P102  Key Challenges and Future Directions of Dynamic Multi-objective Optimisation [#16793]
      Marde Helbig, Kalyanmoy Deb and Andries Engelbrecht
      University of Pretoria, South Africa; Michigan State University, United States of America

P103  Multi-Objective Evolutionary Algorithms Embedded with Machine Learning - A Survey [#17036]
      Zhun Fan, Kaiwen Hu, Fang Li, Yibiao Rong, Wenji Li and Huibiao Lin
Evolutionary Computer Vision and Image Processing: some FAQs, Current Challenges and Future Perspectives [#17182]
Stefano Cagnoni and Mengjie Zhang
Department of Information Engineering, University of Parma, Italy; School of Engineering and Computer Science, Victoria University of Wellington\, New Zealand

Data integration in genomics and systems biology [#16547]
Angela Serra, Michele Fratello, Dario Greco and Roberto Tagliaferri
University of Salerno, Italy; Second University of Napoli, Italy; Unit of Systems Toxicology and Nanosafety Research Center, Finnish Institute of Occupational Health, Finland

Using Latent Dirichlet Allocation to Improve Text Classification Performance of Support Vector Machine [#16781]
Yaw-Huei Chen and Shu-Fong Li
National Chiayi University, Taiwan

Automated Anonymization of Text Documents [#17001]
Francisco Dias, Nuno Mamede and Jorge Baptista
Instituto Superior Tecnico, Portugal; INESC-ID Lisboa, Portugal; Universidade do Algarve, Portugal

Examining the Annealing Schedules for RNA Design Algorithm [#17099]
Emre Erhan, Sinem Sav, Stas Kalashnikov and Herbert H. Tsang
Simon Fraser University, Canada; Bilkent University, Turkey; Trinity Western University, Canada

Evolving a Generalized Strategy for an Action-Platformer Video Game Framework [#16039]
Karine Araujo and Fabricio de Franca
UFABC, Brazil

Procedural Generation of Angry Birds Levels with Adjustable Difficulty [#16589]
Misaki Kaidan, Tomohiro Harada, Chun Yin Chu and Ruck Thawonmas
Ritsumeikan University, Japan

A methodological approach for algorithmic composition systems' parameter spaces aesthetic exploration [#16948]
Ivan Paz, Angela Nebot, Enrique Romero, Francisco Mugica and Alfredo Vellido
Universitat Politècnica de Catalunya, Spain

Efficient Diagnosis System for Parkinson's Disease Using Deep Belief Network [#16471]
Ali H. Al-Fatlawi, Mohammed H. Jabardi and Sai Ho Ling
Information Technology Research and Development Center, University of Kufa, Iraq; Centre for Health Technologies, University of Technology Sydney, Australia

Selecting Optimal EEG Channels for Mental Tasks Classification: An Approach using ICA [#16565]
Rifai Chai, Ganesh R. Naik, Tuan N. Nguyen, Sai Ho Ling, Yvonne Tran and Hung T. Nguyen
University of Technology Sydney, Australia

A procurement decision support mechanism on multi-attribute fuzzy-interval auctions [#16332]
Camilo Franco, Jens Leth Hougaard and Kurt Nielsen
IFRO, Science, Copenhagen University, Denmark

A new flood forecasting model based on SVM and boosting learning algorithms [#16119]
Shijin Li, Kaikai Ma, Zhou Jin and Yuelong Zhu
Hohai University, China

P116 Deep Neural Networks for Precipitation Estimation from Remotely Sensed Information [#16285]
Yumeng Tao, Xiaogang Gao, Alexander Ihler, Kuolin Hsu and Soroosh Sorooshian
University of California, Irvine, United States of America

P117 Optimizing Natural Gas Sensors Allocation in Oil Platforms Using Genetic Algorithms [#16032]
Dinart Braga and Marco Pacheco
Pontificia Universidade Catolica do Rio de Janeiro, Brazil

P118 Detection of Anomalies in Activity Patterns of Lone Occupants from Electricity Usage Data [#16630]
Kuanlong Leong, Cyril Leung, Chunyan Miao and Christine Chen
The University of British Columbia, Canada; Nanyang Technological University, Singapore

P119 An Ann Approach for False Alarm Detection in Microwave Breast Cancer Detection [#17124]
Lakhvinder Singh Solanki, Surinder Singh and Dharmendra Singh
Sant Longowal Institute of Engineering and Technology, India; IIT, Roorkee, India

P120 Vector Directed Path Generation and Tracking for Autonomous Unmanned Aerial/ Ground Vehicles [#26034]
Willson Amalraj Arokiasami, Prahlad Vadakkepat, Kay Chen Tan and Dipti Srinivasan
National University of Singapore, Singapore

P121 Multi-linear Regression Coefficient Classifier for Recognition [#16263]
Qingxiang Feng, Qi Zhu, Chun Yuan and Ivan Lee
Shenzhen Graduate School, Harbin Institute of Technology, China; College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China; Graduate School at Shenzhen, Tsinghua University, China; School of Information Technology and Mathematical Sciences, University of South Australia, Austria

P122 An Efficient Sparse Representation Based Classification for Undersampled Face Recognition [#16755]
Zizhu Fan, Zuoyong Li and Lipan Kang
East China Jiaotong University, China; Fujian Provincial Key Laboratory of Information Processing and Intelligent Control, China

P123 Enhanced Obfuscation for Multi-part Biometric Templates [#17040]
Vikas Gottemukkula, Reza Derakhshani and Sashi Kanth Saripalle
Biometric and Computer Vision Scientist, EyeVeirfy Inc., United States of America; Associate Professor, Department of Computer Science Electrical Engineering, University of Missouri at Kansas City, United States of America

P124 Fast and Efficient Mutimodal Eye Biometrics using Projective Dictionary Pair Learning [#16978]
Abhijit Das, Prabir Mondal, Umapada Pal, Miguel Angel Ferrer and Michael Blumenstein
Griffith University, Australia; ISI Kolkata, India; ULPGC, Spain; University of Technology Sydney, Australia

P125 An Adaptive Output Regulation Approach for Formation Control of Heterogeneous Multi-Agent Systems [#16754]
Shaobao Li, Meng Joo Er, Chiang-Ju Chien and Ning Wang
Nanyang Technological University, Singapore; Huafan University, Taiwan; Dalian Maritime University, China

P126 Lesion Border Detection Using Deep Learning [#17123]
Sabouri Peyman and Gholamhosseini Hamid
AUT University, New Zealand
P127 Verifying Effectiveness of an Expression Education Support Robot that Nods and Gives Hints [#16572]
Koki Suzuki, Shogo Yamada and Masayoshi Kanoh
Chukyo University, Japan
P128 RNN with Russell's Circumplex Model for Emotion Estimation and Emotional Gesture Generation [#16574]
Takuya Tsujimoto, Yasutake Takahashi, Shouhei Takeuchi and Yoichiro Maeda
University of Fukui, Japan; Institute of Technologists, Japan

Session TM-12: Numerical Optimization
Tuesday, July 26, 2:30PM-4:30PM, Room: 202, Chair: Shinichi Shirakawa / Amin Rahati

2:30PM Impact of Invariant Objective for Order Preserving Transformation in Bayesian Optimization [#17071]
Shinichi Shirakawa
Yokohama National University, Japan
2:50PM Accelerating Evolutionary Computation Using Estimated Convergence Point [#16853]
Jun Yu, Yan Pei and Hideyuki Takagi
Kyushu University, Japan; Universally of Aizu, Japan
3:10PM A Gene Expression Programming Framework for Evolutionary Design of Metaheuristic Algorithms [#16569]
Amin Rahati and Hojjat Rakhshani
University of Sistan and Baluchestan, Iran
3:30PM A modified sensitivity analysis method for driving a multidimensional search in the Artificial Bee Colony algorithm [#16632]
Peio Loubiere, Astrid Jourdan, Patrick Siarry and Rachid Chelouah
Ecole Internationale des Sciences du Traitement de l'Information, France; Universite de Paris-Est Creteil, France; Ecole Internationale des Sciences du Traitement de l'information, France
3:50PM Feature-Based Algorithm Selection for Constrained Continuous Optimisation [#16668]
Shayan Poursoltan and Frank Neumann
University of Adelaide, Australia, Australia
4:10PM Evolutionary Partitioning Regression with Function Stacks [#16929]
Daniel Ashlock and Joseph Alexander Brown
University of Guelph, Canada; Innopolis University, Russia

Session TM-13: Heuristics, Metaheuristics and Hyper-heuristics
Tuesday, July 26, 2:30PM-4:30PM, Room: 203, Chair: Ana Bazzan / Kei Ohnishi

2:30PM A Self-tuning Modified Firefly Algorithm to Solve Univariate Nonlinear Equations with Complex Roots [#16409]
Anuradha Ariyaratne, Gishantha Fernando and Sunethra Weerakoon
General Sir John Kotelawala Defence University, Sri Lanka; University of Sri Jayewardenepura, Sri Lanka
2:50PM Case Study: An Analysis of Accidental Complexity in a State-of-the-art Hyper-heuristic for
HyFlex [#16861]
Steven Adriaensen and Ann Nowe
Vrije Universiteit Brussel, Belgium

3:10PM Efficient Local Search in Traffic Assignment [#17074]
Gabriel Ramos and Ana Bazzan
Instituto de Informatica, Universidade Federal do Rio Grande do Sul, Brazil

3:30PM Bayesian Charged System Search: A Hybrid Method for Multi-Modal Optimization Problems [#16272]
Mashall Aryan and Alireza Mollaalizadeh bahnemiri
Victoria University of Wellington, New Zealand; University of Hamburg, Germany

3:50PM Non-swarm Intelligence Search Algorithm Based on the Foraging Behaviors of Fruit Flies [#16645]
Kei Ohnishi, Akihiro Fujiwara and Mario Koeppen
Kyushu Institute of Technology, Japan

4:10PM Hybrid Parameter Control Approach Applied to a Diversity-based Multi-objective Memetic Algorithm for Frequency Assignment Problems [#16856]
Eduardo Segredo, Ben Paechter, Emma Hart and Carlos Ignacio Gonzalez-Vila
Edinburgh Napier University, United Kingdom; Instituto Tecnologico y de Energias Renovables (ITER), Spain

Session TM-14: Real-world Applications
Tuesday, July 26, 2:30PM-4:30PM, Room: 204, Chair: Elizabeth Wanner / Simone Ludwig

2:30PM Portfolio selection for open-pit mining assets acquisition [#16930]
Lucas Ferreira, Adriano Lisboa, Douglas Vieira and Elizabeth Wanner
CEFET-MG, Brazil; ENACOM, Brazil

2:50PM Improved Glowworm Swarm Optimization Algorithm applied to Multi-level Thresholding [#16268]
Simone Ludwig
North Dakota State University, United States of America

3:10PM Considerations in developing a scalable wind power forecasting solution [#17130]
Shane Butler, Des Farren and John Ringwood
Maynooth University, Ireland; Servusnet Informatics Ltd., Ireland

3:30PM Fundamentals of the C-DEEPSO Algorithm and its Application to the Reactive Power Optimization of Wind Farms [#16371]
Carolina G. Marcelino, Paulo E. M. Almeida, Elizabeth F. Wanner, Leonel M. Carvalho and Vladimiro Miranda
CEFET-MG, Brazil; INESC-TEC, Portugal

3:50PM Multiple Pass Monte Carlo Tree Search [#16968]
Cameron McGuinness
University of Guelph, Canada

Session TM-15: Representation and Operators
Tuesday, July 26, 2:30PM-4:30PM, Room: 205, Chair: Daniel Ashlock / James Montgomery

2:30PM Evolvable Warps for Data Normalization [#16941]
Jeremy Gilbert and Daniel Ashlock  
University of Guelph, Canada

2:50PM Conway Crossover to Create Hyperdimensional Point Packings, with Applications [#16008]  
Daniel Ashlock and Steffen Graether  
University of Guelph, Canada

3:10PM An Adaptive Generative Representation for Evolutionary Computation [#16592]  
Daniel Ashlock and James Montgomery  
University of Guelph, Canada; University of Tasmania, Australia

3:30PM The Do What's Possible Representation [#16809]  
Daniel Ashlock, Sierra Gillis, Andrew McEachern and Jeffrey Tsang  
University of Guelph, Canada; Queen's University, Canada

3:50PM Adding Local Edge Mobility to Graph Evolution [#16846]  
Daniel Ashlock and Meghan Timmins  
University of Guelph, Canada

4:10PM A comparison of implementations of basic evolutionary algorithm operations in different languages [#16548]  
Juan Julian Merelo, Israel Blancas-Alvarez, Pedro Castillo, Gustavo Romero, Victor Rivas, Mario Garcia-Valdez, Amaury Hernandez-Aguila and Mario Roman  
UGR, Spain; TecTijuana, Mexico

Session TM-16: SS CEC-08B: Many-Objective Optimization / SS CEC-17A: Computationally Expensive Optimization

Tuesday, July 26, 2:30PM-4:30PM, Room: 206, Chair: Yue-Jiao Gong / Karthik Sindhya

2:30PM A Hybrid Evolutionary Algorithm with Dual Populations for Many-Objective Optimization [#16504]  
Zhang Yu-Hui, Gong Yue-Jiao, Zhang Jun and Ling Ying-Biao  
Key Laboratory of Machine Intelligence and Advanced Computing, Ministry of Education, China; School of Computer Science and Engineering, South China University of Technology, China

2:50PM An Improved Visualization Approach in Many-Objective Optimization [#26022]  
Zhenan He and Gary Yen  
Sichuan University, China; Oklahoma State University, United States of America

3:10PM Enhanced Decomposition-Based Many-Objective Optimization Using Supplemental Weight Vectors [#26043]  
Hiroyuki Sato, Satoshi Nakagawa, Minami Miyakawa and Keiki Takadama  
The University of Electro-Communications, Japan

3:30PM Multi-objective variable subset selection using heterogenous surrogate modeling and Sequential Design [#16377]  
Joachim van der Herten, Ivo Couckuyt, Dirk Deschrijver and Tom Dhaene  
Ghent University - iMinds, Belgium

3:50PM State-based Representation for Structural Topology Optimization and Application to Crashworthiness [#16328]  
Nikola Aulig and Markus Olhofer  
Honda Research Institute Europe GmbH, Germany
4:10PM  A Surrogate Model Assisted Evolutionary Algorithm for Computationally Expensive Design Optimization Problems with Discrete Variables [#16071]
Bo Liu, Nan Sun, Qingfu Zhang, Georges Gielen and Vic Grout
Glyndwr University, United Kingdom; City University of Hong Kong, Hong Kong; Katholieke Universiteit Leuven, Belgium

Session TM-17: SS CEC-23A: Memetic Computing
Tuesday, July 26, 2:30PM-4:30PM, Room: 207, Chair: Liang Feng / Maoguo Gong

2:30PM  Enhancing Evolutionary Multifactorial Optimization based on Particle Swarm Optimization [#16496]
Tian Xie, Maoguo Gong, Zedong Tang, Yu Lei, Jia Liu and Zhao Wang
Xidian University, China; Northwestern Polytechnical University, China

2:50PM  A Memetic Evolutionary Algorithm For Bi-level Combinatorial Optimization: A Realization between Bi-MDVRP and Bi-CVRP [#16794]
Abir Chaabani, Slim Bechikh and Lamjed Ben Said
SOIE lab, University of Tunis, Tunisia

3:10PM  A Memetic Algorithm for Multi-objective Optimization Problems with Interval Parameters [#16582]
Gong Dunwei, Miao Zhuang and Sun Jing
China University of Mining and Technology, China; Huai Hai Institute of Technology, China

3:30PM  Variable Neighborhood based Memetic Algorithm for Distributed Assembly Permutation Flowshop [#17073]
Keyao Wang, Ran Zhang and Bo Liu
Astronautics School, Beihang University, China; Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China

3:50PM  A Preliminary Study on Distance Selection in Probabilistic Memetic Framework for Capacitated Arc Routing Problem [#26044]
Ye Zhenbin, Feng Liang, Ong Yew-Soon, Liu Kai, Chen Chao and Sha Edwin
Chongqing University, China; Nanyang Technological University, Singapore

4:10PM  Evolutionary Multitasking across Single and Multi-Objective Formulations for Improved Problem Solving [#26025]
Bingshui Da, Abhishek Gupta, Yew-Soon Ong and Liang Feng
Nanyang Technological University, Singapore; Chongqing University, China

Tuesday, July 26, 2:30PM-4:30PM, Room: 208-209, Chair: Tomohiro Yoshikawa / Hongwei Mo

2:30PM  Analysis of Human Comfort by 1/f Fluctuation for Chaotic Sound Generation System [#16430]
Yoichiro Maeda
Institute of Technologists, Japan

2:50PM  Japanese Kanji-Calligraphic Font Design using Onomatopoeia Utterance [#16691]
Kenichi Murata, Tsuyoshi Nakamura, Kazuya Endo, Masayoshi Kanoh and Koji Yamada
Nagoya Institute of Technology, Japan; Chukyo University, Japan; Institute of Advanced Media Arts and Sciences, Japan
Session TP-12: Numerical Optimization / SS CEC-25A: Bat Algorithm and Cuckoo Search
Tuesday, July 26, 4:30PM-6:30PM, Room: 202, Chair: Xin-She Yang / Germano Vasconcelos

3:10PM Multi-Layer Situation Model for Robot Integration Systems [#17117]
Satoshi Yokoi, Hiroyuki Masuta, Toru Oshima, Ken'ichi Koyanagi and Tatsuo Motoyoshi
Toyama Prefectural University, Japan

3:30PM Leg Control based on Human Motion Prediction Using Motion Sensor for Power Assist Suit without Binding Knee [#17034]
Takuya Inoue, Shinnosuke Nomura, Yasutake Takahashi, Masayuki Kawai and Yoshiaki Taniai
University of Fukui, Japan

3:50PM Improving Constrained Glider Trajectories for Ocean Eddy Border Sampling within Extended Mission Planning Time [#16802]
Ales Zamuda, Jose Daniel Hernandez Sosa and Leonhard Adler
Faculty of Electrical Engineering and Computer Science, University of Maribor, Slovenia; Institute of Intelligent Systems and Numerical Applications in Engineering, University of Las Palmas de Gran Canaria, Spain

4:10PM A Multi-Modal Optimization Approach to Single Path Planning for Unmanned Aerial Vehicle [#16324]
Peng Yang, Guanzhou Lu, Ke Tang and Xin Yao
University of Science and Technology of China, China; University of Birmingham, United Kingdom

4:30PM The Paradox of Multimodal Optimization: Concepts vs. Species in Single and Multi-objective Problems [#16971]
Amiram Moshaiov
Tel-Aviv University, Israel

4:50PM Bio-inspired BAT optimization Algorithm for Handwritten Arabic Characters Recognition [#16231]
Ahmed Sahlol, Hossam Zawbaa, Ching Suen, Mohamed Abd Elfattah and Aboul Ella Hassanien
Faculty of Specific Education, Computer Teacher Preparation Dept., Damietta University, Egypt; Faculty of Mathematics and Computer Science, Babes-Bolyai University, Romania; Director of CENPRMI, Faculty of Engineering and Computer Sciences, Concordia University, Canada; Faculty of Computers and Information, Mansoura University, Egypt; Faculty of Computers and Information, Mansoura University Faculty of Computers and Information, Cairo University, Egypt

5:10PM A Modified Cuckoo Search Algorithm for Dynamic Optimization Problems [#17094]
Yuta Umenai, Fumito Uwano, Yusuke Tajima, Masaya Nakata, Hiroyuki Sato and Keiki Takadama
The University of Electro-Communications, Japan

5:30PM Cuckoo Search Optimization for Short Term Wind Energy Forecasting [#16708]
Carlos Eduardo Barbosa and Germano Vasconcelos
Federal University of Pernambuco, Brazil

5:50PM An Improved Bat Algorithm with Variable Neighborhood Search for Global Optimization [#16072]
Gai-Ge Wang, Mei Lu and Xiang-Jun Zhao

Jiangsu Normal University, China
6:10PM Adaptive Firefly Algorithm with Alternative Search [#16341]
Hui Wang, Wenjun Wang, Hui Sun, Jia Zhao, Xiang Yu, Li Lv and Huasheng Zhu
Nanchang Institute of Technology, China

Session TP-13: Artificial Immune Systems / Coevolutionary Systems
Tuesday, July 26, 4:30PM-6:30PM, Room: 203, Chair: Mateus Giesbrecht / Mohammad Nabi Omidvar

4:30PM An Immuno Inspired Proposal to Solve the Time Series Realization Problem [#16374]
Mateus Giesbrecht and Celso Bottura
FEEC - UNICAMP, Brazil

4:50PM A New Approach to Optimized Negative Selection [#17066]
Brian Schmidt and Ala Al-Fuqaha
Western Michigan University, United States of America

5:10PM An Immune Inspired Framework for Optimization in Dynamic Environment [#26053]
Weiwei Zhang, Gary Yen and Xiao Wang
Zhengzhou University of Light Industry, China; Oklahoma State University, United States of America

5:30PM Leap on Large-scale Nonseparable Problems [#16021]
Zhou Wu and Mingbo Zhao
University of Pretoria, South Africa; City University of Hong Kong, China

5:50PM Distributed Resource Allocation as Co-Evolution Problem [#16426]
Sven Tomforde, David Meier, Anthony Stein and Sebastian von Mammen
Kassel University, Intelligent Embedded Systems, Germany; University of Augsburg, Organic Computing Group, Germany

6:10PM Contribution Based Multi-Island Competitive Cooperative Coevolution [#16835]
Kavitesh Bali, Chandra Rohitash and Mohammad Nabi Omidvar
School of Computing Information and Mathematical Sciences, University of the South Pacific, Fiji; Nanyang Technological University, Singapore; School of Computer Science, University of Birmingham, United Kingdom

Session TP-14: Particle Swarm Optimization
Tuesday, July 26, 4:30PM-6:30PM, Room: 204, Chair: Kenya Jin'no / Christiaan Scheepers

4:30PM Applying PSO to Natual Language Processing Tasks: Optimizing the Identification of Syntactic Phrases [#16587]
George Tambouratzis
ILSP/Athena R.C., Greece

4:50PM An Improved Rotationally Invariant PSO: A Modified Standard PSO-2011 [#16662]
Yosuke Hariya, Takuya Shindo and Kenya Jin'no
Nippon Institute of Technology, Japan

5:10PM Vector Evaluated Particle Swarm Optimization Exploration Behavior Part I: Explorative Analysis [#16317]
Christiaan Scheepers and Andries Engelbrecht
University of Pretoria, South Africa
5:30PM  Vector Evaluated Particle Swarm Optimization Exploration Behavior Part II: Quantitative Analysis [#16584]
Christiaan Scheepers and Andries Engelbrecht
University of Pretoria, South Africa

5:50PM  Group-Based Stochastic Scaling for PSO Velocities [#16865]
Elre van Zyl and Andries Engelbrecht
University of Pretoria, South Africa

6:10PM  Static Learning Particle Swarm Optimization with Enhanced Exploration and Exploitation Using Adaptive Swarm Size [#16912]
Aditya Panda, Srijan Ghoshal, Amit Konar, Bonny Banerjee and Atulya K. Nagar
Jadavpur University, India; University of Memphis, United States of America; Liverpool Hope University, United Kingdom

Session TP-15: SS CEC-07: Evolutionary Bilevel Optimization
Tuesday, July 26, 4:30PM-6:30PM, Room: 205, Chair: Ankur Sinha / Hemant Singh

4:30PM  Solving Optimistic Bilevel Programs by Iteratively Approximating Lower Level Optimal Value Function [#16923]
Ankur Sinha, Pekka Malo and Kalyanmoy Deb
Indian Institute of Management Ahmedabad, India; Aalto University School of Business, Finland; Michigan State University, United States of America

4:50PM  A Differential Evolution Algorithm for Bilevel Problems Including Linear Equality Constraints [#17052]
Karla Perine, Jaqueline Angelo, Heder Bernardino and Helio Barbosa
UFJF, Brazil; LNCC/MCTI, Brazil; LNCC/MCTI, UFJF, Brazil

5:10PM  Handling Inverse Optimal Control Problems using Evolutionary Bilevel Optimization [#17151]
Varun Suryan, Ankur Sinha, Pekka Malo and Kalyanmoy Deb
Indian Institute of Technology Jodhpur, India; Indian Institute of Management Ahmedabad, India; Aalto University School of Business, Finland; Michigan State University, United States of America

5:30PM  A Memetic Algorithm for Solving Bilevel Optimization Problems with Multiple Followers [#16082]
Md Monjurul Islam, Hemant Singh and Tapabrata Ray
The University of New South Wales, Australia

5:50PM  Metamodel-Based Prediction of Performance Metrics for Bilevel Parameter Tuning in MOEAs [#17112]
Sunith Bandaru, Martin Andersson and Amos H.C. Ng
University of Skovde, Sweden

Session TP-16: SS CEC-17B: Computationally Expensive Optimization
Tuesday, July 26, 4:30PM-6:30PM, Room: 206, Chair: Wolfgang Konen / Abhishek Gupta

4:30PM  A Hybrid Sequential Sampling based Metamodelling Approach for High Dimensional Problems [#16168]
Selvakumar Ulaganathan, Ivo Couckuyt, Tom Dhaene, Eric Laermans and Joris Degroote
Ghent University - iMINDS, Department of Information Technology (iNTEC), Gaston
Crommenlaan 8, Ghent, Belgium 9050, Belgium; Ghent University, Department of Flow, Heat and Combustion Mechanics, Sint - Pietersnieuwstraat 41, Ghent, Belgium 9000, Belgium

4:50PM Equality Constraint Handling for Surrogate-Assisted Constrained Optimization [#16349]
Samineh Bagheri, Wolfgang Konen and Thomas Baeck
TH Koeln (University of Applied Sciences), Germany; Leiden University, Netherlands

5:10PM A New Optimal Resource Allocation Scheme for Computationally Expensive Problems [#16159]
Yi Sun, Albert Y.S. Lam and Victor O.K. Li
The University of Hong Kong, Department of Electrical and Electronic Engineering, Hong Kong

5:30PM Pareto Rank Learning for Multi-Objective Bi-Level Optimization: A Study in Composites Manufacturing [#26002]
Abhishek Gupta, Yew-Soon Ong, Piaras Kelly and Chi-Keong Goh
Nanyang Technological University, Singapore; University of Auckland, New Zealand; Rolls Royce Energy Systems, Singapore

5:50PM Evolutionary Computation for Topology Optimization of Mechanical Structures: An Overview of Representations [#16331]
Nikola Aulig and Markus Olhofer
Honda Research Institute Europe GmbH, Germany

6:10PM Enhancing Covariance Matrix Adaptation Evolution Strategy through Fitness Inheritance [#16887]
Rung-Tzuo Liaw and Chuan-Kang Ting
National Chung Cheng University, Taiwan

Session TP-17: SS CEC-23B: Memetic Computing / Classification, Clustering, Data Analysis and Data Mining
Tuesday, July 26, 4:30PM-6:30PM, Room: 207, Chair: Zexuan Zhu / Shinya Watanabe

4:30PM Multi-objective Memetic Algorithm for Solving Pickup and Delivery Problem with Dynamic Customer Requests and Traffic Information [#16854]
Jun Xiao, Xiaoliang Ma, Zexuan Zhu, Jiarui Zhou and Yanming Yang
Shenzhen University, China; Harbin Institute of Technology Shenzhen Graduate School, China

4:50PM A Novel Water Wave Optimization based Memetic Algorithm for Flow-Shop Scheduling [#17108]
Xin Yun, Xiaoyi Feng, Xin Lyu, Shouyang Wang and Bo Liu
Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China

5:10PM On-demand correlation-based information hierarchical structuring method (CIHSM) for non-dominated solutions [#16702]
Shinya Watanabe, Sho Nakano, Kazuhisa Chiba and Masahiro Kanazaki
Muroran Institute of Technology, Japan; Hokuden Information Technology, Inc., Japan; The University of Electro-Communications, Japan; Tokyo Metropolitan University, Japan

5:30PM Optimization of Workload Level Estimation Using Selection of EEG Channel Connectivity [#26041]
Kevin Ardian, Fumihiko Taya, Yu Sun, Kay Chen Tan and Anastasios Bezerianos
Singapore Institute for Neurotechnology / National University of Singapore, Singapore; Singapore Institute for Neurotechnology, Singapore; National University of Singapore, Singapore;
Singapore

5:50PM An evolutionary sampling approach with adaptive Levy probability distribution [#16226]
Chaoru Hu, Jun Sun and Tian Na
Jiangnan University, China

Session TP-18: Workshop-01B: The 3rd International Workshop on Computational Energy Management in Smart Grids
Tuesday, July 26, 4:30PM-6:30PM, Room: 208-209, Chair: Stefano Squartini / Petr Musilek

4:30PM Supplementary Control for Virtual Synchronous Machine based on Adaptive Dynamic Programming [#16454]
Naresh Malla, Dipesh Shrestha, Zhen Ni and Reinaldo Tonkoski
South Dakota State University, United States of America

4:50PM Smart Renewable Energy Management System for Consumer Applications [#16937]
Justin Schlauwitz and Petr Musilek
Department of Electrical and Computer Engineering, University of Alberta, Edmonton AB, Canada, Canada; Department of Electrical and Computer Engineering, University of Alberta, Edmonton AB, Canada and Faculty of Electrical Engineering and Computer Science, VSB-Technical University, Ostrava, Czech Republic, Canada

5:10PM A Hybrid Meta-heuristic Method for Unit Commitment Considering Flexible Charging and Discharging of Plug-in Electric Vehicles [#16906]
Zhile Yang, Kang Li and Xiandong Xu
Queen's University Belfast, United Kingdom

5:30PM Integrating Demand Response into Electricity Market [#16521]
Zixu Liu, Xiao-Jun Zeng and Qian Ma
University of Manchester, United Kingdom

5:50PM Implementation of Demand Side Management of a Smart Home using Multi-Agent System [#16046]
Logenthiran Thillainathan, Li Weixian, Woo Wai Lok, Phan Van-Tung and Srinivasan Dipti
Newcastle University, Singapore; National University of Singapore, Singapore

6:10PM Artificial bee colonies based optimal sizing of microgrid components: a profit maximization approach [#16992]
Lucio Ciabattoni, Francesco Ferracuti, Gianluca Ippoliti and Sauro Longhi
Universita' Politecnica delle Marche, Italy

Session WA-12: Particle Swarm Optimization
Wednesday, July 27, 8:00AM-10:00AM, Room: 202, Chair: Zhi-Hui Zhan / Toshiharu Hatanaka

8:00AM Adaptive Radius Species Based Particle Swarm Optimization for Multimodal Optimization Problems [#17160]
Zhi-Hui Zhan, Zi-Jia Wang, Ying Lin and Jun Zhang
South China University of Technology, China; Sun Yat-sen University, China

8:20AM A Refinement Mechanism to Improve Particle Swarm Optimization [#16412]
Wei Ren Tan, Saul Zapotecas-Martinez, Hernan E. Aguirre and Kiyoshi Tanaka
Shinshu University, Japan

8:40AM Comparison of Differential Grouping and Random Grouping Methods on $\varepsilon$CCPSO
for Large-Scale Constrained Optimization [#16181]
Chen Peng and Qing Hui
University of Nebraska-Lincoln, United States of America

9:00AM Multi-Objective Random Drift Particle Swarm Optimization Algorithm with Adaptive Grids [#16858]
Yiqiong Yuan, Sun Jun and Zhou Dongmei
Jiangnan University, China

9:20AM Histogram Particle Swarm Optimization (HistPSO): Evolving Non-Parametric Acceleration Distributions [#26049]
Joshua Manela and Timothy Havens
Michigan Technological University, United States of America

9:40AM Heterogenous Swarm with First and Second Order Dynamics for Function Optimization [#17038]
Heng Xiao and Toshiharu Hatanaka
Osaka University, Japan

Session WA-13: Genetic Algorithms
Wednesday, July 27, 8:00AM-10:00AM, Room: 203, Chair: Walter Krawec / Debora Medeiros

8:00AM An Integrated Prognostic based Hybrid Genetic-Immune Algorithm for scheduling jobs and predictive maintenance [#16962]
Asma Ladj, Fatima Benbouzid-Si Tayeb and Christophe Varnier
Ecole nationale Superieure d'Informatique ESI, Algeria; Institut Femto-St, Dept AS2M, France

8:20AM A Genetic Algorithm for Deploying Roadside Units in VANETs [#16731]
Joao Sarubbi, Flavio Martins and Cristiano Silva
CEFETMG, Brazil; UFSJ, Brazil

8:40AM A Genetic Algorithm to Analyze the Security of Quantum Cryptographic Protocols [#16067]
Walter Krawec
Iona College, United States of America

9:00AM FCFFilter: Feature Selection based on Clustering and Genetic Algorithms [#17022]
Charles Ferreira, Debora Medeiros and Fabiana Santana
Federal University of ABC (UFABC), Brazil; University of Canberra, Australia

9:20AM Novel Crossover and Mutation Operation in Genetic Algorithm for Clustering [#17062]
Abul Hashem Beg and Md Zahidul Islam
Charles Sturt University, Australia

9:40AM Genetic Algorithms based on a Granular Surrogate Model and Fuzzy Aptitude Functions [#16995]
Israel Cruz, Carlos Alberto Reyes, Juan Manuel Ramirez, Pilar Gomez and Jose de Jesus Rangel
Consejo Nacional de Ciencia y Tecnologia, Mexico; Instituto Nacional de Astrofisica, Optica y Electronica, Mexico

Session WA-14: Multi-objective Evolutionary Algorithms
Wednesday, July 27, 8:00AM-10:00AM, Room: 204, Chair: Xianpeng Wang / Shengxiang Yang

8:00AM A multi-objective differential evolution algorithm with memory based population construction
Xianpeng Wang, Zhiming Dong and Lixin Tang
Institute of Industrial Engineering and Logistics Optimization, Northeastern University, China

8:20AM A Meta-Heuristic Approach to Predict Protein-Protein Interaction Network [#16882]
Archana Chowdhury, Pratyusha Rakshit, Amit Konar and Atulya K Nagar
Jadavpur University, India; Liverpool Hope University, United Kingdom

8:40AM An Adaptive Penalty-based Boundary Intersection Approach for Multiobjective Evolutionary Algorithm Based on Decomposition [#16414]
Shouyong Jiang, Shengxiang Yang and Jinglei Guo
Centre for Computational Intelligence (CCI), School of Computer Science and Informatics, De Montfort University, The Gateway, Leicester, LE1 9BH, United Kingdom; Department of Computer Science, Central China Normal University, China, China

9:00AM Improved Adaptive Global Replacement Scheme for MOEA/D - AGR [#16534]
Hiu-Hin Tam, Man-Fai Leung, Zhenkun Wang, Sin-Chun Ng, Chi-Chung Cheung and Andrew K. Lui
The Open University of Hong Kong, Hong Kong; Xidian University, China; The Hong Kong Polytechnic University, Hong Kong

9:20AM A Two-phase Many-Objective Evolutionary Algorithm with Penalty Based Adjustment for Reference Lines [#17100]
Zhu Chunyang, Cai Xinye, Fan Zhun and Muhammad Sulaman
School of Computer Science and Technology Nanjing University of Aeronautics and Astronautics Jiangsu, China; School of Engineering Shantou University Guangdong, China

9:40AM A Cone Order Sequence based Multi-objective Evolutionary Algorithm [#16597]
Yueming Lyu, Qingfu Zhang and Ka-Chun Wong
City University of Hong Kong, Hong Kong

Session WA-15: SS CEC-31: New Directions in Evolutionary Machine Learning
Wednesday, July 27, 8:00AM-10:00AM, Room: 205, Chair: Will Browne / Yusuke Nojima

8:00AM Integration of Code-Fragment based Learning Classifier Systems for Multiple Domain Perception and Learning [#17147]
Yi Liu, Muhammad Iqbal, Isidro Alvarez and Will N. Browne
Victoria University of Wellington, New Zealand

8:20AM Evolutionary Support Vector Machines: A Dual Approach [#16947]
Madson Luiz Dantas Dias and Ajalmar Rocha Neto
Federal Institute of Ceara, Brazil

8:40AM Effects of Parallel Distributed Implementation on the Search Performance of Pittsburgh-style Genetics-based Machine Learning Algorithms [#17190]
Yusuke Nojima and Hisao Ishibuchi
Osaka Prefecture University, Japan

9:00AM A Comprehensive Strategy for Mammography Image Classification Using Learning Classifier Systems [#17173]
Abubakar Siddique, Muhammad Iqbal and Will N. Browne
Umm Al Qura University, Saudi Arabia; Victoria University of Wellington, New Zealand

9:20AM Adapting Learning Classifier Systems to Symbolic Regression [#16957]
Syed Saud Naqvi and Will Browne  
Victoria University of Wellington, New Zealand  
9:40AM  Compaction for Code Fragment Based Learning Classifier Systems - Redux [#16183]  
Isidro Alvarez, Will Browne and Mengjie Zhang  
Victoria University of Wellington, New Zealand

Session WA-16: SS CEC-25B: Bat Algorithm and Cuckoo Search  
Wednesday, July 27, 8:00AM-10:00AM, Room: 206, Chair: Xin-She Yang / Ling Wang

8:00AM  Adjusted Bat Algorithm for Tuning of Support Vector Machine Parameters [#16746]  
Eva Tuba, Milan Tuba and Dana Simian  
University of Belgrade, Serbia and Montenegro; Jonh Naisbitt University, Serbia and Montenegro; Lucian Blaga University of Sibiu, Romania

8:20AM  Community Detection in Graphs based on Surprise Maximization using Firefly Heuristics [#16128]  
Javier Del Ser, Jesus L. Lobo, Esther Villar-Rodriguez, Miren Nekane Bilbao and Cristina Perfecto  
TECNALIA and University of the Basque Country (UPV/EHU), Spain; TECNALIA, Spain; University of the Basque Country (UPV/EHU), Spain

8:40AM  A Hybrid Discrete Cuckoo Search for Distributed Permutation Flowshop Scheduling Problem [#16206]  
Jingjing Wang, Ling Wang and Jingnan Shen  
Department of Automation, Tsinghua University, China

9:00AM  Cuckoo Search with Levy Flights for Reconstruction of Outline Curves of Computer Fonts with Rational Bezier Curves [#16956]  
Andres Iglesias and Akemi Galvez  
University of Cantabria, Spain

9:20AM  Modified Firefly Algorithm Using Randomized Mechanisms [#16745]  
Li_Na Zhang, Li_Qiang Liu, Gan_Nan Yuan and Yun_Tao Dai  
Harbin Engineering University, China

Session WA-17: SS CEC-36A: Evolutionary Computation in Architectural Design  
Wednesday, July 27, 8:00AM-10:00AM, Room: 207, Chair: Fatih Tasgetiren / Cemre Cubukcuoglu

8:00AM  Computational Cognitive Color Perception [#16616]  
Ozer Ciftcioglu and Michael S. Bittermann  
Delft University of Technology, Netherlands; Maltepe University, Turkey

Berk Ekici, Ioannis Chatzikonstantinou, Sevil Sariyildiz, M. Fatih Tasgetiren and Quan-Ke Pan  
Yasar University, Turkey; Huazhong University of Science and Technology, China

8:40AM  Multi-Objective Harmony Search Algorithm for Layout Design in Theatre Hall Acoustics [#16249]  
Cemre Cubukcuoglu, Ayca Kirimtat, M. Fatih Tasgetiren, P. N Suganthan and Quan-Ke Pan  
Yasar University, Turkey; Nanyang Technological University, Singapore; State Key Laboratory, Huazhong University of Science and Technology, China
9:00AM  Multi-Objective Optimization Through Differential Evolution for Restaurant Design [#16489]
   Cemre Cubukcuoglu, Ioannis Chatzikonstantinou, Berk Ekici, Sevil Sariyildiz and M. Fatih Tasgetiren
   Yasar University, Turkey

9:20AM  Precision Constrained Optimization by Exponential Ranking [#16620]
   Michael S. Bittermann and Ozer Ciftcioglu
   Maltepe University, Turkey; Delft University of Technology, Netherlands

9:40AM  Interior Spatial Layout with Soft Objectives using Evolutionary Computation [#17016]
   Ioannis Chatzikonstantinou and Ebru Bengisu
   Yasar University, TU Delft, Turkey; Yasar University, Turkey

Session WA-18: SS CDCI-10: Computational Intelligence Methodologies for Environmental
Sustainability and Sustainable Development: Theory and Applications / SS CDCI-16:
Computational Intelligence in Dynamics of Complex Networks: Models and Applications
Wednesday, July 27, 8:00AM-10:00AM, Room: 208-209, Chair: Tatiana Tambouratzis / Chung-Ming Ou

8:00AM  The Resilience Management Fuzzy Controller: a decision making support tool [#16250]
   Ruben Cardenas, Angela Nebot, Francisco Mugica and Alfredo Vellido
   IUSS UME School, Italy; Soft Computing Group, Technical University of Catalonia, Spain

8:20AM  Predicting Sea Waves in the Presence of Pink Noise [#16438]
   Jacqueline Christmas
   University of Exeter, United Kingdom

8:40AM  A Genetic Algorithm Approach for Determining the Characteristics of the Ideally Sustainable
   Country and Increasing Country Sustainability [#16997]
   Tatiana Tambouratzis
   University of Piraeus, Greece

9:00AM  Automatic Inference of Graph Models for Directed Complex Networks using Genetic
   Programming [#16609]
   Michael Richard Medland, Kyle Robert Harrison and Beatrice M. Ombuki-Berman
   Brock University, Canada; University of Pretoria, South Africa

9:20AM  An Effective Method to Find the k Shortest Paths in a Generalized Time-Window Network
   [#16065]
   Xiao-Bing Hu, Ming-Kong Zhang, Jian-Qin Liao and Hai-Lin Zhang
   Beijing Normal University, China; Chengdu MidShare Technology Ltd, China; Research
   Institute of Highway, Ministry of Transport, China

9:40AM  Minimize the average mean first passage time of random walk in complex networks by genetic
   algorithm [#16531]
   Yue Yu and Kwok Yip Szeto
   Hong Kong University of Science and Technology, Hong Kong

Plenary Talk WPlen: IEEE CEC Plenary
Wednesday, July 27, 1:00PM-2:00PM, Room: Ballroom C, Speaker: Yaochu Jin

Plenary Poster Session WPost: CEC Poster Session
Wednesday, July 27, 2:00PM-6:00PM, Room: Ballroom D
P301 An Extension of the ACO_R Algorithm with Time-Decaying Search Width, with Application to Neural Network Training [#16251]
Ashraf Abdelbar and Khalid Salama
Brandon University, Canada; University of Kent, United Kingdom

P302 A Hybrid Differential Evolutionary Algorithm Based on the Hierarchical Clustering [#16456]
Zheng Fang, Ming Yang, Guilin Zhang and Jing Guan
School of Computer Science, China University of Geosciences, Wuhan, China; China Ship Development and Design Center, China

P303 A Novel Registration Method based on Coevolutionary Strategy [#16314]
Jun Zhang and Jinglu Hu
Waseda Univ., Japan

P304 Development of a Genetic Programming-based GA Methodology for the Prediction of Short-to-Medium-term Stock Markets [#16241]
Manal Alghieth, Yingjie Yang and Francisco Chiclana
De Montfort University, United Kingdom

P305 A construction of rotations-based rosters with a Genetic Algorithm [#17015]
Chaima Boufaied, Raja Trabelsi, Hela Masri and Saoussen Krichen
LARODEC laboratory, Tunisia

P306 A Fuzzy Genetic Algorithm Approach to Generate and Assess Meta-Architectures for Non-Line of Site Fires Battlefield Capability [#16901]
Gene Lesinski, Steven Corns and Cihan Dagli
United States Military Academy, United States of America; Missouri University of Science and Technology, United States of America

P307 Decision Template Multi-label Classification based on Recursive Dependent Binary Relevance [#16235]
Thomas W. Rauber, Victor F. Rocha, Lucas H. S. Mello and Flavio M. Varejao
Universidade Federal do Espirito Santo, Brazil

P308 Complexity measures in Genetic Programming Learning: A Brief Review [#16561]
Nam Le, Hoai Nguyen Xuan, Anthony Brabazon and Thuong Pham Thi
Hanoi University, Viet Nam; University College Dublin, Ireland

P309 Feature Selection and Classification Using Age Layered Population Structure Genetic Programming [#16022]
Anthony Awuley and Brian Ross
Brock University, Canada

P310 ICARUS: Identification of Complementary algoRithms by Uncovered Sets [#16301]
Mario Munoz and Michael Kirley
Monash University, Australia; The University of Melbourne, Australia

P311 The Distributed Permutation Flowshop Scheduling Problem with Different Transport Timetables and Loading Capacities [#16728]
ZhengYang Li, WenZhe Duan, MengChen Ji, YiXin Yang, Shouyang Wang and Bo Liu
Academy of Mathematics and Systems Science, Chines Academy of Sciences, China

P312 Strategic Planning of Aircraft Trajectories in North Atlantic Oceanic Airspace Based on Flocking Behaviour [#16722]
Imen Dhief, Nour Houda Dougui, Daniel Delahaye and Noureddine Hamdi
Heterogeneous Advanced Networking and Applications (HANA) Research group ENSI, Tunisia;
Laboratory of Applied Mathematics, Informatics and Automatics for Aviation (MAIAA) ENAC, France

P313 A Fuzzy C-Means Clustering Based Tournament Selection for Multiobjective Optimization [#16280]
Yi Zhang, Zhen Yu, Zi-mu Li and Tong-tong Lu
China Three Gorges University, China

P314 Multimodal Multi-objective Optimization: A Preliminary Study [#16477]
Jane Jing Liang, Caitong Yue and Boyang Qu
Zhengzhou University, China; Zhengzhou Universit, China; Zhongyuan University of Technology, China

P315 Reference Point-based Nondominated Sorting Multi-objective Quantum-inspired Evolutionary Algorithm [#16538]
Dick Sigmund and Jong-Hwan Kim
School of Electrical Engineering, KAIST, Korea (South)

P316 An Objective Reduction Algorithm Based on Hyperplane Approximation for Many-Objective Optimization Problems [#16811]
Yifan Li, Hai-Lin Liu and Fangqing Gu
Guangdong University of Technology, China; GuangDong university of technology, China

P317 A Comparative Study on Decomposition-Based Multi-objective Evolutionary Algorithms for Many-Objective Optimization [#16148]
Xiaoliang Ma, Junshan Yang, Nuosi Wu, Zhen Ji and Zexuan Zhu
Shenzhen City Key Laboratory of Embedded System Design, College of Computer Science and Software Engineering, Shenzhen University, Shenzhen, China, China

P318 A Decomposition Based Evolutionary Algorithm with Uniform Design for Multi-objective Optimization [#16310]
Cai Dai, Xiujuan Lei and Ding Yulian
College of Computer Science Shaanxi Normal University, China

P319 High Dimensional Model Representation for solving Expensive Multi-objective Optimization Problems [#17037]
Proteek Roy and Kalyanmoy Deb
Michigan State University, United States of America

P320 Prediction of Pareto Dominance by Reducing Equivalent and Redundent Dimensions in Decision Vectors [#16282]
Guanqi Guo, Caiying Feng, Wenbin Li and Bo Yang
Hunan Institute of Science and Technology, China

P321 Running Krill Herd Algorithm on Hadoop: A Performance Study [#16436]
Simone Ludwig
North Dakota State University, United States of America

P322 A Novel Constrained Bare-bones Particle Swarm Optimization [#16136]
Shen Yuanyua, Chen Jian, Zeng Chuanhua and Ji Bin
School of Computer Science and Technology, Anhui University of Technology, China; School of Mathematics and Physics, Anhui University of Technology, China

P323 PSO+: A Nonlinear Constraints-Handling Particle Swarm Optimization [#16624]
Manoela Kohler, Leonardo Mendoza, Marley Vellasco, Ricardo Tanscheit and Marco Pacheco Pontifical Catholic University of Rio de Janeiro, Brazil
P324 Search Experience-Based Search Adaptation in Artificial Bee Colony Algorithm [#16407]
Xianneng Li, Guangfei Yang and Mustafa Servet Kiran
Faculty of Management and Economics, Dalian University of Technology, China; Faculty of Engineering, University of Selcuk, Turkey

P325 Research on Autonomous Moving Robot Path Planning Based on Improved Particle Swarm Optimization [#16461]
Zhibin Nie, Xiaobing Yang, Shihong Gao, Yan Zheng, Jianhui Wang and Zhanshan Wang
Northeastern University, China; Northeastern University; Shanxi University, China

P326 Multi-context Cooperative Coevolution in Particle Swarm Optimization [#16107]
Ruo-li Tang, Zhou Wu and Yan-jun Fang
Wuhan University, China; University of Pretoria, South Africa

P327 Finite-time Analysis of the Multi-armed Bandit Problem with Known Trend [#16559]
Djallel Bouneffouf
BC Cancer agency, Canada

P328 Differential Evolution with Multi-Stage Strategies for Global Optimization [#16038]
Xiaogen Zhou, Guijun Zhang, Xiaohu Hao, Li Yu and Dongwei Xu
College of Information Engineering, Zhejiang University of Technology, China

P329 A Study of Fitness Functions for Reconstructing Networks using Node Degrees [#16162]
Martin O. Wimmers and Jing Liu
Key Laboratory of Intelligent Perception and Image Understanding of Ministry of Education, Xi’an Jiaotong University Xi’an 710071 China, China

P330 Entropy determined hybrid two-stage multi-objective evolutionary algorithm combining locally linear embedding [#16055]
Liang Chen, Chong Zhou, Guangming Dai, Yuzhen Zhang and Ruixue Hu
China University of Geosciences, Wuhan, China

P331 Adaptive Patch-Based Sparsity Estimation for Image via MOEA/D [#16851]
Yu Zhou, Sam Kwong, Qingfu Zhang and Mengyuan Wu
Department of CS, City University of Hong Kong, Hong Kong

P332 A Hybrid Estimation of Distribution Algorithm for Distributed Permutation Flowshop Scheduling with Flowline Eligibility [#16693]
Wenzhe Duan, Zhengyang Li, Mengchen Ji, Yixin Yang, Shouyang Wang and Bo Liu
Chongqing University of Electronics Science and Technology, China; National University of Defence Technology, China; National University of Defence Technology, China; National University of Defence Technology, China; National University of Defence Technology, China; National University of Defence Technology, China; National University of Defence Technology, China; National University of Defence Technology, China; National University of Defence Technology, China; National University of Defence Technology, China

P333 Physical Construction of Local Design Information for Sounding Hybrid Rocket Design via Correlation-based Information Hierarchical Structure [#16721]
Kazuhisa Chiba, Shinya Watanabe and Masahiro Kanazaki
The University of Electro-Communications, Japan; Muroran Institute of Technology, Japan; Tokyo Metropolitan University, Japan

P334 Image Restoration by Multivariate-Stochastic Optimization using Improved Particle Swarm Algorithm [#16692]
Mohsin Bilal, Mudasser F. Wyne and Muhammad Arfan Jaffar
Department of Computer Science, College of Computer and Information Systems, Umm Al Qura University, Saudi Arabia; School of Engineering and Computing, National University, San Diego, United States of America; College of Computer and Information Systems, Al Imam Mohammad Ibn Saud Islamic University (IMSIU), Riyadh, Saudi Arabia

P335 Improving the Computational Efficiency of Ripple-Spreading Algorithm for the k Shortest Path
Problem [#16029]
Xiao-Bing Hu, Ming-Kong Zhang and Di Hu
Beijing Normal University, China; Central University of Finance and Economics, China

P336 An Ensemble of Differential Evolution Algorithms with Variable Neighborhood Search for Constrained Function Optimization [#16686]
Mert Paldrak, M. Fatih Tasgetiren, P. N Suganthan and Quan-Ke Pan
Yasar University, Turkey; Nanyang Technological University, Singapore; Huazhong University of Science and Technology, China

P337 Tiled EvoLisa Image Evolution With Blending Triangle Brushstrokes and Gene Compression DE [#16623]
Ales Zamuda and Uros Mlakar
Faculty of Electrical Engineering and Computer Science, University of Maribor, Slovenia

P338 An Effective Estimation of Distributed Algorithm for Solving Uniform Parallel Machine Scheduling Problem with Precedence Constraints [#16236]
Chuge Wu, Ling Wang and Xiaolong Zheng
Department of Automation, Tsinghua University, China

P339 A New Computationally Efficient Dynamic Scheduling for Multiple Resource Constrained Procedures [#17042]
Mohammadali Shahriari, Mohammad Biglarbegian, William Melek and Joseph Kurian
University of Guelph, Canada; University of Waterloo, Canada; Alpha-IT, Canada

P340 A Contribution-guided Discrete Differential Evolution Algorithm For the Quadratic Multiple Knapsack Problem [#16825]
Xiangling Zhao, Yun Dong and Lixin Tang
Institute of Industrial Engineering and Logistics Optimization / Northeastern University, China

P341 Scheduling of No-wait Stochastic Distributed Assembly Flowshop by Hybrid PSO [#16689]
Mengchen Ji, Yixin Yang, Wenzhe Duan, Shouyang Wang and Bo Liu
Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China

P342 Global Optimisation of Multiple Gravity Assist Spacecraft Trajectories Based on Search Space Exploring and PCA [#16081]
Mingcheng Zuo, Guangming Dai, Liang Chen, Lei Peng, Zhiming Song and Xiaoyu Chen
China University of Geosciences, China

P343 Optimal Sliding Mode Control for Spacecraft Rendezvous with Collision Avoidance [#16172]
Licheng Feng, Qing Ni, Yuzhu Bai, Xiaoqian Chen and Yong Zhao
College of Aerospace Science and Engineering, National University of Defense Technology, China

P344 Application of Multi-Objective Alliance Algorithm to Multidisciplinary Design Optimization under Uncertainty [#16311]
Xiaoqian Chen, Xingzhi Hu, Valerio Lattarulo, Wen Yao and Yong Zhao
National University of Defense Technology, China; University of Cambridge, United Kingdom

P345 Human-computer Cooperative Brain Storm Optimization Algorithm for the Two-echelon Vehicle Routing Problem [#16528]
Xueming Yan, Zhifeng Hao, Han Huang and Gang Li
South China University of Technology, China; Foshan University, China

P346 Brain Storm Optimization Algorithm with Re-initialized Ideas and Modified Step Size [#16522]
Mohammed El-Abd
American University of Kuwait, Kuwait
P347  State-Space Modeling and Offline Evolutive Parameter Estimation of a Generic Robotic Platform [#16725]
Leonardo Borges Farconi, Ecyo Farias, Jose Montandon, Pedro Guimaraes, Nuno Bernardes Barcellos, Leonardo Costa Ramos, Rafael Guedes Lang, Ivan Nunes da Silva and Roseli Francelin Romero
University of Sao Paulo, Brazil

P348  Application of Simplified Swarm Optimization Algorithm in Deteriorate Supply Chain Network Problem [#16146]
Wei-Chang Yeh, Wei-Ting Lin, Chyh-Ming Lai, Yen-Chin Lee, Yuk Ying Chung and Jsen-Shung Lin
Department of Industrial Engineering and Engineering Management National Tsing Hua University, Taiwan; School of Information Technology University of Sydney NSW, Australia, Taiwan; Department of Information Management Central Police University, Taiwan

P349  Integrated use of soft computing and clustering for capacitated clustering single-facility location problem with one-time delivery [#16225]
Yunzhi Jiang, Wei-Chang Yeh, Chyh-Ming Lai, Hsiu-Hao Liu, Che-Hou Yeh, Yuk-Ying Chung and Jsen-Shung Lin
Guangdong Polytechnic Normal University, China; Department of Industrial Engineering and Engineering Management, National Tsing Hua University, Taiwan; University of Sydney, Australia; Central Police University, Taiwan

P350  A Multi-agent Genetic Algorithm based on Natural Coding for Emergency Resources Scheduling Problems [#16567]
Haolong Wu and Jing Liu
Key Laboratory of Intelligent Perception and Image Understanding of Ministry of Education, Xidian University, China

P351  An Superior Tracking Artificial Bee Colony for Global Optimization Problems [#16202]
Xianghua Chu, Guozheng Hu, Ben Niu, Li Li and Zhengrong Chu
Shenzhen University, China; University of Manitoba, Canada

P352  A shuffled complex evolution algorithm for the multidimensional knapsack problem using core concept [#16674]
Marcos Baroni and Flavio Varejao
Universidade Federal do Espirito Santo, Brazil

P353  Clustering using Flower Pollination Algorithm and Calinski-Harabasz Index [#16413]
Szymon Lukasik, Piotr A. Kowalski, Malgorzata Charytanowicz and Piotr Kulczycki
Systems Research Institute, Polish Academy of Sciences; Faculty of Physics and Applied Computer Science, AGH University of Science and Technology, Poland; Faculty of Physics and Applied Computer Science, AGH University of Science and Technology; Systems Research Institute, Polish Academy of Sciences, Poland; Institute of Mathematics and Computer Science, The John Paul II Catholic University of Lublin; Systems Research Institute, Polish Academy of Sciences, Poland

P354  Knowledge-inducing MOEA/D for Interval Multi-objective Optimization Problems [#16807]
Yinan Guo, Jian Cheng, Zhen Yang and Chun Wang
China University of Mining and Technology, China

P355  A Multi-point Local Search Algorithm for Continuous Dynamic Optimization [#17072]
Xin Yu and Xi Wu
Chengdu University of Information Technology, China
P356 An Improved Artificial Immune Network Algorithm for Data Clustering Based on Secondary Competition Selection [#16223]
Li Yangyang, Wang Dong, Yu Yiran and Jiao Licheng
Xidian university, China

P357 A New Evolutionary MicroRNA Marker Selection using Next-Generation Sequencing Data [#16966]
Adrian Lancucki, Indrajit Saha, Shib Sankar Bhowmick, Ujjwal Maulik and Piotr Lipinski
University of Wroclaw, Wroclaw, Poland, Poland; National Institute of Technical Teachers’ Training and Research, Kolkata, India, India; Heritage Institute of Technology, Kolkata, India, India; Jadavpur University, Kolkata, India, India

P358 Modified Bare Bones Particle Swarm Optimization with Differential Evolution for Large Scale Problem [#16295]
Shiqin Yang and Yuji Sato
Graduate School of Computer and Information Sciences, Hosei University, Japan

P359 Meta-Optimization based Multi-Objective Test Problem Generation using WFG Toolkit [#17180]
Yuki Tanigaki, Yusuke Nojima and Hisao Ishibuchi
Osaka Prefecture University, Japan

Session WM-12: Differential Evolution / Evolution Strategies
Wednesday, July 27, 2:30PM-4:30PM, Room: 202, Chair: Jin Kiat Chong / Hongbin Dong

2:30PM A Novel Grid-based Differential Evolution (DE) Algorithm for Many-Objective Optimization [#26018]
Jin Kiat Chong and Kay Chen Tan
National University of Singapore, Singapore

2:50PM A Subpopulation-based Differential Evolution Algorithm for Scheduling with Batching Decisions in Steelmaking-continuous Casting Production [#17128]
Wenjie Xu, Fei Zou and Lixin Tang
Institute of Industrial Engineering Logistics Optimization, Northeastern University, Shenyang, China

3:10PM Differential Evolution-Based PID Control of a Quadrotor System for Hovering Application [#16903]
Jimoh O. Pedro, Muhammed Dangor and Praneet J. Kala
University of the Witwatersrand, Johannesburg, South Africa

3:30PM Differential Evolution with a Dimensional Mutation Strategy for Global Optimization [#16084]
Jing Guan
China Ship Development and Design Center, Wuhan, China

3:50PM Mixed Mutation Strategy Evolutionary Programming Based on Shapley Value [#16139]
Jinwei Pang, Hongbin Dong, Jun He and Qi Feng
Harbin Engineering University, China; Aberystwyth University, United Kingdom; National Natural Science Foundation of China, China

4:10PM Global Optimization through Randomized Group Search in Contracting Regions [#16201]
Chao Yu, Qing-Guo Wang and Dipti Srinivasan
National University of Singapore, Singapore; University of Johannesburg, South Africa

Session WM-13: Engineering Applications
Wednesday, July 27, 2:30PM-4:30PM, Room: 203, Chair: Ting Hu / Pranab Muhuri

2:30PM Evolutionary Design of Fuzzy Logic Controllers for Medium Access Control in WBANs [#16532]
Seyed Mohammad Nekooei, Gang Chen and Ramesh Kumar Rayudu
Victoria University of Wellington, New Zealand

2:50PM Evolutionary algorithmic deployment of radio beacons for indoor positioning [#16831]
Sipan Ye, Yuanzhu Chen and Ting Hu
Memorial University, Canada; Memorial University, Canada

3:10PM Solving Two-Stage Stochastic Mixed-Integer Linear Problems by Ordinal Optimization and Evolutionary Algorithms [#16933]
Thomas Siwczyk and Sebastian Engell
TU Dortmund, Germany

3:30PM Multi-Objective Bayesian Optimization Algorithm for Real-time Task Scheduling on Heterogeneous Multiprocessors [#17149]
Sajib K Biswas, Amit Rauniyar and Pranab K Muhuri
South Asian University, India

3:50PM Particle Filter with Lamarckian Inheritance for Nonlinear Filtering [#16626]
Lin Li, Chaozhu Zhang, Zhannan Li and Yun Li
Department of Information and Communication Engineering, Harbin Engineering University, China; College of Computer Science and Technology, Dongguan University of Technology, China

4:10PM Cancer Subtype Identification Pipeline A Classifusion Approach [#16545]
Utkarsh Agrawal, Daniele Soria and Christian Wagner
University of Nottingham, United Kingdom

Session WM-14: Real-world Applications
Wednesday, July 27, 2:30PM-4:30PM, Room: 204, Chair: Wesam Herbawi / Hidefumi Sawai

2:30PM Virtualized-Elastic-Regenerator Placement by Firefly Algorithm for Translucent Elastic Optical Networks [#16576]
Kenji Yamazaki, Haruna Matsushita and Masahiko Jinno
Kagawa University, Japan

2:50PM An Evolutionary Algorithm for the Vehicle Relocation Problem in Free Floating Carsharing [#16284]
Herbawi Wesam, Knoll Martin, Kaiser Marcus and Gruel Wolfgang
Daimler AG, Germany; Technical University of Munich, Germany

3:10PM Evolving local search heuristics for the integrated berth allocation and quay crane assignment problem [#17090]
Tamer El-boghdadly, Mohamed Bader-El-Den and Dylan Jones
University of Portsmouth, United Kingdom

3:30PM Towards High-Performance Global Air Transportation Networks Using Socioeconomic-Environmental Data [#16220]
Hidefumi Sawai and Aki-Hiro Sato
National Institute of Information and Communications Technology, Japan; Kyoto University, Japan
3:50PM A Weight-Aggregation Multi-Objective PSO Algorithm for Load Scheduling of PHEVs [#16610]
ShuWei Feng, Qi Kang, XiaoShuang Chen, MengChu Zhou, SiSi Li and Jing An
Tongji University, China; New Jersey Institute of Technology, United States of America; Shanghai Institute of Technology, China

4:10PM Using Different Substitution Matrices in a String-Matching Technique for Identifying Viral Polymorphic Malware Variants [#16305]
Vijay Naidu and Ajit Narayanan
Auckland University of Technology, New Zealand

Session WM-15: SS CEC-05B: Evolutionary Scheduling and Combinatorial Optimization
Wednesday, July 27, 2:30PM-4:30PM, Room: 205, Chair: Su Nguyen / Xiao-Min Hu

2:30PM A Memetic Algorithm With A Variable Block Insertion Heuristic for Single Machine Total Weighted Tardiness Problem with Sequence Dependent Setup Times [#16264]
M. Fatih Tasgetiren, Quan-Ke Pan, Yucel Ozturkoglu and Angela H. L Chen
Yasar University, Turkey; Huazhong University of Science and Technology, China; Taouyan Innovation Institute of Technology, Taiwan

2:50PM Minimizing Makespan in Multi-Factory Flow Shop Problem Using a Chemical Reaction Metaheuristic [#16723]
Hafewa Bargraoui, Olfa Belkahla Driss and Khaled Ghedira
High Institute of Management of Tunis, Tunisia; Higher Business School of Tunis, Tunisia

3:10PM An Effective DE-EDA for Permutation Flow-shop Scheduling Problem [#16684]
Zuo-cheng Li, Qingxin Guo and Lixin Tang
Institute of Industrial Engineering and Logistics Optimization, Northeastern University, China

3:30PM Memory-based Statistical Learning for The Travelling Salesman Problem [#16143]
Yong Xia and Changhe Li
Hubei Key Laboratory of Intelligent Geo-Information Processing, China University of Geosciences, Wuhan 430074, China, China

Session WM-16: SS CEC-42B: Special Session Associated with Competition on Bound Constrained Single Objective Numerical Optimization
Wednesday, July 27, 2:30PM-4:30PM, Room: 206, Chair: Ponnuthurai Nagaratnam Suganthan / Prakash Kotecha

2:30PM An Ensemble Sinusoidal Parameter Adaptation incorporated with L-SHADE for Solving CEC2014 Benchmark Problems [#16682]
Noor Awad, Mostafa Ali, Ponnuthurai Suganthan and Robert Reynolds
Nanyang Technological University, School of Electrical and Electronic Engineering, Singapore; Jordan University of Science and Technology, School of Computer Information Systems, Princess Sumayya University for Technology, King Hussein Faculty of Computing Sciences, Jordan; Wayne State University, College of Engineering, United States of America

2:50PM Testing United Multi-operator Evolutionary Algorithms-II on Single Objective Optimization Problems [#16757]
Saber Elsayed, Noha Hamza and Ruhul Sarker
University of New South Wales at Canberra, Australia

3:10PM Evaluation of Differential Evolution with Interaction Network on a Real-parameter Optimization Benchmark [#16963]
Pavel Kromer and Petr Gajdos
VSB - Technical University of Ostrava, Czech Republic

3:30PM Simultaneous Heat Transfer Search for Computationally Expensive Numerical Optimization [#17051]
Debasis Maharana and Prakash Kotecha
Indian Institute of Technology Guwahati, India

3:50PM Single Phase Multi-Group Teaching Learning Algorithm for Computationally Expensive Numerical Optimization (CEC 2016) [#16425]
Remya Kommadath, Sivadurgaprasad Chinta and Prakash Kotecha
Indian Institute of Technology Guwahati, India

4:10PM Reduced Yin-Yang-Pair Optimization and its Performance on the CEC 2016 Expensive Case [#16423]
Varun Punnathanam and Prakash Kotecha
Indian Institute of Technology Guwahati, India

Session WM-17: SS CEC-34A: Evolutionary Multi-objective Optimization
Wednesday, July 27, 2:30PM-4:30PM, Room: 207, Chair: Sanaz Mostaghim / Aimin Zhou

2:30PM Multi-Objective Differential Evolution for Automated Control of Industrial Process Input Material Composition incorporating Supply-side Fluctuations [#16026]
Arya Bhattacharya and Debjani Sambasivam
Mahindra Ecole Centrale, India; Tata Steel, India

2:50PM Common Properties of Scalable Multiobjective Problems and a New Framework of Test Problems [#17177]
Hiroyuki Masuda, Yusuke Nojima and Hisao Ishibuchi
Osaka Prefecture University, Japan

3:10PM Analysis and Comparison of Multi-objective Evolutionary Approaches on the Multi-Objective 1/0 Unit Commitment Problem [#17056]
Saul Zapotecas-Martinez, Sophie Jacquin, Hernan E. Aguirre and Kiyoshi Tanaka
SHINSHU University, Japan; INRIA Lille - Nord Europe, France; Shinshu University, Japan

3:30PM Sampling in Latent Space for a Multiobjective Estimation of Distribution Algorithm [#16590]
Bing Dong, Aimin Zhou and Guixu Zhang
East China Normal University, China

3:50PM A Ranking and Selection Strategy for Preference-based Evolutionary Multi-objective Optimization of Variable-Noise Problems [#17110]
Florian Siegmund, Amos H.C. Ng and Kalyanmoy Deb
Session WM-18: Workshop-03A: Key Challenges and Future Directions of Evolutionary Computation

Wednesday, July 27, 2:30PM-4:30PM, Room: 208-209, Chair: Yun Li / Bill Langdon

2:30PM Evolutionary Scheduling and Combinatorial Optimisation: Applications, Challenges, and Future Directions [#16575]
Su Nguyen, Yi Mei, Hui Ma, Aaron Chen and Mengjie Zhang
Hoa Sen University, Viet Nam; Victoria University of Wellington, New Zealand

2:50PM Evolutionary Computation for Feature Manipulation: Key Challenges and Future Directions [#16942]
Bing Xue and Mengjie Zhang
Victoria University of Wellington, New Zealand

3:10PM Genetic Improvement: A Key Challenge for Evolutionary Computation [#17175]
William B. Langdon and Gabriela Ochoa
UCL, Albania; sterling, UK, Belize

3:30PM Landscape Synergy in Evolutionary Multitasking [#26001]
Abhishek Gupta, Yew-Soon Ong, Da Bingshui, Liang Feng and Daniel Handoko
Nanyang Technological University, Singapore; Chongqing University, China; Singapore Management University, Singapore

Session WP-12: Evolved Neural Networks / Evolutionary Fuzzy Systems

Wednesday, July 27, 4:30PM-6:30PM, Room: 202, Chair: Katya Rodriguez / Oscar Castillo

4:30PM Multi-step-ahead Chaotic Time Series Prediction using Coevolutionary Recurrent Neural Networks [#16782]
Shamina Hussein, Rohitash Chandra and Anuraganand Sharma
The University of the South Pacific, Fiji; Artificial Intelligence and Cybernetics Research Group, Fiji

4:50PM Complexity-based speciation and genotype representation for neuroevolution [#16127]
Alexander Hadjiivanov and Alan Blair
School of Computer Science and Engineering, University of New South Wales, Sydney, Australia

Ravneil Nand
School of Computing Information and Mathematical Sciences, University of South Pacific, Suva, Fiji., Fiji

5:30PM Generalized Neuron (GN) and its application in DNA Microarray Classification [#17164]
Beatriz A Garro, Katya Rodriguez and Roberto A Vazquez
IIMAS-UNAM, Mexico; Universidad La Salle, Mexico

5:50PM Grey Wolf Optimizer with dynamic adaptation of parameters using fuzzy logic [#16266]
Luis Rodriguez, Oscar Castillo and Jose Soria
Tijuana Institute of Technology, Mexico

6:10PM Gene Expression Data Classification using Automatic Differential Evolution Based Algorithm [#16785]
Ranjita Das and Sriparna Saha
National Institute of Technology, Mizoram, India; Indian Institute of Technology, Patna, India

Wednesday, July 27, 4:30PM-6:30PM, Room: 203, Chair: David Camacho / Kai Qin

4:30PM Evolutionary Semi-supervised Rough Categorization of Brain Signals from a Wearable Headband [#16974]
Glavin Wiechert, Matt Triff, Zhixing Liu, Zhicheng Yin, Shuai Zhao, Ziyun Zhong, Runxing Zhaou and Pawan Lingras
Saint Mary's University, Canada

4:50PM A Novel Adaptive Density-based ACO Algorithm with Minimal Encoding Redundancy for Clustering Problems [#16405]
Esther Villar-Rodriguez, Antonio Gonzalez-Pardo, Javier Del Ser, Miren Nekane Bilbao and Sancho Salcedo-Sanz
TECNALIA, Spain; Basque Center for Applied Mathematics, Spain; TECNALIA and the University of the Basque Country UPV/EHU, Spain; University of the Basque Country UPV/EHU, Spain; Universidad de Alcala, Spain

5:10PM A Method for Building Predictive HSMMs in Interactive Environments [#16870]
Victor Rodriguez-Fernandez, Antonio Gonzalez-Pardo and David Camacho
Universidad Autonoma de Madrid, Spain

5:30PM Differential Evolution with Stochastic Fractal Search Algorithm for Global Numerical Optimization [#16652]
Noor Awad, Mostafa Ali, Ponnuthurai Suganthan and Edward Jaser
Nanyang Technological University, School of Electrical and Electronic Engineering, Singapore; Jordan University of Science and Technology, School of Computer Information Systems. Princess Sumayya University for Technology, King Hussein Faculty of Computing Sciences, Jordan; Princess Sumayya University for Technology, King Hussein Faculty of Computing Sciences, Jordan

5:50PM Adaptive CR Values with Fuzzy Inference System for Differential Evolution Algorithm [#16354]
Jing-Zhong Wang and Tsung-Ying Sun
National Dong Hwa University, Taiwan

6:10PM Differential Evolution with a Two-Stage Optimization Mechanism for Numerical Optimization [#16478]
Zhi-Zhong Liu, Yong Wang, Shengxiang Yang and Zixing Cai
School of Information Science and Engineering, Central South University, China; School of Computer Science and Informatics, De Montfort University, United Kingdom

Session WP-14: Memetic Computing, Multi-meme and Hybrid Algorithms
Wednesday, July 27, 4:30PM-6:30PM, Room: 204, Chair: Bo Liu / Jiarui Zhou

4:30PM  An Effective TLBO-Based Memetic Algorithm for Hypersonic Reentry Trajectory Optimization [#16064]
Xinghua Qu, Bo Liu, Ran Zhang and Huifeng Li
Astronautics School, Beihang University, China; Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China

4:50PM  A Simultaneous Perturbation Stochastic Approximation Enhanced Teaching-Learning based Optimization [#16166]
Ao Liu, Xudong Deng, Zeping Tong, Yongliang Luo and Bo Liu
Wuhan University of Science and Technology, China; Systems Engineering Research Institute, China; Academy of Mathematics and Systems Science, Chinese Academy of Sciences, China

5:10PM  Metabolomics Biomarker Discovery Using Multimodal Memetic Algorithm and Multivariate Mutual Information Based Feature Selection [#16182]
Jiarui Zhou, Zhen Ji, Zexuan Zhu and Shan He
Harbin Institute of Technology Shenzhen Graduate School, China; Shenzhen University, China; University of Birmingham, United Kingdom

5:30PM  A Memetic Algorithm Using Partial Solutions for Graph Coloring Problem [#16296]
Ziwei Zhuang, Suohai Fan, Hedong Xu and Jing Zheng
Jinan University, China

5:50PM  Energy Consumption Prediction for Steelmaking Production Using PSO-based BP Neural Network [#16663]
Yanyan Zhang, Shengnan Zhao and Lixin Tang
Institute of Industrial Engineering and Logistics Optimization, Northeastern University, China

6:10PM  A Multi-agent Genetic Algorithm for Local Community Detection by Extending the Tightest Nodes [#16499]
Peng Wang and Jing Liu
Key Laboratory of Intelligent Perception and Image Understanding of Ministry of Education, Xidian University, China

Session WP-15: Discrete and Combinatorial Optimization
Wednesday, July 27, 4:30PM-6:30PM, Room: 205, Chair: Roberto Santana / Saman Halgamuge

4:30PM  Maximal Nonlinearity in Balanced Boolean Functions with Even Number of Inputs, Revisited [#16975]
Stjepan Picek, Roberto Santana and Domagoj Jakobovic
KU Leuven, Belgium; University of the Basque Country, Spain; University of Zagreb, Croatia

4:50PM  Intelligent Scheduling in Flexible Job Shop Environments Based on Artificial Fish Swarm Algorithm with Estimation of Distribution [#16288]
Hongwei Ge and Liang Sun
Dalian University of Technology, China

5:10PM  Restricting the search space to boost Quantum Annealing performance [#16593]
Joanna Tomasik, Arpad Rimmel, Pierre Berge and Baptiste Cavarec
LRI/CentraleSupelec, France; CentraleSupelec, France

5:30PM  Iterated Local Search Algorithm for Clustering Wireless Sensor Networks. [#16625]
Muyiwa Olakanmi Oladimeji, Mikdam Turkey and Sandra Dudley
London South Bank University, United Kingdom

5:50PM Fast Algorithms Inspired by Physarum Polycephalum for Node Weighted Steiner Tree Problem with Multiple Terminals [#16191]
Yahui Sun and Saman Halgamuge
University of Melbourne, Australia

6:10PM A Discrete Bacterial Memetic Evolutionary Algorithm for the Traveling Salesman Problem [#16672]
T. Laszlo Koczy, Peter Foldesi and Boldizsar Tuu-Szabo
Szechenyi Istvan University, Gyor, Hungary; Budapest University of Technology and Economics, Budapest, Hungary, Hungary; Szechenyi Istvan University, Gyor, Hungary, Hungary

Session WP-16: SS CEC-20: When Evolutionary Computation Meets Data Mining
Wednesday, July 27, 4:30PM-6:30PM, Room: 206, Chair: Zhun Fan / Xinye Cai

4:30PM An Estimation of Distribution Algorithm Guided by Mean Shift [#16812]
Hui Fang, Aimin Zhou and Guixu Zhang
East China Normal University, China

4:50PM Classification Guided Differential Evolution [#16090]
Shiyan Shen, Wenyin Gong and Zhihua Cai
China University of Geosciences, China

5:10PM A Multi-phase Adaptively Guided Multiobjective Evolutionary Algorithm Based on Decomposition for Travelling Salesman Problem [#16913]
Ning Zhang, Xinye Cai and Zhun Fan
Nanjing University of Aeronautics and Astronautics, China; Shantou University, China

5:30PM A Decomposition based Multiobjective Evolutionary Algorithm with Classification [#16596]
Xi Lin, Qingfu Zhang and Sam Kwong
City University of Hong Kong, Hong Kong

5:50PM An Initialization Method for Grammatical Evolution Assisted by Decision Trees [#17080]
Igor Russo, Heder Bernardino, Carlos Borges and Helio Barbosa
Universidade Federal de Juiz de Fora (UFJJF), Brazil; Laboratorio Nacional de Computacao Cientifica (LNCC), Universidade Federal de Juiz de Fora (UFJJF), Brazil

6:10PM Evolutionary Multi-objective Optimization for Multi-view Clustering [#16009]
Bo Jiang, Feiyue Qiu, Shipin Yang and Liping Wang
Zhejiang University of Technology, China; Nanjing Tech University, China

Session WP-17: SS CEC-34B: Evolutionary Multi-objective Optimization / SS CEC-52: Hidden Complex Networks in Evolutionary Dynamics. Past, Present and Future
Wednesday, July 27, 4:30PM-6:30PM, Room: 207, Chair: Ivan Zelinka / Magdalena Metlicka

4:30PM Multi-objective Fitness-proportional Attraction Approach with Weights [#26027]
Patrick Laack, Heiner Zille and Sanaz Mostaghim
Otto-von-Guericke University Magdeburg, Germany

4:50PM Complex Network based Adaptive Artificial Bee Colony algorithm [#16634]
Magdalena Metlicka and Donald Davendra
VSB - Technical University of Ostrava, Czech Republic; Central Washington University,
United States of America

5:10PM Complex Network Analysis in PSO as an Fitness Landscape Classifier [#16382]
Michal Pluhacek, Roman Senkerik, Adam Viktorin, Jakub Janostik and Donald Davendra
Tomas Bata University in Zlin, Czech Republic; VSB-Technical University of Ostrava, Czech Republic

5:30PM Complex Network Analysis based Adaptive Differential Evolution [#16633]
Magdalena Metlicka and Donald Davendra
VSB - Technical University of Ostrava, Czech Republic; Central Washington University, United States of America

5:50PM On the Influence of Different Randomization and Complex Network Analysis for Differential Evolution [#17068]
Roman Senkerik, Adam Viktorin, Michal Pluhacek, Jakub Janostik and Donald Davendra
Tomas Bata University in Zlin, Czech Republic; Computer Science Department, Central Washington University, United States of America

6:10PM Small-World Hidden in Differential Evolution [#16258]
Lenka Skanderova, Tomas Fabian and Ivan Zelinka
VSB-TU Ostrava, Czech Republic

Session WP-18: Workshop-03B: Key Challenges and Future Directions of Evolutionary Computation
Wednesday, July 27, 4:30PM-6:30PM, Room: 208-209, Chair: Yun Li / Bill Langdon

Session HA-12: SS CEC-05C: Evolutionary Scheduling and Combinatorial Optimization
Thursday, July 28, 8:00AM-10:00AM, Room: 202, Chair: Su Nguyen / Yuping Wang

8:00AM Improving Job Shop Dispatching Rules Through Terminal Weighting and Adaptive Mutation in Genetic Programming [#16994]
Michael Riley, Mei Yi and Zhang Mengjie
Victoria University of Wellington, New Zealand

8:20AM Maximising Total Weighted Number of Activities for Reservation with Slack [#26012]
Su Nguyen, Mengjie Zhang and Kay Chen Tan
Hoa Sen University, Viet Nam; Victoria University of Wellington, New Zealand; National University of Singapore, Singapore

8:40AM Multi-objective Scheduling for Divisible Load in Heterogeneous Distributed System [#16238]
Hejun Xuan, Yuping Wang, Shanshan Hao and Xiaoli Wang
Computer Science and Technology, Xidian University, China

9:00AM A Memetic Algorithm-Based Indirect Approach to Web Service Composition [#16439]
Alexandre Sawczuk da Silva, Yi Mei, Hui Ma and Mengjie Zhang
Victoria University of Wellington, New Zealand

Xiao-long Zheng and Ling Wang
Department of Automation, Tsinghua University, China

9:40AM A Discrete Artificial Bee Colony Algorithm for the Permutation Flowshop Scheduling Problem with Sequence-Dependent Setup Times [#16911]
Session HA-13: Estimation of Distribution Algorithms

Thursday, July 28, 8:00AM-10:00AM, Room: 203, Chair: John McCall / Amin Nikanjam

8:00AM  How effective is Cauchy-EDA in high dimensions? [#16557]
Momodou L. Sanyang, Robert J. Durrant and Ata Kaban
University of Birmingham, United Kingdom; University of Waikato, New Zealand

8:20AM  BPGA-EDA for the Multi-Mode Resource Constrained Project Scheduling Problem [#16709]
Mayowa Ayodele, John McCall and Olivier Regnier-Coudert
Robert Gordon University, United Kingdom

8:40AM  Estimation Multivariate Normal Algorithm with Thresholded Convergence [#16265]
Dania Tamayo-Vera, Antonio Bolufe-Rohler and Stephen Chen
University of Havana, Cuba; York University, Canada

9:00AM  PASCAL: An EDA for Parameterless Shape-Independent Clustering [#16904]
Henry Cagnini and Rodrigo Barros
Pontificia Universidade Catolica do Rio Grande do Sul, Brazil

9:20AM  Enhance Continuous Estimation of Distribution Algorithm by Variance Enlargement and Reflecting Sampling [#16958]
Zhigang Ren, Chenlong He, Dexing Zhong, Shanshan Huang and Yongsheng Liang
Xi'an Jiaotong University, China

9:40AM  Multi-Structure Problems: Difficult Model Learning in Discrete EDAs [#17091]
Nikanjam Amin and Karshenas Hossein
K.N.Toosi University of Technology, Iran; University of Isfahan, Iran

Session HA-14: SS CDCI-09: Computational Intelligence for Economics and Finance / Finance and Economics

Thursday, July 28, 8:00AM-10:00AM, Room: 204, Chair: Okan Duru / Piotr Lipinski

8:00AM  Equity Price Direction Prediction For Day Trading: Ensemble Classification Using Technical Analysis Indicators With Interaction Effects [#16134]
Dirk Van den Poel, Celine Chesterman, Maxim Koppen and Michel Ballings
Ghent University, Belgium; University of Tennessee at Knoxville, United States of America

8:20AM  Stationarity Control in the Fuzzy Time Series and Neural Network Algorithms [#17183]
Okan Duru and Matthew Butler
Texas A and M University at Galveston, United States of America; Amazon Corporation, United States of America

8:40AM  Combining Cloud Computing, Machine Learning and Heuristic Optimization for Investment Opportunities Forecasting [#16585]
Zhixi Li, Vincent Tam and Lawrence Yeung
HKU, Hong Kong

9:00AM  Polarity propagation of financial terms for market trend analyses using news articles [#16325]
Tomoki Ito, Kiyoshi Izumi, Kota Tsubouchi and Tatsuo Yamashita
The University of Tokyo, Japan; Yahoo! JAPAN Research, Japan
9:20AM Feature Engineering for Improving Financial Derivatives-based Rainfall Prediction [#16744]
Sam Cramer, Michael Kampouridis and Alex Freitas
University of Kent, United Kingdom

9:40AM Multiobjective Optimization of Frequent Pattern Models in Ultra-High Frequency Time Series: Stability versus Universality [#17033]
Krzysztof Michalak, Adrian Lancucki and Piotr Lipinski
Department of Information Technologies, Institute of Business Informatics, Wroclaw University of Economics, Poland; Computational Intelligence Research Group, Institute of Computer Science, University of Wroclaw, Poland

Thursday, July 28, 8:00AM-10:00AM, Room: 205, Chair: Saber Elsayed / Ana Maria Madureira

8:00AM Iterated Prisoner's Dilemma with Extortionate Zero-Determinant Strategies and Random-Memory Opponents [#16935]
Franklin Kenter and Emily Meigs
Rice University, United States of America

8:20AM A Co-evolutionary approach for optimal bidding strategy of multiple electricity suppliers [#16979]
Md Forhad Zaman, Dr Saber Mohammed Elsayed, A/Prof. Tapabrata Ray and Prof. Ruhul A. Sarker
UNSW Canberra, Australia

8:40AM A Pareto Non-Dominated Solution Approach for the Vehicle Routing Problem with Multiple Time Windows [#16061]
Slim Belhaiza and Rym M'Hallah
King Fahd University of Petroleum and Minerals, Saudi Arabia; Kuwait University, Kuwait

9:00AM What Cost Teamwork: Quantifying Situational Awareness and Computational Requirements in a Proto-Team via Multi-Objective Evolution [#16743]
Michael Barlow and Erandi Lakshika
University of New South Wales, Australia

9:20AM Leveraging Evolutionary Algorithms for Dynamic Multi-Objective Optimization Scheduling of Multi-tenant Smart Home Appliances [#16868]
Walid Trabelsi, Radhia Azzouz, Slim Bechikh and Lamjed Ben Said
International Business Machines Corporation, Cork, Ireland; SOIE laboratory, University of Tunis, Tunisia

Session HA-16: SS CEC-44: Large Scale Global Optimization
Thursday, July 28, 8:00AM-10:00AM, Room: 206, Chair: Daniel Molina / Shahryar Rahnamayan

8:00AM CBCC3 -- A Contribution-Based Cooperative Co-evolutionary Algorithm with Improved Exploration/Exploitation Balance [#16424]
Mohammad Nabi Omidvar, Borhan Kazimipour, Xiaodong Li and Xin Yao
University of Birmingham, United Kingdom; RMIT University, Australia

8:20AM Multiple Parents Guided Differential Evolution for Large Scale Optimization [#16488]
Qiang Yang, Han-Yu Xie, Wei-Neng Chen and Jun Zhang
South China University of Technology, and Sun Yat-sen University, China; Sun Yat-sen University, China; South China University of Technology, China

8:40AM Center-Based Initialization of Cooperative Co-evolutionary Algorithm for Large-scale Optimization [#16075]
Sedigheh Mahdavi, Rahnamayan Shahryar and Deb Kalyanmoy
Department of Electrical, Computer, and Software Engineering, University of Ontario Institute of Technology (UOIT), Oshawa, Canada; Department of Electrical and Computer Engineering, Michigan State University East Lansing, USA, United States of America

9:00AM 100 Million Dimensions Large-Scale Global Optimization Using Distributed GPU Computing [#16334]
Alberto Cano and Carlos Garcia-Martinez
Virginia Commonwealth University, United States of America; University of Cordoba, Spain

9:20AM A Coral Reefs Optimization Algorithm with Substrate Layers and Local Search for Large Scale Global Optimization [#16768]
Sancho Salcedo-Sanz, Carlos Camacho-Gomez, Daniel Molina and Francisco Herrera
Universidad de Alcala, Spain; Universidad de Cadiz, Spain; Universidad de Granada, Spain

Session HA-17:
Thursday, July 28, 8:00AM-10:00AM, Room: 207, Chair: Bing Xue / Saul Zapotecas-Martinez

8:00AM Improving Classification on Images by Extracting and Transferring Knowledge in Genetic Programming [#16473]
Muhammad Iqbal, Mengjie Zhang and Bing Xue
Victoria University of Wellington, New Zealand

8:20AM A Comprehensive Analysis on Reusability of GP-Evolved Job Shop Dispatching Rules [#16462]
Yi Mei and Mengjie Zhang
Victoria University of Wellington, New Zealand

8:40AM Further Investigation on Genetic Programming with Transfer Learning for Symbolic Regression [#16869]
Edward Haslam, Bing Xue and Mengjie Zhang
Victoria University of Wellington, New Zealand

9:00AM Dividing Rectangles Attack Multi-Objective Optimization [#16355]
Abdullah Al-Dujaili and Suresh Sundaram
Nanyang Technological University, Singapore

9:20AM A Memetic Algorithm Based on MOEA/D for Near Space Communication System Deployment Optimization on Tide User Model [#16501]
Zhao Wang, Maoguo Gong, Yu Lei, Shanfeng Wang and Linzhi Su
Xidian University, China; Northwestern Polytechnical University, China

Session HA-18: SS CDCI-13A: Computational Intelligence in Power System
Thursday, July 28, 8:00AM-10:00AM, Room: 208-209, Chair: Kumarappan Narayanan / Anupam Trivedi

8:00AM Ensemble Classifier Selection Using Multi-Objective PSO for Fault Diagnosis of Power Transformers [#16401]
Abdolrahman Peimankar, Stephen Weddell, Thahirah Jalal and Andrew Lapthorn
School of Electrical and Computer Engineering, University of Canterbury, New Zealand; Unison Networks Limited, New Zealand

8:20AM Optimal Placement of Distributed Generation in Micro-grids with Binary and Integer-encoding Evolutionary Algorithms [#16555]
Carlos Camacho-Gomez, Ricardo Mallol-Poyato, Silvia Jimenez-Fernandez, Laura Cornejo-Bueno and Sancho Salcedo-Sanz
Universidad de Alcala, Spain

8:40AM Feature Selection in Solar Radiation Prediction using Bootstrapped SVRs [#16594]
Garcia Hinde Oscar, Gomez Verdejo Vanessa, Martinez Ramon Manel, Salcedo Sanz Sancho, Jimenez Fernandez Silvia, Casanova Mateo Carlos and Sanz Justo Julia
Department of Signal Processing and Communications, Universidad Carlos III, Madrid, Spain; Department of Electrical and Computing Engineering, The University of New Mexico, NM, United States of America; Department of Signal Processing and Communications, Universidad de Alcala, Madrid, Spain; Department of Civil Engineering: Construction, Infrastructure and Transport, UPM, Spain; LATUV, Universidad de Valladolid, Valladolid, Spain

9:00AM Optimal Charging Scheduling of Plug-in Electric Vehicles for Maximizing Penetration within a Workplace Car Park [#16664]
Rahul Mehta, Dipti Srinivasan and Anupam Trivedi
National University of Singapore, Singapore

9:20AM A Novel Hybrid Method for Planning and Allocation of DGs in Medium Voltage Networks considering Voltage Regulation and Relay Coordination [#16761]
Dhivya Sampath Kumar, Dipti Srinivasan and Thomas Reindl
National University of Singapore, Singapore; Solar Energy Research Institute Singapore, Singapore

9:40AM A Search Group Algorithm for Optimal Voltage Regulation in Power Systems [#16998]
Giovanni Acampora, Davide Caruso, Alfredo Vaccaro and Autilia Vitiello
Nottingham Trent University, United Kingdom; University of Sannio, Italy; University of Salerno, Italy

Plenary Talk HPlen: IEEE CEC Plenary
Thursday, July 28, 1:00PM-2:00PM, Room: Ballroom C, Speaker: Graham Kendall

Session HM-12: Multiobjective Optimization
Thursday, July 28, 2:30PM-4:30PM, Room: 202, Chair: Beatrice Lazzerini / Timothy Havens

2:30PM Multi-Objective Optimization Approach to Stock Market Technical Indicators [#16636]
Ricardo de Almeida, Gilberto Reynozo-Meza and Maria Teresinha Arns Steiner
Pontificia Universidade Catolica do Parana, Brazil

2:50PM Pareto-Based Many-Objective Optimization using Knee Points [#16359]
Justin Maltese, Beatrice Ombuki-Berman and Andries Engelbrecht
Brock University, Canada; University of Pretoria, South Africa

3:10PM Coverage Optimization in a Terrain-Aware Wireless Sensor Network [#17055]
Husam Sweidan and Timothy Havens
Michigan Technological University, United States of America

3:30PM A Semi-Supervised Learning-Aided Evolutionary Approach to Occupational Safety Improvement [#16982]
Marco Cococcioni, Beatrice Lazzerini and Francesco Pistolesi
Department of Information Engineering, Italy

3:50PM Evolutionary Algorithm with Parallel Evaluation Strategy Using Constrained Penalty-based
Boundary Intersection [#16751]
Taiga Kato and Koji Shimoyama
Institute of Fluid Science, Tohoku University, Japan

4:10PM A Decomposition-based Approach for Knee Solution Approximation in Multi-objective
Optimization [#16821]
Sufian Sudeng and Naruemon Wattanapongsakorn
King Mongkut's University of Technology Thonburi, Thailand

Algorithms
Thursday, July 28, 2:30PM-4:30PM, Room: 203, Chair: Marley Vellasco / Shi Cheng

2:30PM Large Scale Continuous EDA Using Mutual Information [#16598]
Qi Xu, Momodou L. Sanyang and Ata Kaban
University of Birmingham, United Kingdom

2:50PM SMS-EDA-MEC: Extending Copula-based EDAs to Multi-Objective Optimization [#17115]
Luis Marti, Harold D. de Mello Jr., Nayat Sanchez-Pi and Marley Vellasco
Universidade Federal Fluminense, Brazil; Universidade do Estado do Rio de Janeiro, Brazil;
Universidade de Estado do Rio de Janeiro, Brazil; Pontifical Catholic University of Rio de
Janeiro, Brazil

3:10PM On the Quality of Graphs Generated by Swarm Algorithms [#16799]
Matthias Becker
University Hannover, FG Simulation, Germany

3:30PM A Study of Constraint-Handling Techniques in Brain Storm Optimization [#16415]
Adriana Cervantes-Castillo and Efren Mezura-Montes
University of Veracruz, Mexico

3:50PM Convergence Analysis of Brain Storm Optimization Algorithm [#16095]
Ziwei Zhou, Haibin Duan and Yuhui Shi
Beihang University, China; Xi'an Jiaotong-Liverpool University, China

Session HM-14: Multi-objective Evolutionary Algorithms
Thursday, July 28, 2:30PM-4:30PM, Room: 204, Chair: Adriana Menchaca / Jinliang Ding

2:30PM Deltap-MOEA: A New Multi-Objective Evolutionary Algorithm Based on the Deltap Indicator
[#26016]
Adriana Menchaca-Mendez, Carlos Hernandez and Carlos Coello Coello
CINVESTAV-IPN, Mexico

2:50PM Multiobjective Approach to the Vehicle Routing Problem with Demand Responsive Transport
[#16222]
Renan Santos Mendes, Dangelo Silva Miranda, Elizabeth Fialho Wanner, Joao Fernando M
Sarubbi and Flavio V. Cruzeiro Martins
CEFET-MG, Brazil

3:10PM Reference Point Based Prediction for Evolutionary Dynamic Multiobjective Optimization
Session HM-15: SS CEC-06: Evolutionary Feature Selection and Construction
Thursday, July 28, 2:30PM-4:30PM, Room: 205, Chair: Bing Xue / Ben Niu

2:30PM Improving Generalisation of Genetic Programming for High-Dimensional Symbolic Regression with Feature Selection [#16192]
Qi Chen, Bing Xue, Ben Niu and Mengjie Zhang
School of Engineering and Computer Science Victoria University of Wellington, New Zealand; College of Management, Shenzhen University, China

2:50PM A PSO Based Hybrid Feature Selection Algorithm for High-Dimensional Classification [#16404]
Binh Tran, Mengjie Zhang and Bing Xue
Victoria University of Wellington, New Zealand

3:10PM Bacterial-Inspired Feature Selection Algorithm and Its Application on Fault Diagnosis of Complex Structures [#16666]
Hong Wang, Jing Xingjian and Ben Niu
The Hong Kong Polytechnic University, Hong Kong; Shenzhen University, China

Laura Cornejo-Bueno, Adrian Aybar-Ruiz, Silvia Jimanez-Fernandez, Enrique Alexandre, Jose Carlos Nieto-Borge and Sancho Salcedo-Sanz
Universidad de Alcala, Spain

3:50PM Enhancing Discrimination Power with Genetic Feature Construction: A Grammatical Evolution Approach [#17003]
Patricia Miquilini, Vinicius Melo, Rodrigo Barros and Marcio Basgalupp
ICT-UNIFESP, Brazil; PUCRS, Brazil

4:10PM A Compact Firefly Algorithm for the Variable Selection Problem in Pharmaceutical Ingredient Determination [#16275]
Anderson Soares, Lauro De Paula, Heber Nogueira, Telma De Lima and Clarimar Coelho
Universidade Federal de Goias, Brazil

Session HM-16: SS CEC-04A: Evolutionary Computer Vision
Thursday, July 28, 2:30PM-4:30PM, Room: 206, Chair: Mengjie Zhang / Aldo Marquez-Grajales

2:30PM Figure-ground Image Segmentation using Genetic Programming and Feature Selection [#16530]
2:50PM Evolutionary Algorithms for Classification of Mammographic Densities using Local Binary Patterns and Statistical Features [#16737]
Francine Burling-Claridge, Muhammad Iqbal and Mengjie Zhang
Victoria University of Wellington, New Zealand

3:10PM Automatic Blended Tone Mapping through Evolutionary Optimization [#16984]
Xihe Gao, Stephen Brooks and Dirk V. Arnold
Dalhousie University, Canada

3:30PM Cervical Image Segmentation Using Active Contours and Evolutionary Programming Over Temporary Acetowhite Patterns [#16990]
Aldo Marquez-Grajales, Hector-Gabriel Acosta-Mesa, Efren Mezura-Montes and Rodolfo Hernandez-Jimenez
Laboratorio Nacional en Informatica Avanzada, Mexico; University of Veracruz, Mexico; Private Practice, Mexico

3:50PM An Evolutionary Algorithm for Depth Image Based Camera Pose Estimation in Indoor Environments [#16952]
Ang Lu and Dirk V. Arnold
Dalhousie University, Canada

4:10PM A Hybrid Genetic Algorithm for Color Image Denoising [#17085]
Daniel Fajardo-Delgado, Maria Guadalupe Sanchez, Jesus Ezequiel Molinar-Solis, Jose Alberto Fernandez-Zepeda, Vicente Vidal and Gumerindo Verdu
Instituto Tecnologico de Cd. Guzman, Mexico; Centro de Investigacion Cientifica y de Educacion Superior de Ensenada, Mexico; Universitat Politencica de Valencia, Spain

Session HM-17: SS CEC-36B: Evolutionary Computation in Architectural Design
Thursday, July 28, 2:30PM-4:30PM, Room: 207, Chair: Fatih Tasgetiren / Onur Dursun

2:30PM A Computational Intelligence Decision-Support Environment for Architectural and Building Design: CIDEA [#17020]
Ioannis Chatzikonstantinou
Yasar University, TU Delft, Turkey

2:50PM Optimizing Natural Ventilation Strategy in Existing Buildings using Differential Evolution: Case of Architectural Studio Classrooms [#16991]
Damla Elbi, Huma Fulya Ekim and Onur Dursun
Yasar University, Turkey

3:10PM Further Note on the Probabilistic Constraint Handling [#16618]
Ozer Ciftcioglu, Michael S. Bittermann and Rituparna Datta
Delft University of Technology, Netherlands; Maltepe University, Turkey; Indian Institute of Technology, Kanpur, India

3:30PM Visual Perception with Color for Architectural Aesthetics [#16614]
Michael S. Bittermann and Ozer Ciftcioglu
Maltepe University, Turkey; Delft University of Technology, Netherlands

3:50PM Multi-Objective Optimization For Shading Devices in Buildings By Using Evolutionary Algorithms [#16242]
Ayca Kirimtat, Basak Kundakci Koyunbaba, Ioannis Chatzikonstantinou, Sevil Sariyildiz and...
Ponnuthurai Nagaratnam Suganthan
Yasar University, Turkey; Nanyang Technological University, Singapore

4:10PM Effects of Varying Input and Output Points on New Aisle Designs in Warehouses [#16961]
Omer Ozturkoglu
Yasar University, Turkey

Session HM-18: SS CDCI-13B: Computational Intelligence in Power System / SS CEC-45: Evolutionary Computing Application in Hardware
Thursday, July 28, 2:30PM-4:30PM, Room: 208-209, Chair: Helton Alves / Andy M. Tyrrell

2:30PM Optimal Placement of Capacitor Banks in Distorted Electrical Distribution Network Based on a Constrained Multi-objective Immune Algorithm. [#17032]
Helton Alves
IFMA, Brazil

2:50PM A Multiobjective Evolutionary Algorithm based on Decomposition for Unit Commitment Problem with Significant Wind Penetration [#17122]
Anupam Trivedi, Dipti Srinivasan, Kunal Pal and Thomas Reindl
National University of Singapore, Singapore

3:10PM Harmony Search and Virus Optimization Algorithm for Multi-Objective Combined Economic Energy Dispatching Problems [#16873]
Yun-Chia Liang and Josue Rodolfo Cuevas Juarez
Yuan Ze University, Taiwan; Yuan Ze University, MasterWork AoiTek Tech Corp. Ltd., Taiwan

3:30PM Optimal Installation of Multiple DG Units Using Competitive Swarm Optimizer (CSO) Algorithm [#16398]
Arulraj R. and Kumarappan N.
Annamalai University, India

3:50PM Drag Force Fault Extension to Evolutionary Model Consistency Checking for a Flapping-Wing Micro Air Vehicle [#16967]
John Gallagher, Monica Sam, Sanjay Boddhu, Eric Matson and Garrison Greenwood
Wright State University, United States of America; Purdue University, United States of America; Portland State University, United States of America

Session HP-12: Multiobjective Optimization / Learning Classifier Systems
Thursday, July 28, 4:30PM-6:30PM, Room: 202, Chair: Amilkar Yudier Puris Ceréres / Anis Yazidi

4:30PM Improving the IWFG Algorithm for Calculating Incremental Hypervolume [#16019]
Wesley Cox and Lyndon While
The University of Western Australia, Australia

4:50PM An effective PSO-TLBO algorithm for multi-objective optimization [#16483]
Tingli Cheng, Minyou Chen, Peter J. Fleming, Zhihe Yang and Shaojun Gan
School of Electrical Engineering, Chongqing University, China; Department of Automatic Control and System Engineering, University of Sheffield, United Kingdom; School of Electronics, Electrical Engineering and Computer Science, Queens University Belfast, United Kingdom

5:10PM Learning Bayesian network by a Mesh of points [#16154]
Oviedo Byron, Puris Amilkar, Moreira Luis, Moral Serafin and Novoa Pavel
UTEQ, Ecuador; UGR, Spain

5:30PM Interpolation-based Classifier Generation in XCSF [#16931]
Anthony Stein, Christian Eymueller, Dominik Rauh, Sven Tomforde and Joerg Haehner
Organic Computing Group, University of Augsburg, Institute of Computer Science, Germany

5:50PM Distributed Learning Automata for Solving a Classification Task [#16946]
Goodwin Morten, Yazidi Anis and Moller Tore
University of Agder, Norway; Oslo and Akershus University College, Norway

6:10PM An XCS-based Algorithm for Multi-Objective Reinforcement Learning [#17157]
Xiu Cheng, Gang Chen and Mengjie Zhang
School of Engineering and Computer Science, Victoria University of Wellington, New Zealand

Session HP-13: SS CEC-14: Fireworks Algorithm for Its Application on Big-Data
Thursday, July 28, 4:30PM-6:30PM, Room: 203, Chair: Ying Tan / Milan Tuba

4:30PM Enhancing Interaction in the Fireworks Algorithm by Dynamic Resource Allocation and Fitness-Based Crowdedness-Avoiding Strategy [#16186]
Junzhi Li and Ying Tan
Peking University, China

4:50PM Route Planning in a New Tourist Recommender System: a Fireworks Algorithm Based Approach [#16485]
Hui Ding, Liangjun Ke and Zihao Geng
State Key Laboratory for Manufacturing System Engineering Systems Engineering Institute Xi’an Jiaotong University, China; School of Computer and Information Technology, Beijing Jiaotong University, China

5:10PM Fireworks algorithm for the satellite link scheduling problem in the navigation constellation [#16696]
Tianjiao Zhang, Liangjun Ke, Jing Li, Jisheng Li, Zexi Li and Jingqi Huang
Xi’an Jiaotong university, China; State Key Laboratory of Astronautic Dynamics, China

5:30PM Fireworks Algorithm Applied to Wireless Sensor Networks Localization Problem [#17009]
Aleksandra Arsic, Milan Tuba and Milos Jordanski
University of Belgrade, Serbia and Montenegro; Jonh Naisbitt University, Serbia and Montenegro

5:50PM Enhancing Fireworks Algorithms for Dynamic Optimization Problems [#16960]
Hakan Pekdemir and Haluk Topcuoglu
Marmara University, Turkey

6:10PM Fuzzy FWA with dynamic adaptation of parameters [#16416]
Juan Barraza, Patricia Melin, Fevrier Valdez and Claudia Gonzalez
Tijuana Institute of Technology, Mexico

Session HP-14: Differential Evolution
Thursday, July 28, 4:30PM-6:30PM, Room: 204, Chair: Ji Qiang / Aluizio Araujo

4:30PM Tuning of an Adaptive Unified Differential Evolution Algorithm for Global Optimization [#16738]
Ji Qiang, Chad Mitchell and Albert Qiang
Lawrence Berkeley National Laboratory, United States of America; Campolindo High School,
United States of America

4:50PM Searching a Probabilistic Model for Differential Evolution Population [#16837]
Elaine Guerrero, Wagner Silva and Aluizio Araujo
Federal University of Pernambuco, Brazil

5:10PM Enhancing Exploration in Differential Evolution via Exponential Recombination [#26036]
Qiu Xin, Xu Jianxin and Tan Kay Chen
NUS Graduate School for Integrative Sciences and Engineering, National University of Singapore, Singapore; Department of Electrical and Computer Engineering, National University of Singapore, Singapore

5:30PM QUasi-Affine TRansformation Evolutionary (QUATRE) Algorithm: A Parameter-reduced Differential Evolution Algorithm for Optimization Problem [#16234]
Zhenyu Meng and Jeng-Shyang Pan
Harbin Institute of Technology Shenzhen Graduate School, China; Harbin Institute of Technology Shenzhen Graduate School; Fujian University of Technology, China

5:50PM Enhancing Distributed Differential Evolution with a Space-Driven Topology [#16910]
Yong-Feng Ge, Wei-Jie Yu, Jing-jing Li, Zhi-Wen Yu and Jun Zhang
Sun Yat-sen University, China; South China Normal University, China; South China University of Technology, China

6:10PM An Opposition-Based Self-adaptive Differential Evolution with Decomposition for Solving the Multiobjective Multiple Salesman Problem [#17186]
Jin Kiat Chong and Xin Qiu
National University of Singapore, Singapore

Session HP-15: Genetic Algorithms / SS CEC-49: Genetic Improvement of Software + Search-Based Software Engineering (GI+SBSE)
Thursday, July 28, 4:30PM-6:30PM, Room: 205, Chair: João Bertini / Markus Wagner

4:30PM A Genetic Algorithm for Improving the Induction of Attribute-based Decision Graph Classifiers [#16706]
João Bertini and Maria Nicoletti
DC/UFSCar, Brazil; DC/UFSCar and FACCAMP, Brazil

4:50PM An Empirical Study of Crossover and Mass Extinction in a Genetic Algorithm for Pathfinding in a Continuous Environment [#17065]
David Mathias and Vincent Ragusa
Florida Southern College, United States of America

5:10PM A Multi-Population Memetic Algorithm for Dynamic Shortest Path Routing in Mobile Ad-hoc Networks [#17150]
Ayad Turky, Nasser R Sabar and Andy Song
School of Computer Science and Information Technology, RMIT University, Australia

5:30PM Flare Prediction by CBR and GA integrated SVM [#16152]
Yukiko Yamamoto, Setsuo Tsuruta, Takayuki Muranushi, Yuko Hada Muranushi, Syoji Kobashi, Yoshiyuki Mizuno and Rainer Knauf
Tokyo Denki University, Japan; RIKEN Advanced Institute for Computational Science, Japan; Kyoto University, Japan; University of Hyogo, Japan; Kyoto Women's University, Japan; Ilmenau University of Technology, Germany

5:50PM Product Selection Based on Upper Confidence Bound MOEA/D-DRA for Testing Software
Product Lines [#16364]
Thiago Ferreira, Josiel Kuk, Aurora Pozo and Silvia Vergilio
Federal University of Parana, Brazil

6:10PM Automatic Lock-free Parallel Programming on Multi-core Processors [#16921]
Gopinath Chennupati, R. Muhammad Atif Azad and Conor Ryan
University of Limerick, Ireland

Session HP-16: SS CEC-04B: Evolutionary Computer Vision / SS CEC-03: Nature-Inspired Constrained Single- and Many-Objective Optimization
Thursday, July 28, 4:30PM-6:30PM, Room: 206, Chair: Efren Mezura-Montes / Dymitr Ruta

4:30PM Object-tracking based on Particle Filter using Particle Swarm Optimization with Density Estimation [#16179]
Gongyi Xia and Simone Ludwig
North Dakota State University, United States of America

4:50PM Cost Effective, Scalable Design of Indoor Distributed Antenna Systems Based on Particle Swarm Optimization and Prufer Strings [#16867]
Dina Y. Atia, Dymitr Ruta, Kin Poon, Anis Ouali and A. F. Isakovic
Khalifa University, VSAP, United Arab Emirates; EBTIC, Khalifa University, United Arab Emirates; Khalifa University, KSRC, United Arab Emirates

5:10PM Towards an Improvement of Variable Interaction Identification for Large-Scale Constrained Problems [#16493]
Adan-Enrique Aguilar-Justo and Efren Mezura-Montes
University of Veracruz, Mexico

5:30PM A Comparative Study of Constraint-Handling Techniques in Evolutionary Constrained Multiobjective Optimization [#16447]
Jia-Peng Li, Yong Wang, Shengxiang Yang and Zixing Cai
School of Information Science and Engineering, Central South University, China; School of Computer Science and Informatics, De Montfort University, United Kingdom

5:50PM micro-JADE-varepsilon: Micro adaptive differential evolution to solve constrained optimization problems [#17081]
Aldo Marquez-Grajales and Efren Mezura-Montes
University of Veracruz, Mexico

6:10PM Enhanced Multi-operator Differential Evolution for Constrained Optimization [#26017]
Saber Elsayed, Ruhul Sarker and Carlos Coello Coello
University of New South Wales at Canberra, Australia; CINVESTAV-IPN, Mexico

Session HP-17: SS CEC-36C: Evolutionary Computation in Architectural Design / Ant Colony Optimization
Thursday, July 28, 4:30PM-6:30PM, Room: 207, Chair: Essamudin Ebrahim / Rolf Dornberger

4:30PM Impacts of Problem Scale and Sampling Strategy on Surrogate Model Accuracy: An Application of Surrogate-based Optimization in Building Design [#17012]
Ding Yang, Yimin Sun, Danilo di Stefano, Michela Turrin and Sevil Sariyildiz
TU Delft / South China University of Technology, China; South China University of Technology, China; ESTECO, Italy; TU Delft / South China University of Technology,
Netherlands; TU Delft / Yasar University, Netherlands

4:50PM Optimizing Wall Insulation Material Parameters in Renovation Projects using NSGA-II [#16987]
Hizir Gokhan Uyduran, Orcun Koral Iseri, Yarkin Ustunes and Onur Dursun
Yasar University, Turkey

5:10PM fairGhosts - Ant Colony Controlled Ghosts for Ms. Pac-Man [#16130]
Iris Hunkeler, Fabian Schaer, Rolf Dornberger and Thomas Hanne
University of Applied Sciences and Arts Northwestern Switzerland, Switzerland

5:30PM Ant-Colony Optimization Control of Brushless-DC Motor Driving a Hybrid Electric-Bike and Fed from Photovoltaic Generator [#16502]
Essamudin Ebrahim
electronics Research institute, Egypt

5:50PM Exploratory Path Planning Using the Max-Min Ant System Algorithm [#16917]
Valeria Santos, Fernando Otero, Colin Johnson, Fernando Osorio and Claudio Toledo
University of Sao Paulo, Brazil; University of Kent, United Kingdom

6:10PM A Hybrid ACO Algorithm Based on Bayesian Factorizations and Reinforcement Learning for Continuous Optimization [#16360]
Qishuai Liu and Qing Hui
University of Nebraska-Lincoln, United States of America

Session HP-18: SS CDCI-19: Computational Intelligence in Biometrics and Biometrics Applications
SS CEC-29: Evolutionary Computation for Computational Biology
Thursday, July 28, 4:30PM-6:30PM, Room: 208-209, Chair: Qinghan Xiao / Anirban Mukhopadhyay

4:30PM Sparse Representation Classification based on Difference Subspace [#16259]
Qi Zhu, Qingxiang Feng, Jiaohuang Huang and Dan Zhang
College of Computer Science and Technology, Nanjing University of Aeronautics and Astronautics, China; Shenzhen Graduate School, Harbin Institute of Technology, China

4:50PM Discriminative Sparsity Preserving Graph Embedding [#16303]
Jianping Gou, Lan Du, Keyang Cheng and Yingfeng Cai
JiangSu University, China; Monash University, Australia

5:10PM Multispectral Hand Recognition Using the Kinect v2 Sensor [#16432]
Steven Samoi and Svetlana Yanushkevich
University of Calgary, Canada

5:30PM Towards Touchless Pore Fingerprint Biometrics: A Neural Approach [#16945]
Angelo Genovese, Enrique Munoz, Vincenzo Piuri, Fabio Scotti and Gianluca Sforza
Universita' degli Studi di Milano, Italy

5:50PM Optimization of Artificial Operon Construction by Consultation Algorithms Utilizing LCS [#17054]
Changhee Han, Kenji Tsuge and Hitoshi Iba
Graduate School of Information Science and Technology, The University of Tokyo, Japan; Institute for Advanced Biosciences, Keio University, Japan

6:10PM Neutral space analysis of gene regulatory network models of salt stress response in Arabidopsis using evolutionary computation [#17023]
Gonzalo Ruz, Tania Timmermann and Eric Goles
Universidad Adolfo Ibanez, Chile

Session FA-12: Parallel and Distributed Algorithms / Convergence, Scalability and Complexity Analysis
Friday, July 29, 8:00AM-10:00AM, Room: 202, Chair: Sriparna Saha / Steffen Finck

8:00AM Multi Operators-based Partial Connected Parallel Evolutionary Algorithm [#16141]
Yuanjun Laili, Fei Tao and Lin Zhang
Beihang University, China

8:20AM Divide and Conquer Based Non-dominated Sorting for Parallel Environment [#16796]
Sumit Mishra, Sriparna Saha and Samrat Mondal
Indian Institute of Technology Patna, India

8:40AM A Successful Parallel Implementation of NSGA-II on GPU for the Energy Dispatch Problem on Hydroelectric Power Plants [#16983]
Lucas Braga de Oliveira, Carolina G. Marcelino, Anolan Milanes, Paulo E. M. Almeida and Leonel M Carvalho
CEFET-MG, Brazil; INESC TEC, Portugal

9:00AM Analysis of Simple Pattern Search on the Noisy Sphere Model [#16248]
Steffen Finck
FH Vorarlberg University of Applied Sciences, Austria

9:20AM Proposal of Search Based on a User’s Preference Direction Using Reference Lines [#16694]
Toshihiro Kishigami and Tomohiro Yoshikawa
Graduate School of Engineering, Nagoya Univ., Japan

Session FA-13: Meta-modeling and Surrogate Models / SS CEC-55: Multiobjective Optimization with Surrogate Models
Friday, July 29, 8:00AM-10:00AM, Room: 203, Chair: Tapabrata Ray / Bogdan Filipic

8:00AM Multiple Surrogate Assisted Multiobjective Optimization using Improved Pre-selection [#16059]
Kalyan Bhattacharjee, Hemant Singh, Tapabrata Ray and Juergen Branke
The University of New South Wales, Australia; University of Warwick, United Kingdom

8:20AM A Multi-objective Batch Infill Strategy for Efficient Global Optimization [#16429]
Ahsanul Habib, Hemant Singh and Tapabrata Ray
The University of New South Wales, Australia

8:40AM Ensemble of Surrogates Based on Error Classification by Unsupervised Learning [#16350]
Yi Zhang, Xiaqian Chen, Ning Wang, Wen Yao and Bingxiao Du
National University of Defense Technology, China

9:00AM Truncated Expected Hypervolume Improvement: Exact Computation and Application [#16718]
Kaifeng Yang, Andre Deutz, Zhiwei Yang, Thomas Baeck and Michael Emmerich
LIACS, Netherlands

9:20AM Study of the Approximation of the Fitness Landscape and the Ranking Process of Scalarizing Functions for Many-objective Problems [#17169]
Gregorio Toscano and Kalyanmoy Deb
CINVESTAV-IPN, Mexico; Michigan State University, United States of America

Friday, July 29, 8:00AM-10:00AM, Room: 204, Chair: Pietro S. Oliveto / Martin Schlueter / Robert G. Reynolds

8:00AM  An Analytic Expression of Relative Approximate Error for a Class of Evolutionary Algorithms [#16421]
Jun He
Aberystwyth University, United Kingdom

8:20AM  On Sampling-and-Classification Optimization in Discrete Domains [#16492]
Hong Qian and Yang Yu
Nanjing University, China

8:40AM  Learning and Exploiting Mixed Variable Dependencies with a Model-Based EA [#16617]
Krzysztof Sadowski, Peter Bosman and Dirk Thierens
Utrecht University, Netherlands; Centrum Wiskunde and Informatica, Netherlands

9:00AM  Extension and Performance Evaluation of Recent Optimization Techniques on Mixed Integer Optimization Problems [#16427]
Varun Punnathanam, Remya Kommadath and Prakash Kotecha
Indian Institute of Technology Guwahati, India

9:20AM  Heritage-Dynamic Cultural Algorithm for Multi-Population Solutions [#16151]
Andrew Hlynka and Ziad Kobti
University of Windsor, Canada

9:40AM  A Study on Population Adaptation in Social Networks based on Knowledge Migration in Cultural Algorithm [#17126]
Pooya Moradian Zadeh, Mukund Pandey and Ziad Kobti
School of Computer Science- University of Windsor, Canada

Session FA-15: Emerging Areas / SS CEC-53: Multi-Fidelity Design Optimization under Epistemic Uncertainties

Friday, July 29, 8:00AM-10:00AM, Room: 205, Chair: Dipti Srinivasan / Hou Liqiang

8:00AM  A Vehicle-to-Grid Based Reactive Power Dispatch Approach Using Particle Swarm Optimization [#16704]
Wenjie Zhang, Pritam Das and Dipti Srinivasan
National University of Singapore, Singapore

8:20AM  Automatically Proving Mathematical Theorems with Evolutionary Algorithms and Proof Assistants [#16813]
Li-An Yang, Jui-Pin Liu, Chao-Hong Chen and Ying-ping Chen
National Chiao Tung University, Taiwan

8:40AM  An Exploration of Grammatical Encodings to model Six Nations Rugby Match Outcomes [#17133]
Michael O'Neill, Anthony Brabazon and David Fagan
University College Dublin, Ireland

9:00AM  Evolving Construction Heuristics for the Curriculum Based University Course Timetabling Problem [#17145]
Nelishia Pillay  
University of KwaZulu-Natal, South Africa  
9:20AM Multi-fidelity Adaptive Global Metamodel of Expensive Computer Simulations [#16510]  
Riccardo Pellegrini, Umberto Iemma, Cecilia Leotardi, Emilio F. Campana and Matteo Diez  
Roma Tre University, Italy; CNR-INSEAN, Italy  
9:40AM Multi-Fidelity Design Optimization under Epistemic Uncertainty [#16772]  
Hou Liqiang, Tan Wei and Ma Hong  
State Key Laboratory of Astronautic Dynamics Xi'an Satellite Control Center, China

Friday, July 29, 8:00AM-10:00AM, Room: 206, Chair: Anil Kumar / Vaclav Snasel

8:00AM Computational Intelligence based metaheuristic for energy-efficient routing in wireless sensor networks [#16024]  
Palvinder Singh Mann, Satvir Singh and Anil Kumar  
Research Scholar, Punjab Technical University, Kapurthala, Punjab, India.144008, India; S B S State Technical Campus, Ferozepur, Punjab, India.152004, India; Jaypee Institute of Information Technology, Noida, India.201304, India

8:20AM Sensor Control for Temporal Coverage Optimization [#17025]  
Vahab Akbarzadeh, Christian Gagne and Marc Parizeau  
PhD candidate, Canada; Associate Professor, Canada; Professor, Canada

8:40AM Reliable Multiple Robot-Assisted Sensor Relocation using Multi-Objective Optimization [#17006]  
Benjamin Desjardins, Rafael Falcon, Rami Abielmona and Emil Petriu  
University of Ottawa, Canada; Larus Technologies Corporation, Canada; Larus Technologies Corporation, Canada

9:00AM Genetic Algorithm for Entropy-based Feature Subset Selection [#16902]  
Pavel Kromer and Jan Platos  
VSB - Technical University of Ostrava, Czech Republic

9:20AM On Performance Improvement of the SOMA Swarm Based Algorithm and its Complex Network Duality [#16619]  
Lukas Tomaszek and Ivan Zelinka  
VSB-TU Ostrava, Czech Republic

Session FA-17: Intelligent Systems Applications / SS CDCl-22: Intelligent Control of Unmanned Surface Vehicles / Autonomous Mental Development, Coevolution and Collective Behavior  
Friday, July 29, 8:00AM-10:00AM, Room: 207, Chair: Toshio Kodama / Meng Joo Er

8:00AM A case study of homotopic BOM information management using the cellular data system [#16011]  
Kodama Toshio  
Maeda Corporation, Japan

8:20AM A Hybrid Approach for Test Case Prioritization and Selection [#16680]  
Dennis Silva, Pedro Oliveira, Ricardo Rabelo, Matheus Campanha, Pedro Santos Neto and Ricardo Britto
Federal University of Piaui (UFPI), Brazil; Instituto Federal do Maranhao, Brazil; Blekinge Institute of Technology, Sweden

8:40AM FPGA Implementation of Improved Ant Colony Optimization Algorithm for Path Planning [#16776]
Chen-Chien Hsu, Wei-Yen Wang, Yi-Hsing Chien, Ru-Yu Hou and Chin-Wang Tao
National Taiwan Normal University, Taiwan; National Ilan University, Taiwan

9:00AM Improved Monte Carlo Localization with Robust Orientation Estimation based on Cloud Computing [#16787]
Chung-Ying Li, I-Hsum Li, Yi-Hsing Chien, Wei-Yen Wang and Chen-Chien Hsu
National Taiwan Normal University, Taiwan; Lee-Ming Institute of Technology, Taiwan

9:20AM Extending the Nelder-Mead Algorithm for Feature Selection from Brain Networks [#16927]
Reshma Kar, Amit Konar, Aruna Chakraborty, Anca Ralescu and Atulya Nagar
Jadavpur University, India; St. Thomas College of Engineering and Technology, India; University of Cincinnati, United States of America; Liverpool Hope University, United Kingdom

9:40AM Co-Evolutionary Path Optimization by Ripple-Spreading Algorithm [#16343]
Xiao-Bing Hu and Jian-Qin Liao
Beijing Normal University, China; Chengdu MiidShare Technology Ltd, China

Session FA-18: SS CDCI-28: Applied Computational Intelligence for the Economics of Financial Market Infrastructures / SS CDCI-06: Computational Intelligence for Music, Art, and Creativity
Friday, July 29, 8:00AM-10:00AM, Room: 208-209, Chair: Biliana Alexandrova-Kabadjova / Chuan-Kang Ting

8:00AM Equilibrium interbank lending networks [#16217]
Di Xiao and Andreas Krause
University of Bath, United Kingdom

8:20AM A Colored Petri Net for Stock Trading Signal Detection [#16852]
Po-Yuan Shih, Dong-Her Shih and An-Chung Liu
National Chung Cheng University, Taiwan; National Yunlin University of Science and Technology, Taiwan

8:40AM Modifying the Fitness Function During the Use of an Evolutionary Algorithm for Design [#16110]
Andres Gomez de Silva Garza
Instituto Tecnologico Autonomo de Mexico (ITAM), Mexico

9:00AM Evolved Deflection Drawings [#16452]
Gary Greenfield
University of Richmond, United States of America

9:20AM Analysing Creative Models based on Unplugged Evolutionary Algorithms [#16453]
Lilian Navarro Moreno, Francisco Fernandez de Vega, Cayetano Jose Cruz Garcia, Patricia Hernandez Rondan and Jose Vicente Albarran Fernandez
Universidad de Extremadura, Spain; Universidad de Sevilla, Spain

Plenary Talk FPlen: IEEE CEC Plenary
Friday, July 29, 1:00PM-2:00PM, Room: Ballroom C, Speaker: Sanaz Mostaghim
Plenary Poster Session FPost: CEC Poster Session
Friday, July 29, 2:00PM-6:00PM, Room: Ballroom D

P501 Wind Speed Prediction Using a Cooperative Coevolution Genetic Algorithm Based on Back Propagation Neural Network [#16196]
Li Jie, Wang Rui and Zhang Tao
National University of Defense Technology, China

P502 A Genetic Algorithm for Feature Selection in Gait Analysis [#16969]
Rosa Altilio, Luca Liparulo, Andrea Proietti, Marco Paoloni and Massimo Panella
Department of Information Engineering, Electronics and Telecommunications (DIET), University of Rome "La Sapienza", Italy; Movement Analysis Laboratory, Physical Medicine and Rehabilitation, University of Rome "La Sapienza", Italy

P503 Optimizing Acceptance Frontier using PSO and GA for Multiple Signature Iris Recognition [#17005]
Gladston Moreira, Eduardo Luz and David Menotti
Universidade Federal de Ouro Preto, Brazil; Universidade Federal do Parana, Brazil

P504 Image classification with stacked restricted boltzmann machines and evolutionary function array classification voter [#16450]
Siyi Chen, Gang Liu, Cong Wu, Zhichen Jiang and Jie Chen
Hubei University of Technology, China

P505 Self-adaptive Spectral Cluster Number Detecting with Particle Swarm Optimization Algorithm [#16855]
Chupeng Zeng, Aimin Zhou and Guixu Zhang
Department of Computer Science and Technology East China Normal University, China

P506 Feature Selection Approach based on Moth-Flame Optimization Algorithm [#16735]
Hossam Zawbaa, Eid Emamy, Bazil Parv and Marwa Sharawi
Babes Bolyai University, Romania; Cairo University, Egypt; Arab Open University, Egypt

P507 On the Role of Degree Influence in Suboptimal Modularity Maximization [#16351]
Rafael Santiago and Luis Lamb
Federal University of Rio Grande do Sul, Brazil

P508 Automatic Modulation Classification with Genetic Backpropagation Neural Network [#16204]
Qianlin Zhou, Hui Lu, Liwei Jia and Kefei Mao
Beihang University, China

P509 Heuristic Search Towards the Invention of an Optimal-Ignition Internal Combustion Engine [#16780]
Wuqiao Luo, Christoph Schoning, Lin Li and Yun Li
School of Engineering, University of Glasgow, United Kingdom; Harbin Engineering University, China; University of Glasgow, and Dongguan University of Technology, United Kingdom

P510 Multiobjective Wind Driven Optimization Approach Applied to Transformer Design [#16274]
Helon Vicente Hultmann Ayala, Emerson Hochsteiner de Vasconcelos Segundo, Luiz Lebensztajn, Viviana Cocco Mariani and Leandro Coelho
Pontificia Universidade Catolica do Parana, Brazil; Universidade de Sao Paulo, Brazil

P511 Metaheuristic Based Battery Control Optimization of a Photovoltaic System with Grid Connection [#16972]
Jean Meunier, Julien Rohmer, Dominique Knittel and Pierre Collet
University of Strasbourg, France

P512 Neuro-evolutionary system for FOREX trading [#16823]
Jacek Mandziuk and Piotr Rajkiewicz
Warsaw University of Technology, Poland

P513 A Comparative Study of Differential Evolution Algorithms for Parameter Fitting Procedures [#16475]
Carlos Torres-Cerna, Alma Alanis, Ignacio Poblete-Castro, Marta Bermejo-Jambrina and Esteban Hernandez-Vargas
Universidad de Guadalajara, Mexico; Universidad Andres Bello, Chile; Helmholtz Centre for Infection Research, Germany

P514 Contextual Bandit Algorithm for Risk-Aware Recommender Systems [#16558]
Djallel Bouneffouf
The University of British Columbia, Canada

P515 Multi-constraint Building Partitioning Formulation for Effective Contaminant Detection and Isolation [#16537]
Alexis Kyriacou, Stelios Timotheou, Michalis Michaelides, Christos Panayiotou and Marios Polycarpou
University of Cyprus, Cyprus; Cyprus University of Technology, Cyprus

P516 Discovering Grid-Cell Models Through Evolutionary Computation [#16279]
Lin Wang, Bo Yang and Jeff Orchard
Shandong Provincial Key Laboratory of Network Based Intelligent Computing, University of Jinan, Jinan, 250022, China; China; David R. Cheriton School of Computer Science, University of Waterloo, Waterloo, Canada, Canada

P517 Cooperative Neuro-evolutionary Recurrent Neural Networks for Solar Power Prediction [#16670]
Mashud Rana, Rohitash Chandra and Vassilios Agelidis
The University of New South Wales (UNSW), Australia; Software Foundation, Fiji

Xiangfei Zhang, Yongsheng Ding, Guangshun Yao and Kuangrong Hao
Donghua University, China

P519 A Genetic Programming approach to modeling power losses of Insulate Gate Bipolar Transistors [#16915]
Nicola Femia, Antonio Della Cioppa and Mario Migliaro
Power Electronics and Renewable Sources Lab, DIEM, University of Salerno, Via Giovanni Paolo II 132, 84084 Fisciano (SA), ITALY, Italy; Natural Computation Lab, DIEM, University of Salerno, Via Giovanni Paolo II 132, 84084 Fisciano (SA), ITALY, Italy

P520 An Exploration Of The Space Of DNA Structural Properties Using An Evolutionary Algorithm [#16369]
Wendy Ashlock
Ashlock Labs, Canada

P521 Functional brain network extraction using a genetic algorithm with a kick-out method [#16783]
Kei Harada, Misato Tanaka, Satoru Hiwa, Heiner Zille, Sanaz Mostaghim and Tomoyuki Hiroyasu
Doshisha University, Japan; Otto von Guericke University Magdeburg, Germany

P522 A More Efficient Method for Domain Repeat Detection in WD-40 Proteins [#16914]
Nuosi Wu, Jiarui Zhou, Zexuan Zhu and Zhen Ji
Shenzhen City Key Laboratory of Embedded System Design, College of Computer Science and Software Engineering, China; Harbin Institute of Technology Shenzhen Graduate School, China

P523 Using Grouping Genetic Algorithm to Mine Diverse Group Stock Portfolio [#16805]
Chun-Hao Chen, Cheng-Yu Lu, Tzung-Pei Hong and Ja-Hwung Su
Tamkang University, Taiwan; National University of Kaohsiung, Taiwan; Cheng Shiu University, Taiwan

P524 Learning Classifier System with Deep Autoencoder [#17060]
Kazuma Matsumoto, Rei Saito, Yusuke Tajima, Masaya Nakata, Hiroyuki Sato, Tim Kovacs and Keiki Takadama
The University of Electro-Communications, Japan; University of Bristol, United Kingdom

P525 Revised: XCS-DH: Minimal Default Hierarchies in XCS [#17162]
Tim Kovacs, Simon Rawles, Larry Bull, Masaya Nakata and Keiki Takadama
University of Bristol, United Kingdom; University of the West of England, United Kingdom; The University of Electro-Communications, Japan

P526 Applying Exponential Weighting Moving Average Control Parameter Adaptation Technique with Generalized Differential Evolution [#26039]
Saku Kukkonen and Carlos Coello Coello
Lappeenranta University of Technology, Finland; CINVESTAV-IPN, Mexico

P527 An Evolutionary Many-Objective Optimisation Algorithm with Adaptive Region Decomposition [#16677]
Hai-Lin Liu, Lei Chen, Qingfu Zhang and Kalyanmoy Deb
GuangDong university of technology, China; Guangdong University of Technology, China; City University of Hong Kong, China; Michigan State University, United States of America

P528 Black-box Expensive Multiobjective Optimization with Adaptive In-fill rules [#16237]
Qin Chen, Bingxiang Long and Qingfu Zhang
State Key Laboratory of Aerodynamics, China Aerodynamic Research and Development Center, China; Facility Design and Instrument Institute, China Aerodynamic Research and Development Center, China; University of Essex, United Kingdom

P529 Performance Measures for Niching Algorithms [#16905]
Jonathan Mwaura, Andries Engelbrecht and Filipe Nepocumeno
University of Pretoria, South Africa

Ming Yang, Jing Guan and Li Changhe
School of Computer Science, China University of Geosciences, Wuhan, China; China Ship Development and Design Center, Wuhan, China

P531 L-SHADE with Competing Strategies Applied to CEC2015 Learning-based Test Suite [#16554]
Radka Polakova, Josef Tvrdik and Petr Bujok
University of Ostrava, Czech Republic

P532 Success-History Based Adaptive Differential Evolution Algorithm with Multi-Chaotic Framework for Parent Selection Performance on CEC2014 Benchmark Set [#16583]
Adam Viktorin, Michal Pluhacek and Roman Senkerik
Tomas Bata University in Zlin, Czech Republic

P533 Correlation-based Genetic Algorithm for Real-parameter optimization [#16586]
Arghya Kundu, Sougata Laha and Athanasios Vasilakos
Lexmark International Pvt. Ltd., India; Nanyang Technological University, India; Lulea University of Technology, Sweden
P534 Cooperative Co-evolution using LSHADE with Restarts For The CEC15 Benchmarks [#16539]
Mohammed El-Abd
American University of Kuwait, Kuwait
P535 Optimization of Room Allocation Plans at the University Duisburg-Essen with a Regulatory Algorithm [#16170]
Marcel Kleine-Boymann, Christina Kluever and Juergen Kluever
University of Duisburg-Essen, Germany

Session FM-12: Evolutionary Programming / Self-adaptation in Evolutionary Computation / SS CDCI-23: Computational Intelligence for Knowledge and Skills Transfer: Theories, Algorithms and Applications
Friday, July 29, 2:30PM-4:30PM, Room: 202, Chair: Josu Ceberio / Min Jiang

2:30PM On the Relationship of Degree of Separability with Depth of Evolution in Subcomponents of Cooperative Coevolution [#16800]
Rohitash Chandra, Ratneel Deo, Kavitesh Bali and Anurag Sharma
Nanyang Technological University, Singapore; School of Computing, Information and Mathematical Sciences, University of the South Pacific, Fiji
2:50PM Speech Steganalysis using Evolutionary Restricted Boltzmann Machines [#16177]
Catherine Paulin, Sid-Ahmed Selouani and Eric Hervet
LARIHS Laboratory, Universite de Moncton , Campus de Shippagan, Canada; Universite de Moncton, Campus de Moncton, Canada
3:10PM Bayesian Optimisation for Parameter Tuning in Evolutionary Algorithms [#16928]
Ibai Roman, Josu Ceberio, Alexander Mendiburu and Jose A. Lozano
University of the Basque Country UPV/EHU, Spain
3:30PM Evolutionary Approach for Selection of Optimal EEG Electrode Positions and Features for Classification of Cognitive Tasks [#17082]
Rimita Lahiri, Pratyusha Rakshit, Amit Konar and Atulya K Nagar
Jadavpur University, India; Liverpool Hope University, United Kingdom
3:50PM Chinese Character CAPTCHA Recognition Based on Convolution Neural Network [#16138]
Yanping Lv, Feipeng Cai, Dazhen Lin and Donglin Cao
Cognitive Science Department, Xiamen University, Xiamen, China, China
4:10PM A Spatial-Temporal Visual Mid-Level Ontology for GIF Sentiment Analysis [#16451]
Zheng Cai, Donglin Cao, Dazhen Lin and Rongrong Ji
Cognitive Science Department, Xiamen University, Xiamen, China, 361005, China

Session FM-13: SS CDCI-26: Cognitive Robotics
Friday, July 29, 2:30PM-4:30PM, Room: 203, Chair: Chu Kiong Loo / Kosuke Sekiyama

2:30PM Estimation of Easily Visible Position for Unknown Object Grasping [#16570]
Masuta Hiroyuki, Nariki Soichiro, Motoyoshi Tatsuo, Koyanagi Ken'ichi, Oshima Toru and Lim Hun-ok
Toyama Prefectural University, Japan; Kanagawa Univeristy, Japan
2:50PM Integrated Adaptive Resonance Theory Neural Model for Episodic Memory with Task Memory
Session FM-14: Constraint and Uncertainty Handling / Dynamic and Uncertain Environments
Friday, July 29, 2:30PM-4:30PM, Room: 204, Chair: Elizabeth Wanner / Bin Xin

2:30PM Constrained Evolutionary Wind Turbine Placement with Penalty Functions [#16273]
Daniel Lueckehe, Markus Wagner and Oliver Kramer
Jade University of Applied Sciences, Germany; University of Adelaide, Australia; University of Oldenburg, Germany

2:50PM A Quadratic Approximation-Based Local Search Operator for Handling Two Equality Constraints in Continuous Optimization Problems [#16338]
Carlos H Fonseca and Elizabeth F. Wanner
CEFET-MG, Brazil

3:10PM Robust Design Optimization Based on Multi-Objective Particle Swarm Optimization [#16111]
Yan Yu, Guangming Dai, Liang Chen, Chong Zhou and Lei Peng
School of Computer Science, China University of Geosciences, Wuhan, China, China

3:30PM Multi-Robot Box-Pushing in Presence of Measurement Noise [#16879]
Pratyusha Rakshit, Amit Konar and Atulya K Nagar
Jadavpur University, India; Liverpool Hope University, United Kingdom

3:50PM Solving the Uncertain Multi-objective Multi-stage Weapon Target Assignment Problem via MOEA/D-AWA [#16015]
Juan Li, Jie Chen, Bin Xin, Lihua Dou and Zhihong Peng
School of Automation, Beijing Institute of Technology; Key Laboratory of Complex System Intelligent Control and Decision, China

Session FM-15: SS CDCI-03: Computational Intelligence Methods for Natural Language Processing
Friday, July 29, 2:30PM-4:30PM, Room: 205, Chair: Keeley Crockett / Joao Paulo Carvalho

2:30PM Fuzzy Ontologies in Semantic Similiarity Measures [#16255]
Keeley Crockett and David Chandran
Manchester Metropolitan University, United Kingdom; Kings College London, United Kingdom

2:50PM A Hybrid Approach to Sentiment Analysis [#16292]
Orestes Appel, Francisco Chiclana, Jenny Carter and Hamido Fujita
De Montfort University, Canada; De Montfort University, United Kingdom; Iwate Prefectural University, Japan

3:10 PM
A Re-ranking Model for Accurate Knowledge Base Completion with Knowledge Base Schema and Web Statistic [#16506]
Su Jeong Choi, Hyun-Je Song, Hee-Geun Yoon, Seong-Bae Park and Se-Young Park
Kyungho National University, Korea (South)

3:30 PM
Automatic Generation of Exercises on Passive Transformation in Portuguese [#16508]
Jorge Baptista, Sandra Lourenco and Nuno Mamede
Universidade do Algarve, Portugal, Portugal; Universidade de Lisboa, Portugal, Portugal

3:50 PM
Predicting ICU readmissions based on bedside medical text notes [#16603]
Sergio Curto, Joao P. Carvalho, Catia Salgado, Susana Vieira and Joao M. C. Sousa
INESC-ID / Instituto Superior Tecnico, Universidade de Lisboa, Portugal; LAETA, IDMEC / Instituto Superior Tecnico, Universidade de Lisboa, Portugal

Session FM-16: SS CEC-42C: Special Session Associated with Competition on Bound Constrained Single Objective Numerical Optimization
Friday, July 29, 2:30PM-4:30PM, Room: 206, Chair: Ponnuthurai Nagaratnam Suganthan / Ivan Zelinka

2:30 PM
Competition On Learning-based Real-Parameter Single Objective Optimization by SOMA Swarm Based Algorithm with SOMARemove Strategy [#16621]
Ivan Zelinka and Lukas Tomaszek
VSB-TU Ostrava, Czech Republic

2:50 PM
Analysis of the Bayesian Multi-Scale Optimistic Optimization on the CEC2016 and BBOB Testbeds [#16357]
Abdullah Al-Dujaili and Suresh Sundaram
Nanyang Technological University, Singapore

3:10 PM
Testing An Evolutionary Portfolio Algorithm on The CEC2016 Real-Parameter Single Objective [#16386]
Yi Junyan, He Zheng and Gang Yang
Department of Computer Science and Technology, Beijing University of Civil Engineering and Architecture, Beijing, 100044, China, China; Multimedia Computing Lab, Department of Information, Renmin University of China, China

3:30 PM
Evaluating the Performance of SHADE with Competing Strategies on CEC 2014 Single-Parameter Test Suite [#16579]
Petr Bujok, Josef Tvrdik and Radka Polakova
University of Ostrava, Czech Republic; Centre of Excellence IT4Innovations, Institute for Research and Applications of Fuzzy Modeling, University of Ostrava, Czech Republic

3:50 PM
An Asynchronous Adaptive Multi-population Model for Distributed Differential Evolution [#16541]
Ivanoe De Falco, Antonio Della Cioppa, Umberto Scafuri and Ernesto Tarantino
Institute of High Performance Computing and Networking National Research Council of Italy
Via P. Castellino, 111 80131 Naples, ITALY, Italy; Natural Computation Lab, DIEM University of Salerno Via Giovanni Paolo II 132, 84084 Fisciano (SA), ITALY, Italy

Session FM-17: Genetic Programming
Friday, July 29, 2:30PM-4:30PM, Room: 207, Chair: Hitoshi Iba / Vic Ciesielski

2:30PM  Vanishing Ideal Genetic Programming [#16513]
        Hiroshi Kera and Hitoshi Iba
        The University of Tokyo, Japan

2:50PM  Adapting to Concept Drift with Genetic Programming for Classifying Streaming Data [#17098]
        Murray Smith and Vic Ciesielski
        RMIT University, Melbourne, Australia

3:10PM  A Survey of Modularity in Genetic Programming [#16715]
        George Gerules and Janikow Cezary
        University of Missouri - St.Louis, United States of America

3:30PM  Genetic Programming for Evolving Programs with Recursive Structures [#16866]
        Tessa Phillips, Mengjie Zhang and Bing Xue
        Victoria University of Wellington, New Zealand

3:50PM  More Efficient Evolution of Small Genetic Programs in Cartesian Genetic Programming by Using Genotypic Age [#16591]
        Roman Kalkreuth, Guenter Rudolph and Joerg Krone
        TU Dortmund University, Germany; South Westphalia University of Applied Science, Germany

4:10PM  Exploring Position Independent Initialisation in Grammatical Evolution [#17044]
        Fagan David, Fenton Michael and O'Neill Michael
        University College Dublin, Ireland

Session FM-18: SS CDCI-15: Computational Intelligence Algorithms for Industrial and Design Engineering Problems
Friday, July 29, 2:30PM-4:30PM, Room: 208-209, Chair: Mohamed Tawhid / Kang Li

2:30PM  A Comparison of Particle Swarm Optimization and Genetic Algorithms for a Multi-Objective Type-2 Fuzzy Logic Based System for the Optimal Allocation of Mobile Field Engineers [#16267]
        Andrew Starkey, Hani Hagras, Sid Shakya and Gilbert Owusu
        University of Essex, United Kingdom; British Telecom, United Kingdom

2:50PM  A Satellite Cluster Data Transmission Scheduling Method based on Genetic Algorithm with Rote Learning Operator [#16247]
        Hao Chen, Yirong Zhou, Chun Du and Jun Li
        National University of Defense Technology, China

3:10PM  Battery Optimal Charging Strategy Based on A Coupled Thermoelectric Model [#16803]
        Kailong Liu, Kang Li, Zhihe Yang, Cheng Zhang and Jing Deng
        Queen's University Belfast, United Kingdom

Session FP-12: Engineering Applications
Friday, July 29, 4:30PM-6:30PM, Room: 202, Chair: Markus Olhofer / Ali Sadollah

4:30PM  Hybrid Evolutionary Approach for Level Set Topology Optimization [#16252]
        Mariusz Bujny, Nikola Aulig, Markus Olhofer and Fabian Duddeck
        Technical University of Munich, Germany; Honda Research Institute Europe GmbH, Germany
4:50PM Application of Evolutionary Algorithms in Guaranteed Parameter Estimation [#16833]
Thilo Goerke and Sebastian Engell
Technische Universitaet Dortmund, Germany

5:10PM Approximate Solutions of Heat Transfer Fins With Convex And Exponential Profiles Using Fourier-Based Optimization Method [#16393]
Ali Sadollah, Rong Su, Joong Hoon Kim and Kaizhou Gao
School of Electrical and Electronic Engineering, Nanyang Technological University, 639798, Singapore; School of Civil, Environmental and Architectural Engineering, Korea University, 136-713, Seoul, South Korea, Korea (South); School of computer, Liaocheng University, Liaocheng, 250209, P. R. China, China

5:30PM NSGA-II for Joint Generation and Voyage Scheduling of an All-Electric Ship [#17170]
Ce Shang, Dipti Srinivasan and Thomas Reindl
National University of Singapore, Singapore

5:50PM A Nonlinear Estimation and Control Algorithm based on Ant Colony Optimization [#16356]
Hadi Nobahari and Saeed Nasrollahi
Sharif University of Technology, Iran

Session FP-13: Heuristics, Metaheuristics and Hyper-heuristics
Friday, July 29, 4:30PM-6:30PM, Room: 203, Chair: Xin Yao / Mohamed Bader-El-Den

4:30PM Improving the Performance of Evolutionary Engine Calibration Algorithms with Principal Component Analysis [#16185]
Mohammad Hassan Tayarani Najaran, Adam Prugel Bennett, Hongming Xu and Xin Yao
University of Birmingham, United Kingdom; University of Southampton, United Kingdom

4:50PM Cluster Analysis using A Gradient Evolution-based K-means Algorithm [#16212]
Ren-Jieh Kuo and Ferani Eva Zulvia
National Taiwan University of Science and Technology, Taiwan

5:10PM Optimizing D-GM quantum computing by exploring parallel and distributed quantum simulations under GPUs architecture [#16239]
Anderson Avila, Renata Reiser, Mauricio Pilla and Adenauer Yamin
Federal University of Pelotas, Brazil

5:30PM Mathematical Function Optimization Using A Novel Algorithm Based On Newtonian Field Theory [#16363]
Todd Perry and Mohamed Bader-El-Den
University of Portsmouth, United Kingdom

5:50PM Towards Optimal Algorithmic Parameters for Simulation-Based Multi-Objective Optimization [#16615]
Martin Andersson, Sunith Bandaru and Amos H.C. Ng
University of Skovde, Sweden

Session FP-14: SS CDCI-29: Computational Intelligence in Marketing and Social Sciences
Friday, July 29, 4:30PM-6:30PM, Room: 204, Chair: Raymond Chiong / Fernando Rubio

4:30PM Automatic media planning: optimal advertisement placement problems [#16890]
Ismael Rodriguez, Fernando Rubio and Pablo Rabanal
Universidad Complutense de Madrid, Spain
4:50PM Incorporating Awareness and Genetic-based Viral Marketing Strategies to a Consumer Behavior Model [#16936]
Juan Francisco Robles, Manuel Chica and Oscar Cordon
University of Granada, Spain; Open University of Catalonia, Spain

5:10PM Identifying Malicious Web Domains Using Machine Learning Techniques with Online Credibility and Performance Data [#17063]
Zhongyi Hu, Raymond Chiong, Ilung Pranata, Willy Susilo and Yukun Bao
Wuhan University, China; The University of Newcastle, Australia; The University of Wollongong, Australia; Huazhong University of Science and Technology, China

5:30PM A Novel Genetic Algorithm for Constructing Uniform Test Forms of Cognitive Diagnostic Models [#16644]
Ye-shi Jiang, Ying Lin, Jing-jing Li, Zheng-jia Dai, Jun Zhang and Xinglin Zhang
Sun Yat-sen University, China; South China Normal University, China; South China University of Technology, China

Session FP-15: Large-scale Problems / SS CEC-19: Efficient Non-dominated Sorting and Pareto Approaches to Many-Objective Optimization
Friday, July 29, 4:30PM-6:30PM, Room: 205, Chair: Asim Roy / Xingyi Zhang

4:30PM Cooperative Coevolution with Dependency Identification Grouping for Large Scale Global Optimization [#16124]
Guangming Dai, Xiaoyu Chen, Liang Chen, Maocai Wang and Lei Peng
China University of Geosciences, China

4:50PM A Phase Based Optimization Algorithm for Big Optimization Problems [#16058]
Zijian Cao, Lei Wang, Xinhong Hei, Qiaoyong Jiang, Xiaofeng Lu and Xiaofan Wang
Xi'an University of Technology, China

5:10PM Two-layered ensemble Kohonen nets for imbalanced streaming data [#17059]
Asim Roy
Arizona State University, United States of America

5:30PM A multi-objective evolutionary algorithm based on an enhanced inverted generational distance metric [#16308]
Ye Tian, Xingyi Zhang, Ran Cheng and Yaochu Jin
Anhui University, China; University of Surrey, United Kingdom

5:50PM An Improved Reference Point Sampling Method on Pareto Optimal Front [#16142]
Cheng He, Linqiang Pan, Hang Xu, Ye Tian and Xingyi Zhang
Huazhong University of Science and Technology, China; Xiamen University, China; Anhui University, China

Session FP-16: SS CEC-43: Evolutionary Physical Systems and Matter / SS CEC-16: Fitness Landscape Analysis in Practice
Friday, July 29, 4:30PM-6:30PM, Room: 206, Chair: Stefano Nichele / Anna Rakitianskaia

4:30PM A Simulation Tool for Evolving Functionalities in Disordered Nanoparticle Networks [#16346]
Ruud van Damme, Hajo Broersma, Julia Mikhal, Celestine Lawrence and Wilfred van der Wiel
University of Twente, Netherlands

4:50PM Towards Standalone In-Materio Devices: Stable Logic Gates and Elementary Cellular
Automata in Carbon Nanotubes Material [#16335]
Sigve Farstad, Stefano Nichele and Gunnar Tufte
Norwegian University of Science and Technology, Norway

5:10PM Manipulating the conductance of single-walled carbon nanotubes based thin films for evolving threshold logic circuits using particle swarm optimisation [#16875]
Fawada Qaiser, Apostolos Kotsialos, Mark Kieran Massey, Dagou Achille Zeze, Christopher Pearson and Michael C. Petty
School of Engineering and Computing Sciences, Durham University, United Kingdom

5:30PM The R-Package FLACCO for Exploratory Landscape Analysis with Applications to Multi-Objective Optimization Problems [#16326]
Pascal Kerschke and Heike Trautmann
University of Muenster, Germany

5:50PM Analysis of Error Landscapes in Multi-layered Neural Networks for Classification [#16685]
Anna Rakitianskaia, Eduan Bekker, Katherine Malan and Andries Engelbrecht
University of Pretoria, South Africa

**Session FP-17: Genetic Programming**

*Friday, July 29, 4:30PM-6:30PM, Room: 207, Chair: Marco Aurelio Pacheco / Chuan-Kang Ting*

4:30PM Directly Evolving Classifiers for Missing Data using Genetic Programming [#16657]
Cao Truong Tran, Mengjie Zhang and Peter Andreae
Victoria University of Wellington, New Zealand

4:50PM Genetic Programming and Automatic Differentiation Algorithms Applied to the Solution of Ordinary and Partial Differential Equations [#16629]
Waldir Lobao, Douglas Dias and Marco Pacheco
Brazilian Institute of Geography and Statistics - IBGE, Brazil; Rio de Janeiro State University - UERJ, Brazil; PUC-Rio, Brazil

5:10PM Learning Ensemble of Decision Trees through Multifactorial Genetic Programming [#16874]
Yu-Wei Wen and Chuan-Kang Ting
National Chung Cheng University, Taiwan

**Session FP-18: SS CDCI-01: Computational Intelligence for Industry 4.0**

*Friday, July 29, 4:30PM-6:30PM, Room: 208-209, Chair: Yun Li / Cindy Goh*

4:30PM Smart Design for Ships in a Smart Product Through-Life and Industry 4.0 Environment [#16889]
Joo Hock Ang, Cindy Goh and Yun Li
Sembcorp Marine Ltd, Singapore; University of Glasgow, United Kingdom

4:50PM Management Approaches for Industry 4.0 [#17171]
Saqib Shamim, Shuang Cang, Hongnian Yu and Yun Li
Bournemouth University, United Kingdom; Glasgow University, United Kingdom

5:10PM Self-organizing tool for smart design with predictive customer needs and wants to realize Industry 4.0 [#17172]
Alfredo Alan Flores Saldivar, Cindy Goh, Wei-neng Chen and Yun Li
University of Glasgow, United Kingdom; Sun Yat-sen University, China

5:30PM Intelligent Controller Design Coupled in a Communication Framework for a Networked HVAC
System [#17144]
Narendra Kumar Dhar, Nishchal K Verma and Laxmidhar Behera
Department of Electrical Engineering, IIT Kanpur, India