Detailed Program

Tuesday, December 8, 08:00–10:00

Registration: 08:00–16:00
Room: Strelitzia Conservatorium, Ground Level

Opening Remarks: 08:30–08:40
Room: Audi 2

Frank Rosenblatt Award: 08:40–09:00
Room: Audi 2

SSCI’15 Plenary Talk
Speaker: Marco Dorigo Controling Swarms of Cooperating Robots
Tuesday, December 8, 09:00–10:00, Room: Audi 2
Chair: Xin Yao

Tuesday, December 8, 10:00–12:20

SSCI’15 Keynote Talk
Speaker: Simon Lucas Statistical Simulation Algorithms for General Video Game AI
10:20, Room: Audi 2
Chair: Garrison Greenwood

CIFEr’15 Keynote Talk
Speaker: Olivier Scaillet Valuing American Options using Fast Recursive Projections
11:00, Room: Audi 2
Chair: Antoaneta Serguieva

CICA’15 Session: 1: Fuzzy System Identification and Control
Tuesday, December 8, 10:20–12:20, Room: 1.41
Chair: Ginalber Serra, Co-chair: Alok Deb

10:20 [1570188045] Self-Tuning Robust Stability Fuzzy Digital Controller
Ginalber Serra, Edson Costa

10:40 [1570191285] Fuzzy Logic Control and Fault Detection in Centralized Chilled Water System
Noor Sulaiman, Mohd Othman, Hayati Abdullah

11:00 [1570196363] A Novel Data Knowledge Representation with Collaborative Fuzzy Transfer Rule for Takagi Sugeno Kang Type Model
Mukesh Prasad, Meng Joo Er, Chin Teng Lin, Om Kumar Prasad, Manoranjan Mohanty, Jagendra Singh

11:20 [1570197773] Interval Type-2 Recursive Fuzzy C-Means Clustering Algorithm in the TS Fuzzy Model Identification
Tammoay Dam, Alok Deb

CIVTS’15 Session: 1: Intelligent Transportation Systems
Tuesday, December 8, 10:20–12:20, Room: 1.42
Chair: Marthinus Booysen, Co-chair: Yi Lu Murphey
10:20 [1570192697] Efficacy of Interventions and Incentives to Achieve Speed Compliance in the Informal Public Transport Sector
Nelson Ebot Eny Akpa, Marthinus J Booysen, Marion Sinclair

Ayalew Habtie, Ajith Abraham, Dida Midekso

11:00 [1570192387] Multi-UAV Task Allocation: A Team-Based Approach
Venugopalan Krishnaswamy, Kartick Subramanian, Suresh Sundaram

Supatcha Chaimatanan

CICS’15 Session: 1:
Tuesday, December 8, 10:20–12:20, Room: 1.43
Chair: Shubhalaxmi Kher

10:20 [1570191847] P2V: Effective Website Fingerprinting Using Vector Space Representations
Khaled Alnaami, Gbadebo Ayoade, Asim Siddiqui, Nicholas Ruozzi, Latifur Khan

10:40 [1570192577] Quantum Based Neural Network Classifier and Its Application for Firewall to Detect Malicious Web Request
Om Patel, Aruna Tiwari, Vikram Patel, Ojas Gupta

11:00 [1570193107] Conversion of Decision Tree Into Deterministic Finite Automation for High Accuracy Online SYN Flood Detection
Marcin Luckner

11:20 [1570197379] Potentials of Using One-class SVM for Detecting Protocol-specific Anomalies in Industrial Networks
Franka Schuster, Andreas Paul, Ren Rietz, Hartmut Koenig

CCMB’15 Session: 1:
Tuesday, December 8, 10:20–12:20, Room: 1.44
Chair: Angelo Cangelosi, Co-chair: Alessandro Di Nuovo

10:20 [1570195861] Empathic Interaction Using the Computational Emotion Model
Zeeshan Rasool, Naoki Masuyama, Chu Kiong Loo, Md. Islam

10:40 [1570190189] Artificial Mental Imagery in Cognitive Robots Interaction
Alessandro Di Nuovo, Angelo Cangelosi

11:00 [1570192161] Robustness and Real-Time Performance of an Insect Inspired Target Tracking Algorithm Under Natural Conditions
Zahra Bagheri, Steven D Wiederman, Ben Cazzolato, Steven Grainger, David C O’Carroll

11:20 [1570192523] Combining CCA and CFP for Enhancing the Performance in the Hybrid BCI System
Li-Wei Ko, Sai Kalyan Ranga Singamanallla

RiiSS’15 Session: 1: Informationally Structured Space
Tuesday, December 8, 10:20–12:20, Room: 1.61
Chair: Chu Kiong Loo, Co-chair: Takenori Obo

10:20 [1570192403] Development of Food Texture Sensor Using Two Magnetic Sensing Elements
Hiroyuki Nakamoto, Daisuke Nishikubo, Futoshi Kobayashi, Fumio Kojima

10:40 [1570192441] Invariant Perception for Grasping an Unknown Object Using 3D Depth Sensor
Hiroyuki Masuta, Hanyo Lim, Tatsuo Motoyoshi, Ken’ichi Koyanagi, Toru Oshima

11:00 [1570196233] Fuzzy Spiking Neural Network for Abnormality Detection in Cognitive Robot Life Supporting System
Dalai Tang, János Botzheim, Naoyuki Kubota, Tiong Yew Tang

11:20 [1570197453] Behavior Pattern Extraction Based on Growing Neural Networks for Informationally Structured Space
Takenori Obo, Habeebah Kakudi, Chu Kiong Loo, Naoyuki Kubota
10:20 [#1570169637] Study on Index Model of Tropical Cyclone Intensity Change Based on Projection Pursuit and Evolution Strategy
Huantong Geng

10:40 [#1570185043] Classification Uncertainty of Multiple Imputed Data
Tuomo Alasalmi, Heli Koskimki, Jaakko Suutala, Juha Rinning

11:00 [#1570188525] Calibrating Probability with Undersampling for Unbalanced Classification
Andrea Dal Pozzolo, Olivier Caelen, Reid Johnson, Gianluca Bontempi

Vladimir Stanovov, Evgenii Sopov, Eugene Semenkin

11:40 [#1570192479] Classification Using Probabilistic Random Forest
Rajhans Gondane, V. Susheela Devi

10:20 [#1570175885] Ensemble Methods for Robust 3D Face Recognition Using Commodity Depth Sensors
Florin Schimbinschi, Lambert Schomaker, Marco Wiering

10:40 [#1570189451] Deep Convolutional Neural Networks and Support Vector Machines for Gender Recognition
Jos van de Woldshaar, Marco Wiering, Mahir Karaaba

11:00 [#1570190639] Video Face Recognition From A Single Still Image Using an Adaptive Appearance Model Tracker
M. Ali Akber Dewan, Eric Granger, Robert Sabourin, Gian Luca Marcialis, Fabio Roli

11:20 [#1570191637] Robust Face Recognition by Computing Distances From Multiple Histograms of Oriented Gradients
Mahir Karaaba, Olarik Surinta, Lambert Schomaker, Marco Wiering

11:40 [#1570191657] Identifying Critical Factors Influencing Quality of Blood Vessel Information in JPEG Compressed Skin Images
Xiaojie Li, Adams Kong

Tuesday, December 8, 13:00–15:00

CIDM Keynote Talk
Speaker: Barbara Hammer Structure Metric Learning in Prototype-based Models and Its Application for Intelligent Tutoring
13:00, Room: Audi 2
Chair: Friedhelm Schwenker

CICS Keynote Talk
Speaker: Robert Abercrombie Impact of Big Data on Computational Intelligence Aspects of Cyber Security and the Computing Environment to Support Repeatable Scientific Experimentation
13:40, Room: Audi 2
Chair: Shubhalaxmi Kher
CICA Keynote Talk
Speaker: Er Meng Joo Cognitive Robotics: Recent Developments and Futuristic Trends
14:20, Room: Audi 2
Chair: Ginalber Serra

13:00 [Tutorial 1] MCDM: Introduction to Dynamic Multi-Objective Optimization and Its Challenges
Márde Helbig
Room: 1.41

13:00 [Tutorial 2] FOCI: A Gentle Introduction to The Time Complexity Analysis of Evolutionary Algorithms
Pietro Oliveto
Room: 1.42

13:00 [Tutorial 3] SSCI: Computational Intelligence in Bioinformatics (Tutorial has been cancelled)
Ed Keedwell, Jonathan Mwaura
Room: 1.43

SIS’15 Session: 1: Particle Swarm Optimization I
Tuesday, December 8, 13:00–15:00, Room: 1.44
Chair: Pavel Krömer

13:00 [#1570173149] An Improved Method for Comprehensive Learning Particle Swarm Optimization
Zi-Jia Wang, Zhi-hui Zhan, Jun Zhang

13:20 [#1570192243] A Subspace-Based Method for PSO Initialization
Elre van Zyl, Andries Engelbrecht

13:40 [#1570192855] Particle Swarm Optimization with Minimum Spanning Tree Topology for Multi-modal Optimization
Yu-Hui Zhang, Yue-jiao Gong, Jun Zhang

14:00 [#1570190207] The Effect of Probability Distributions on the Performance of Quantum Particle Swarm Optimization for Solving Dynamic Optimization Problems
Kyle Harrison, Beatrice Ombuki-Berman, Andries Engelbrecht

14:20 [#1570197619] A Swarm-Based Approach to Learning Phase-Type Distributions for Continuous Time Bayesian Networks
Logan J Perreault, Monica Thornton, Rollie Goodman, John W. Sheppard

14:40 [#1570159763] Transistor Sizing Using Particle Swarm Optimisation
Lyndon White, Lyndon While, Ben Deeks, Farid Boussaid

RiiSS’15 Session: 2: Intelligent Robotics
Tuesday, December 8, 13:00–15:00, Room: 1.61
Chair: János Botzheim, Co-chair: Hiroyuki Masuta

13:00 [#1570191529] Evolving Snake Robot Controllers Using Artificial Neural Networks as an Alternative to a Physics-Based Simulator
Grant Woodford, Mathys du Plessis, Christiaan Pretorius

13:20 [#1570191823] Genetic Bayesian ARAM for Simultaneous Localization and Hybrid Map Building
Wei Hong Chin, Chu Kiong Loo, Naoyuki Kubota, Yuichiro Toda

13:40 [#1570193227] Pareto-dominance Based MOGP for Evolving Soccer Agents
Christopher Lazarus

14:00 [#1570193245] Inter-connection Structure Optimization for Neural Oscillator Based Biped Robot Locomotion
Azhar Aulia Saputra, Indra Adjju Sulistijono, János Botzheim, Naoyuki Kubota

14:20 [#1570193421] Autonomous Viewpoint Selection of Robots Based on Aesthetic Composition Evaluation of a Photo
Kai Lan, Kosuke Sekiyama
CIDM’15 Session: 2a: Special Session: Mining of Human Centered Multimodal Data
Tuesday, December 8, 13:00–14:00, Room: 1.62
Chair: Markus Kächele

13:00 [#1570190953] Avoiding Bias in Classification Accuracy - a Case Study for Activity Recognition
Heli Koskimäki

13:20 [#1570196031] Fusion Mappings for Multimodal Affect Recognition
Martin Schels, Markus Kächele, Patrick Thiam, Friedhelm Schwenker

13:40 [#1570192227] Data Mining in MEDLINE for Disease-Disease Associations Via Second Order Co-Occurrence
Modest von Korff, Bernard Deffarges, Thomas Sander

CIDM’15 Session: 2b: Ensemble Methods
Tuesday, December 8, 14:00–15:00, Room: 1.62
Chair: Markus Kächele

14:00 [#1570192723] Evaluation of Fusion Methods for Gamma-divergence-based Neural Network Ensembles
Uwe Knauer, Andreas Backhaus, Udo Seiffert

14:20 [#1570192891] Improving Classification Performance by Merging Distinct Feature Sets of Similar Quality Generated by Multiple Initializations of mRMR
Thomas Bottesch, Guenther Palm

14:40 [#1570193191] Naïve Bayes Classification Ensembles to Support Modeling Decisions in Data Stream Mining
Patricia Lutu

CIBIM’15 Session: 2: Special Session: Machine Learning Techniques for Fingerprint Biometrics
Tuesday, December 8, 13:00–15:00, Room: 1.63
Chair: Ajita Rattani, Co-chair: Ruggero Donida Labati

13:00 [#1570192059] Fusion of Palmprint and Finger-Knuckle-Print for Human Personal Recognition
Aditya Nigam, Parvez Khan, Phalguni Gupta

13:20 [#1570192355] Distortion Analysis on Binary Representation of Minutiae Based Fingerprint Matching for Match-on-Card
Cynthia Mlambo

13:40 [#1570193443] Automatic Classification of Acquisition Problems Affecting Fingerprint Images in Automated Border Controls
Ruggero Donida Labati, Angelo Genovese, Enrique Munoz Ballester, Vincenzo Piuri, Fabio Scotti, Gianluca Sforza

14:00 [#1570195225] A Preliminary Study on Identifying Fabrication Material From Fake Fingerprint Images
Ajita Rattani, Zahid Akhtar, GianLuca Foresti

Tuesday, December 8, 15:20–17:20

Suresh Sundaram
Room: 1.44

15:20 [Tutorial 5] CIDM, CICARE: Multimodal Recognition of Mental States (Emotions, Dispositions, Pain)
Holger Hoffmann, Harald Traue, Steffen Walter, Friedhelm Schwenker, Sascha Meudt
Room: 1.61
15:20 [Tutorial 6] SSCI: Hyper-heuristics and Computational Intelligence  
Nelishia Pillay  
Room: 1.62

Giacomo Boracchi, Gregory Ditzler  
Room: 1.63

Madalina Drugan  
Room: Audi 2

Abolfazl Mehbodniya, Fumiyuki Adachi  
Room: Boardroom

CICA’15 Session: 2: System Identification and Learning with Applications  
Tuesday, December 8, 15:20–17:20, Room: 1.41  
Chair: Er Meng Joo, Co-chair: Fouzi Harrou

15:20 [#1570173237] Interpretation and Analysis of Input Selection Approaches in Distance Space  
Tim Heinz, Oliver Nelles

15:40 [#1570184331] Extended Deterministic Local Search Algorithm for Maximin Latin Hypercube Designs  
Tobias Ebert, Torsten Fischer, Julian Belz, Tim Heinz, Geritt Kampmann, Oliver Nelles

16:00 [#1570192287] Enhanced Anomaly Detection Via PLS Regression Models and Information Entropy Theory  
Harrou Fouzi, Ying Sun

Ananda Maiti, Alexander A. Kist, Andrew Maxwell

16:40 [#1570194283] GLRT Based Anomaly Detection for Sensor Network Monitoring  
Harrou Fouzi, Ying Sun

17:00 [#1570196053] Multi-document Extractive Summarization Using Window-based Sentence Representation  
Yong Zhang, Er Meng Joo, Rui Zhao

CIVTS’15 Session: 2: Driver Behavior Detection and Vehicle Vision Systems  
Tuesday, December 8, 15:20–17:20, Room: 1.42  
Chair: Yi Lu Murphey, Co-chair: Marthinus Booysen

15:20 [#1570192905] Real Time Drowsiness Detection Based on Lateral Distance Using Wavelet Transform and Neural Network  
Jiaqi Ma, Yi Lu Murphey, Hong Zhao

15:40 [#1570182527] A Comparison of Low-Cost Monocular Vision Techniques for Pothole Distance Estimation  
Sonja Nienaber, Marthinus J Booyse, Steve Kroon

16:00 [#1570190023] Performance Comparison of Dynamic Time Warping (DTW) and a Maximum Likelihood (ML) Classifier in Measuring Driver Behavior with Smartphones  
Jarrett Engelbrecht, Marthinus J Booyse, Gert-Jan van Rooyen, Frederick Bruwer

16:20 [#1570191749] Comparison of GPS and MEMS Support for Smartphone-Based Driver Behavior Monitoring  
Frederick Bruwer, Marthinus J Booyse

Ritesh Kanjee, Johnson Carroll, Asheer Bachoo

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CICS’15 Session: 2:
Tuesday, December 8, 15:20–17:20, Room: 1.43
Chair: Robert Abercrombie

15:20 [#1570169699] Information Warfare: Fighting Back Through the Matrix
Ramzi A. Haraty, Sanaa Kaddoura, Ahmed Zekri

15:40 [#1570170935] Security Analysis of Smart Grid Cyber Physical Infrastructures Using Modeling and Game Theoretic Simulation
Robert Abercrombie

16:00 [#1570181673] An Adaptive Approach Towards the Selection of Multi-factor Authentication
Arunava Roy, Abhijit Kumar Nag, Dipankar Dasgupta

16:20 [#1570189199] Histogram-Based Fast Text Paragraph Image Detection
Devadeep Shyam, Yan Wang, Alex Kot

Mehul S Raval, Vaibhav Joshi, Dhruv Gupta, Shubhalaxmi J Kher

Wednesday, December 9, 08:00–09:30

Registration: 08:00–16:00
Room: Strelitzia Conservatorium, Ground Level

SSCI’15 Plenary Talk
Speaker: Xin Yao Large Scale Global Optimisation Through Co-operative Co-evolution
Wednesday, December 9, 08:30–09:30, Room: Audi 2
Chair: Bernadette Bouchon-Meunier

Wednesday, December 9, 09:50–12:20

CIPLS’15 Keynote Talk
Speaker: Erwin Pesch Planning and Scheduling Models in Intermodal Transport Optimization
09:50, Room: Audi 2
Chair: Bülent Çatay

IEEE ALIFE’15 Keynote Talk
Speaker: Terry Bossmoaier Complex Behaviour in Artificial Life
10:30, Room: Audi 2
Chair: Heiko Hamann

MCDM’15 Keynote Talk
Speaker: Joshua Knowles Automation vs Intuition in MCDM
11:10, Room: Audi 2
Chair: Hisao Ishibuchi

CIBD’15 Session: 1:
Wednesday, December 9, 09:50–12:20, Room: 1.41
Chair: Paulo Lisboa

09:50 [#1570197557] Hierarchical Mahalanobis Distance Clustering Based Technique for Prognostics in Applications Generating Big Data
Krishnan Raghavan, Sarangapani Jagannathan

Sue Ellen Haupt, Branko Kosovic

10:30 [#1570193585] Distributed, MapReduce-based Nearest Neighbor and E-Ball Kernel k-Means
Nikolaos Tsapanos, Anastasios Tefas, Nikos Nikolaidis, Ioannis Pitas

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ADPRL’15 Session: 1:
Wednesday, December 9, 09:50–12:20, Room: 1.42
Chair: Marco Wiering, Co-chair: Madalina Drugan

09:50 [1570191291] Learning an Optimal Control Policy for a Markov Decision Process Under Linear Temporal Logic Specifications
Masaki Hiromoto, Toshimitsu Ushio

10:10 [1570192167] A Policy Gradient with Parameter-based Exploration Approach for Zone-heating
Kevin Van Vaerenbergh, Yann-Michaël De Haene, Bruno Depreitere, Ann Nowé

10:30 [1570192495] Temporal Difference Learning for the Game Tic-Tac-Toe 3D: Applying Structure to Neural Networks
Michiel van de Steeg, Madalina Drugan, Marco Wiering

11:10 [1570196479] Bayesian Reinforcement Learning in Markovian and non-Markovian Tasks
Adnane Ez-zizi, Simon Farrell, David Leslie

11:50 [1570202843] Correlated Gaussian Multi-Objective Multi-Armed Bandit Across Arms Algorithm
Saba Yahya, Madalina Drugan

IntECS’15 Session: 1:
Wednesday, December 9, 09:50–12:20, Room: 1.43
Chair: Giacomo Boracchi

09:50 [1570189433] Detecting Contaminants in Smart Buildings by Exploiting Temporal and Spatial Correlation
Manuel Roveri, Giacomo Boracchi, Michalis P Michaelides

10:10 [1570192591] Controlled-Accuracy Approximation of Nonlinear Functions for Soft Computing Applications
Ines del Campo, Javier Echanobe, Estibaliz Asua, Raul Finker

10:30 [1570193129] Semantic Mediation in Smart Water Networks
George M. Milis, Demetris Eliades, Christos Panayiotou, Marios Polycarpou

10:50 [1570193189] A Pdf-free Change Detection Test for Data Streams Monitoring
Li Bu, Dongbin Zhao, Cesare Alippi

11:10 [1570195973] Using Cultural Algorithms to Improve Wearable Device Gesture Recognition Performance
Faisal Waris, Robert G Reynolds

Francesco Orciuoli, Mimmo Parente

11:50 [1570197457] Optimal Defense and Control for Cyber-Physical Systems
Haifeng Niu, Sarangapani Jagannathan
CIASG’15 Session: 1: Forecasting, Prediction and Estimation
Wednesday, December 9, 09:50–12:20, Room: 1.44
Chair: G. Kumar Venayagamoorthy

09:50 [#1570197659] Short-term Forecasting of Wind Power Generation Based on the Similar Day and Elman Neural Network
Xiaoyu Zhang, Rui Wang, Tao Zhang, Yabin Zha

10:10 [#1570189421] Prediction Interval Modeling Tuned by an Improved Teaching Learning Algorithm Applied to Load Forecasting in Microgrids
Franka Veltman, Luis Marin, Doris Saez, Alfredo Nez, Leonel Guitierrez

10:30 [#1570192947] Electrical Energy Consumption Forecast Using External Facility Data
Eugénia Vinagre, Luis Gomes, Zita Vale

10:50 [#1570191025] Electric Water Heater Energy Consumption Determination Using Outlet Temperature and Volumetric Estimation
Philip J C Nel, Marthinus J Booysen, Brink van der Merwe

11:10 [#1570196357] Frequency Prediction of Synchronous Generators in a Multi-machine Power System with a Photovoltaic Plant Using a Cellular Computational Network
Yawei Wei, Iroshani Jayawardene, G. Kumar Venayagamoorthy

11:30 [#1570185185] Semantically-enhanced Configurability in State Estimation Structures of Power Systems
George M. Milis, Markos Asprou, Elias Kyriakides, Christos Panayiotou, Marios Polycarpou

CIFEr’15 Session: 1: Forecasting & Predictive Modeling
Wednesday, December 9, 09:50–12:20, Room: 1.61
Chair: Peter Beling

09:50 [#1570173365] Maximum Entropy Production Principle for Stock Returns
Pawel Fiedor

10:10 [#1570181259] Predicting Stock Price Movements Based on Different Categories of News Articles
Yauheniya Shynkevich, Martin McGinnity, Sonya A Coleman, Ammar Belatreche

10:30 [#1570191001] Predicting Rainfall in the Context of Rainfall Derivatives Using Genetic Programming
Sam Cramer, Michael Kampouridis, Alex A Freitas, Antonis Alexandridis

10:50 [#1570191515] Predicting Credit Risk in Peer-to-Peer Lending: A Neural Network Approach
Ajay Byanjankar, Markku Heikkil, Jozsef Mezei

CIDM’15 Session: 3: Clustering
Wednesday, December 9, 09:50–12:20, Room: 1.62
Chair: Friedhelm Schwenker

09:50 [#1570185549] An Alternating Optimization Approach Based on Hierarchical Adaptations of DBSCAN
Alexander Dockhorn, Christian Braune, Rudolf Kruse

10:10 [#1570188213] Scalable Hierarchical Clustering: Twister Tries with a Posteriori Trie Elimination
Michael Cochez, Ferrante Neri
### Overlapping Community Detection in Social Network Using Disjoint Community Detection
Jaswant Meena, V. Susheela Devi

### An Enhanced Quantum-Inspired Evolutionary Fuzzy Clustering
Neha Bharill, Om Patel, Aruna Tiwari

### Maximum Clusterability Divisive Clustering
David Holmeyr, Nicos Pavlidis

### Collaborative Clustering: How to Select the Optimal Collaborators?
Parisa Rastin, Gunal Cabanes, Nistor Grozavu, Younes Bennani

### A Comparative Study of Markov Network Structure Learning Methods Over Data Streams
Swarup Chandra, Vishal Karande, Latifur Khan

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### CICARE’15 Session: 1: Applications of Computational Intelligence and Informatics in Disease Diagnosis and Rehabilitation

**Wednesday, December 9, 09:50–12:20, Room: 1.63**

**Chair:** Jonathan Mwaura

09:50 [#1570213002] **Feature Reduction for Dimensional Emotion Recognition in Human-Robot Interaction**  
Ntombikayise Banda, Andries Engelbrecht, Peter Robinson

10:30 [#1570191481] **A Decision Tree-Based Approach for Cardiovascular Dysautonomias Diagnosis: a Case Study**  
Ali Idri, Ilham Kadi

10:50 [#1570210933] **A Novel Ontology and Machine Learning Inspired Hybrid Cardiovascular Decision Support Framework**  
Amir Hussain, Kamran Farooq, Bin Luo, Warner Slack

11:10 [#1570212581] **Solar Powered Wheel Chair for Physically Challenged People Using Surface EMG Signal**  
M. Shamim Kaiser, Zamsheed Iqbal Chowdhury, Shamim Al Mamun, Amir Hussain, Mufti Mahmud

11:30 [#1570197423] **Smartphone-based Tele-Rehabilitation System for Frozen Shoulder Using a Machine Learning Approach**  
Kanmanus Ongvisatepaiiboon, Jonathan H. Chan, Vajirasak Vanijja

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**Wednesday, December 9, 13:00–15:00**

### ADPRL’15 Keynote Talk
**Speaker:** Jan Peters  
**Title:** Motor Skill Learning: From Simple Skills to Table Tennis and Manipulation  
13:00, Room: Audi 2  
**Chair:** Marco Wiering

### CIASG’15 Keynote Talk
**Speaker:** Om Malik  
**Title:** Computational Intelligence Based Controllers for Real-Time Control in Power Systems  
13:40, Room: Audi 2  
**Chair:** G. Kumar Venayagamoorthy

### ICES’15 Keynote Talk
**Speaker:** Lukas Sekanina  
**Title:** Evolutionary Design for Approximate Computing: Trading Accuracy for Energy Efficiency and Performance in Circuits and Programs  
14:20, Room: Audi 2  
**Chair:** Andy Tyrell

13:00 [Tutorial 10] **CIES: Dealing with Uncertainty in Computing: From Probabilistic and Interval Uncertainty to Combination of Different Approaches, with Application to Geoinformatics, Bioinformatics, and Engineering**  
Vladik Kreinovich  
Room: 1.42
Robert G. Reynolds
Room: 1.43

13:00 [Tutorial 12] CICARE: A Computational Intelligence Library
Gary Pampara, Filipe Nepomuceno
Room: 1.44

MCDM’15 Session: 1:
Wednesday, December 9, 13:00–15:00, Room: 1.41
Chair: Hisao Ishibuchi, Co-chair: Sanaz Mostaghim

13:00 [#1570190115] Comparative Study of Recent Multimodal Evolutionary Algorithms
Romaric Pighetti, Denis Pallez, Frederic Precioso

13:20 [#1570192815] Using ϵ-Dominance for Hidden and Degenerated Pareto-Fronts
Heiner Zille, Sanaz Mostaghim

Alon Snir, Barak Samina, Amiram Moshaiov

14:00 [#1570194071] Relation Between Weight Vectors and Solutions in MOEA/D
Hisao Ishibuchi, Ken Doi, Hiroyuki Masuda, Yusuke Nojima

14:20 [#1570203017] Approximative Pareto Front Identification
Madalina M Drugan

14:40 [#1570192469] Enhancing State-of-the-art Multi-objective Optimization Algorithms by Applying Domain Specific Operators
Newsha Ghoreishi, Jan Sørensen, Bo Jørgensen

CIFEr’15 Session: 2: Systemic Risk & Sentiment Analysis & Macroeconomic Modeling
Wednesday, December 9, 13:00–15:00, Room: 1.61
Chair: Peter Sarlin

Kuan-Heng Chen, Khaldoun Khashanah

Samuel Rönqvist, Peter Sarlin

13:40 [#1570193079] An Extreme Firm-Specific News Sentiment Asymmetry Based Trading Strategy
Qiang Song, Anqi Liu, Steve Yang, Anil Deane, Kaushik Datta

14:00 [#1570193153] Learning Ordinary Differential Equations for Macroeconomic Modelling
Zhivko Georgiev, Dimitar Kazakov

14:20 [#1570193177] Sentiment Classification in the Financial Domain Using ν-SVM and Multi-Objective Optimisation
Fan Sun, Ammar Belatreche, Sonya A Coleman, Thomas McGinnity, Yuhua Li

14:40 [#1570193221] CrisisModeler: A Tool for Exploring Crisis Predictions
Markus Holopainen, Peter Sarlin

CIDM’15 Session: 4: Data Mining Applications
Wednesday, December 9, 13:00–15:00, Room: 1.62
Chair: Sascha Meudt

Ali Idri, Aya Hassani, Alain Abran

Kazuhisa Chiba, Hideyuki Yoda, Shoma Ito, Masahiro Kanazaki
13:40 [1570191593] Using Twitter for Next-Place Prediction, with an Application to Crime Prediction
Mingjun Wang, Matthew Gerber

14:00 [1570191959] Genetic Clustering Algorithm for Extractive Text Summarization
Sebastian Suarez Benjumea, Elizabeth León

14:20 [1570192513] Optimizing Seed Set for New User Cold Start
He-Da Wang, Ji Wu

14:40 [1570192589] Collaborative Filtering of Call for Papers
He-Da Wang, Ji Wu

FOCI’15 Session: 1: Fuzzy Logic
Wednesday, December 9, 13:00–15:00, Room: 1.63
Chair: Pablo Cordero

13:00 [1570173287] An Open Source Matlab/Simulink Toolbox for Interval Type-2 Fuzzy Logic Systems
Ahmet Taskin, Tufan Kumbasar

13:20 [1570193009] Omega-algebras
Branimir Seselja, Andreja Tepavcevic

13:40 [1570193137] L-E Fuzzy Boolean Algebras
Branimir Seselja, Andreja Tepavcevic

14:00 [1570197805] A Normal Form for Fuzzy Functional Dependencies
Jose Manuel Rodríguez-Jiménez, Estrella Rodríguez-Lorenzo, Pablo Cordero, Manuel Enciso, Angel Mora

14:20 [1570197849] On Fuzzy Preordered Sets and Monotone Galois Connections
Francisca García-Pardo, Inma Cabrera, Pablo Cordero, Manuel Ojeda-Aciego

14:40 [1570199563] Designing Lattices of Truth Degrees for Fuzzy Logic Programming Environments
Juan Guerrero, María del Señor Martínez, Gines Moreno, Carlos Vázquez

Wednesday, December 9, 15:20–17:20

15:20 [Panel Discussion 1]: Problem Niches for CI
Panelists: Hisao Ishibuchi, Bernadette Bouchon-Meunier, Pablo Estevez, Ed Keedwell, Robert Reynolds, Xin Yao
Room: Audi 2
Chair: Hisao Ishibuchi
Summary: Computational Intelligence (CI) methods are increasingly being used in solving various problems from machine learning, optimization, modeling, artificial intelligence and other computational areas. In certain such tasks, CI has a clear niche due to their flexible structure, stochastic operators, and modular approach. In this panel, eminent CI researchers will address and highlight various such problem classes for which CI methods have been demonstrated to have a niche and indicate possible other problems where they can potentially have an edge over existing methods.

Dimitar Kazakov, Zhivko Georgiev
Room: 1.61

Claude Touzet
Room: 1.62

Paolo Rocca
Room: 1.63
CIPLS’15 Session: 1:
Wednesday, December 9, 15:20–17:20, Room: 1.41
Chair: Bülent Çatay

15:20 [#1570192191] A Collaborative Lot-Sizing Problem with Production Limitations
Mario Ziebuhr, Tobias Buer, Herbert Kopfer

15:40 [#1570192833] Adaptive IDEA for Robust Multiobjective Optimization. Application to the r-TSALBP-m/A
Manuel Chica, Joaquin Bautista, Sergio Damas, Oscar Cordon

16:00 [#1570193101] The Influence of the Picking Times of the Components in Time and Space Assembly Line Balancing Problems: An Approach with Evolutionary Algorithms
Emanuel Alsina, Nicola Capodieci, Giacomo Cabri, Alberto Regattieri, Mauro Gamberi, Francesco Pilati

16:20 [#1570193233] Component Analysis Based Approach to Support the Design of Meta-heuristics for MLCLSP Providing Guidelines
Luis Pessoa, Carolin Wagner, Fernando Lima Neto, Bernd Hellingrath

ICES’15 Session: 1: Evolvable Robotic Systems
Wednesday, December 9, 15:20–17:20, Room: 1.42
Chair: Lukas Sekanina

15:20 [#1570192789] Evolving Robust Robot Team Morphologies for Collective Construction
Geoff Nitschke

15:40 [#1570194011] The Benefits of Adaptive Behavior and Morphology for Cooperation
Geoff Nitschke

16:00 [#1570171257] Evolution, Individual Learning, and Social Learning in a Swarm of Real Robots
Jacqueline Heinerman, Massimiliano Rango, A.E. Eiben

Jonathan Mwaura, Ed Keedwell

16:40 [#1570174311] A Multi-Agent System for Autonomous Adaptive Control of a Flapping-Wing Micro Air Vehicle
Garrison Greenwood, Michal Podhradsky, John Gallagher, Eric Matson

IEEE ALIFE’15 Session: 1:
Wednesday, December 9, 15:20–17:20, Room: 1.43
Chair: Terry Bossomaier

15:20 [#1570167173] Study of Normalization and Aggregation Approaches for Consensus Network Estimation
Pau Bellot, Philippe Salembier, Albert Oliveras, Patrick Meyer

15:40 [#1570171901] An Ansatz for a Theory of Living Systems
Dominique Chu, David Barnes

16:00 [#1570184497] Effects of Several Bioinspired Methods on the Stability of Coevolutionary Complexification
Benjamin Inden, Jürgen Jost

Heiko Hamann, Mostafa Wahby, Thomas Schmickl, Payam Zahadat, Daniel Hofstadler, Kasper Stoy, Sebastian Risi, Andres Faina, Frank Veenstra, Serge Kernbach, Igor Kuksin, Olga Kernbach, Phil Ayres, Przemyslaw Wojtaszek

16:40 [#1570191933] Using the Simulation of Ecological Systems to Explain the Wheel of Retailing
Roderick Ducan, Terry Bossomaier, Steven D’Alessandro, Craig Johnson, Kathleen French

17:00 [#1570193575] The Impact of Obstruction on a Model of Competitive Exclusion in Plants
Jeffrey Tsang, Daniel A Ashlock
15:20 [1570189623] A Comparative Study for Efficient Synchronization of Parallel ACO on Multi-core Processors in Solving QAPs
Shigeyoshi Tsutsui, Noriyuki Fujimoto

15:40 [1570192483] Towards a Network Interpretation of Agent Interaction in Ant Colony Optimization
Pavel Krömer, Petr Gajdos, Ivan Zelinka

16:00 [1570192887] A Gradient-Guided ACO Algorithm for Neural Network Learning
Ashraf Abdelbar, Khalid Salama

16:20 [1570192889] Ant Colony Optimization for First-order Rule Discovery
Rafael Ramírez

16:40 [1570192901] Investigating Evaluation Measures in Ant Colony Algorithms for Learning Decision Tree Classifiers
Khalid Salama, Ashraf Abdelbar, Fernando Otero

Thursday, December 10, 08:00–09:30

Registration: 08:00–16:00
Room: Strelitzia Conservatorium, Ground Level

SSCI’15 Plenary Talk
Speaker: Paulo Lisboa
Thursday, December 10, 08:30–09:30, Room: Audi 2
Chair: Simon Lucas

Thursday, December 10, 09:30–12:20

CIHLI’15 Keynote Talk
Speaker: Tristan Cazenave Monte Carlo Tree Search
09:50, Room: Audi 2
Chair: Jacek Mańdziuk

CIES’15 Keynote Talk
Speaker: Ralf Mikut Computational Intelligence in Smart Grids
10:30, Room: Audi 2
Chair: Rudolf Kruse

CIEL’15 Keynote Talk
Speaker: Ke Tang Evolutionary Ensemble Learning in Uncertain Environments
11:10, Room: Audi 2
Chair: Janusz Kacprzyk

CICOMMS’15 Session: 1a: Special Session: Nature-inspired Antenna Systems
Thursday, December 10, 09:50–11:10, Room: 1.41
Chair: Randy Haupt, Co-chair: Paolo Rocca

09:50 [1570196203] Surrogate-Assisted Optimization of Metamaterial Devices for Advanced Antenna Systems
Lorenza Tenuti, Marco Salucci, Giacomo Oliveri, Paolo Rocca, Andrea Massa

10:10 [1570192027] Role of Boundary Dynamics in Improving Efficiency of Particle Swarm Optimization on Antenna Problems
Pragnan Chakravorty, Durbadal Mandal
10:30 [1570192687] Optimization of Antenna Arrays for SLL Reduction Towards Pareto Objectivity Using GA Variants
Sudipta Das, Gopi Ram Hardel, Pragnan Chakravorty, Durbadal Mandal, Rajib Kar, Sakti Prasad Ghoshal

10:50 [1570177745] Optimizing an Antenna Array for Satellite Communications
Randy Haupt

CIComms’15 Session: 1b:
Thursday, December 10, 11:10–12:20, Room: 1.41
Chair: Kandarpa Kumar Sarma, Co-chair: Paolo Rocca

11:10 [1570189837] An Adaptive Congestion Control and Fairness Scheduling Strategy for Wireless Mesh Networks
Sajid Sheikh, Riaan Wolhuter, Herman A Engelbrecht

11:30 [1570198595] A Dec-POMDP Model for Congestion Avoidance and Fair Allocation of Network Bandwidth in Rate-Adaptive Video Streaming
Mahdi Hemmati, Yassine Abdulsalam, Shervin Shirmohammadi

Alireza Baghai-Wadji

ICES’15 Session: 2: Applications of Evolvable Systems
Thursday, December 10, 09:50–12:20, Room: 1.42
Chair: Garry Greenwood

09:50 [1570193195] Social-Insect-Inspired Networking for Autonomous Fault Tolerance
Matthew Rowlings, Martin Trefzer, Andy Tyrrell

10:10 [1570192363] Neuromorphic Hardware Accelerated Adaptive Authentication System
Manan Suri, Vivek Parmar, Akshay Singla, Surag Nair, Rishabh Malviya

10:30 [1570192425] Evolution of Non-Cryptographic Hash Function Pairs for FPGA-Based Network Applications
Roland Dobai, Jan Korenek

10:50 [1570192409] An Investigation of Underlying Physical Properties Exploited by Evolution in Nanotubes Materials
Stefano Nichele, Odd Rune Lykkeb, Gunnar Tufte

11:10 [1570192401] Modelling Epigenetic Mechanisms to Capture Dynamical Topological Morphology: Applications in Edge Detection
Alexander Turner, Martin Trefzer, Andy Tyrrell

11:30 [1570183955] Simultaneous Improvement to Signal Integrity and Electromagnetic Interference in High-Speed Transmission Lines
Moritoshi Yasunaga, Ikuo Yoshihara

CIASG’15 Session: 2: Simulation, Operations and Control
Thursday, December 10, 09:50–12:20, Room: 1.43
Chair: Komla Folly

09:50 [1570193063] Co-Simulation Platform for Characterizing Cyber Attacks in Cyber Physical Systems
Mohammad Sadi, Mohd Hasan Ali, Dipankar Dasgupta, Robert K Abercrombie, Shubhabalaxmi J Kher

10:10 [1570191787] Stochastic Optimization for Combined Economic and Emission Dispatch with Renewables
Mehdi Rahmani-Andebili, G. Kumar Venayagamoorthy

10:30 [1570193043] VPP Energy Resources Management Considering Emissions: The Case of Northern Portugal 2020 to 2050
João Soares, Nuno Borges, Cristina Lobo, Zita Vale

10:50 [1570197617] Stochastic Model Predictive Control Based Economic Dispatch for Hybrid Energy System Including Wind and Energy Storage Devices
Yan Zhang, Rui Wang, Tao Zhang, Yajie Liu, Bo Guo, Tianjun Liao
11:10 [#1570197757] Development of Optimal PI Controllers for a Grid-Tied Photovoltaic Inverter
Ali Arzani, Paranietharan Arunagirinathan, G. Kumar Venayagamoorthy

11:30 [#1570193105] Multi-machine Power System Stabilizer Design Based on Population Based Incremental Learning
Derek A Dombo, Komla Folly

SIS’15 Session: 3: Particle Swarm Optimization II
Thursday, December 10, 09:50–12:20, Room: 1.44
Chair: Sanaz Mostaghim

09:50 [#1570196169] Dynamic Vector-evaluated PSO with Guaranteed Convergence in the Sub-swarms
M Helbig, Andries Engelbrecht

10:10 [#1570190193] Co-operative Vector-Evaluated Particle Swarm Optimization for Multi-objective Optimization
Justin Maltese, Beatrice Ombuki-Berman, Andries Engelbrecht

10:30 [#1570190219] High-Dimensional Multi-objective Optimization Using Co-operative Vector-Evaluated Particle Swarm Optimization with Random Variable Grouping
Justin Maltese, Andries Engelbrecht, Beatrice Ombuki-Berman

10:50 [#1570195045] A Parallel Implementation of Multiobjective Particle Swarm Optimization Algorithm Based on Decomposition
Jin-Zhou Li, Wei-Neng Chen, Jun Zhang

11:10 [#1570182049] On the Performance of Particle Swarm Optimization Algorithms in Solving Cheap Problems
Abdullah Al-Dujaili, Muhammad Rizwan Tanweer, Suresh Sundaram

11:30 [#1570188293] Frequency Distribution of Candidate Solutions in Angle Modulated Particle Swarms
Bennie Leonard, Andries Engelbrecht

CICARE’15 Session: 2: Applications of Computational Intelligence in eHealth and Therapy
Thursday, December 10, 09:50–12:20, Room: 1.61
Chair: Marthinus Booysen

09:50 [#1570177143] Real Time Identification of Heart Sounds Using Selectional Regional Correlation of the Time Frequency Domain
David Fourie, Marthinus J Booysen

10:10 [#1570192339] Automatic Diagnosis of Voiding Dysfunction From Sound Signal
Petr Hurtik, Michal Burda, Jan Krhut, Peter Zvara, Libor Luňáček

10:30 [#1570197173] Efficient Bone Detector and Geometric Descriptor for X-ray Imaging
Jakub Romanowski, Marcin Korytkowski, Rafal Scherer

10:50 [#1570195913] Fuzzy Set-Based Detection of Hypotension Episodes for Predicting Leaks in Sleeve Gastrectomy
Job Visser, Anna Wilbik, Uzay Kaymak, Simon Nienhuijs

11:10 [#1570191611] A Note on the Evaluation of Mutation Prioritization Algorithms
Dusan Popovic, Jesse Davis, Alejandro Sifrim, Bart De Moor

CIDM’15 Session: 5a: Special Session: Process Mining
Thursday, December 10, 09:50–10:50, Room: 1.62
Chair: Andrea Burattin, Co-chair: Fabrizio Maggi, Chiara Di

09:50 [#1570178547] Constructing Probable Explanations of Nonconformity: A Data-aware and History-based Approach
Mahdi Alizadeh, Massimiliano de Leoni, Nicola Zannone

10:10 [#1570193019] Efficient Process Discovery From Event Streams Using Sequential Pattern Mining
Marwan Hassani, Sergio Siccha, Florian Richter, Thomas Seidl

10:30 [#1570193159] The Analysis of a Real Life Declarative Process
Tijs Slaats, Søren Debois
CIDM’15 Session: 5b: Classification II
Thursday, December 10, 10:50–12:20, Room: 1.62
Chair: Andrea Burattin, Co-chair: Fabrizio Maggi, Chiara Di

10:50 [1570192573] Improving SVM Training Sample Selection Using Multi-Objective Evolutionary Algorithm and LSH
Romaric Pighetti, Denis Pallez, Frédéric Precioso

11:10 [1570192717] Subclass Marginal Fisher Analysis
Anastasios Maronidis, Anastasios Tefas, Ioannis Pitas

Skyler Seto, Wenyu Zhang, Yichen Zhou

11:50 [1570193235] Evolving Workflow Graphs Using Typed Genetic Programming
Tomáš Křen; Martin Pilat, Roman Neruda

FOCI’15 Session: 2: Evolutionary Computation and Machine Learning
Thursday, December 10, 09:50–12:20, Room: 1.63
Chair: Pietro Oliveto

09:50 [1570169921] Improving Convergence in Cartesian Genetic Programming Using Adaptive Crossover, Mutation and Selection
Roman Kalkreuth, Guenter Rudolph, Jörg Krone

10:10 [1570179501] Measuring Saturation in Neural Networks
Anna Rakitianskaia, Andries Engelbrecht

10:30 [1570192193] Hybrid Approach for TSP Based on Neural Networks and Ant Colony Optimization
Carsten Mueller, Niklas Kiehne

10:50 [1570192561] An Evolutionary Approach to the Discovery of Hybrid Branching Rules for Mixed Integer Solvers
Kjartan Petursson, Thomas Runarsson

11:10 [1570192631] Population-Based Incremental Learning with Immigrants Schemes in Changing Environments
Michalis Mavrovouniotis, Shengxiang Yang

11:30 [1570192705] Graph Embedding Exploiting Subclasses
Anastasios Maronidis, Anastasios Tefas, Ioannis Pitas

11:50 [1570196337] Towards A Generic Computational Intelligence Library: Preventing Insanity
Gary Pampará, Andries Engelbrecht

Thursday, December 10, 13:00–14:00

13:00 [Panel Discussion 2]: Ensuring Repeatable and Reliable CI
Panelists: Sanaz Mostaghim, Janusz Kacprzyk, Joshua Knowles, Paulo Lisboa, Paolo Rocca
Room: Audi 2
Chair: Sanaz Mostaghim
Summary: Computational Intelligence (CI) methods usually involve a random initialization, use stochastic operators, and involve algorithmic parameters that must often be tuned. Hence, an important question faced by CI researchers is on the issue of ensuring repeatable and reliable performance of CI methods in controlled as well as practical problem solving tasks. In this panel, eminent researchers will discuss various existing methodologies of ensuring repeatable and reliable performance of different CI methods, need for standardization, and other possible methods from statistics and contemporary fields.

13:00 CIS RSA Chapter Meeting
Room: 1.63

13:00 CFETC Meeting
Room: Boardroom
Thursday, December 10, 14:00–15:00

CIComms’15 Keynote Talk
Speaker: Andrea Massa  Frontiers in Complex Engineering Optimization - The System-by-design Paradigm
14:00, Room: Audi 2
Chair: Paolo Rocca

CIHLI’15 Session: 1:
Thursday, December 10, 14:00–15:00, Room: 1.41
Chair: Jacek Mańdziuk, Co-chair: Sławomir Zadrożyń

14:00 [#1570192977] RoboCHAIR: Creative Assistant for Question Generation and Ranking
Senja Pollak, Borut Lesjak, Janez Kranjc, Vid Podpečan, Martin Žnidarič, Nada Lavrač

14:20 [#1570193215] Enhancing Environmental Surveillance Against Organised Crime with Radial Basis Neural Networks
Christian Napoli, Emiliano Tramontana, Marcin Woźniak

14:40 [#1570202855] A New Two-Stage Approach to the Multiaspect Text Categorization
Sławomir Zadrożyń, Janusz Kacprzyk, Marek Gajewski

ICES’15 Session: 3: Evolvable Digital Systems
Thursday, December 10, 14:00–15:00, Room: 1.42
Chair: Andy Tyrrell

14:00 [#1570192267] An Evolutionary Strategy Based State Assignment for Area-Minimization Finite State Machines
Yanyun Tao, Lijun Zhang, Yuzhen Zhang

14:20 [#1570192079] Designing Polymorphic Circuits with Periodical Weight Adjustment
Houjun Liang, Rui Xie, Liang Chen

14:40 [#1570191729] Investigation of Replicating Tiles in Cellular Automata Designed by Evolution Using Conditionally Matching Rules
Michał Bidlo

SDE’15 Session: 1: Algorithmic Aspects of Differential Evolution
Thursday, December 10, 14:00–15:00, Room: 1.43
Chair: Ferrante Neri, Co-chair: Suresh Sundaram

14:00 [#1570191777] A Population Adaptation Mechanism for Differential Evolution Algorithm
Johanna Aalto, Jouni Lampinen

Petr Gajdos, Pavel Krömer, Ivan Zelinka

14:40 [#1570187735] Continuous Parameter Pools in Ensemble Differential Evolution
Giovanni Iacca, Fabio Caraffini, Ferrante Neri

CIASG’15 Session: 3: Demand Response
Thursday, December 10, 14:00–15:00, Room: 1.44
Chair: Zita Vale

14:00 [#1570193059] Demand Response Shifting Management Applied to Distributed Generation and Pumping
Diogo Sousa, Pedro Faria, Zita Vale

14:20 [#1570193199] Economic Impact of Demand Response in the Scheduling of Distributed Energy Resources
João Spinola, Pedro Faria, Zita Vale

14:40 [#1570192893] Quantum Particle Swarm Optimization Applied to Distinct Remuneration Approaches in Demand Response Programs
Fabio Pereira, João Soares, Pedro Faria, Zita Vale
CIDM’15 Session: 6: Advanced Data Mining Techniques
Thursday, December 10, 14:00–15:00, Room: 1.61
Chair: Friedhelm Schwenker

14:00 [#1570174967] On Accelerated Gradient Approximation for Least Square Regression with L1-regularization
Yongquan Zhang, Jianyong Sun

14:20 [#1570193289] Multi-Objective Genetic Programming for Dataset Similarity Induction
Jakub Smid, Klara Peskova, Martin Pilat, Roman Neruda

14:40 [#1570197693] On Perturbations of Multisets
Maciej Krawczak, Grażyna Szkatuła

CIDM’15 Session: 7: Special Session: Analysis and Visualization of Highdimensional and Complex Data
Thursday, December 10, 14:00–15:00, Room: 1.62
Chair: Barbara Hammer, Co-chair: Frank-Michael Schleif, Alessio Micheli

14:00 [#1570171003] Model-Based Outlier Detection for Object-Relational Data
Fatemeh Riahi, Oliver Schulte

14:20 [#1570192941] Inferring Feature Relevances From Metric Learning
Alexander Schulz, Bassam Mokbel, Michael Biehl, Barbara Hammer

14:40 [#1570193131] Multiple Graph-Kernel Learning
Fabio Aiolli, Michele Donini, Nicolo Navarin, Alessandro Sperduti

CIES’15 Session: 1:
Thursday, December 10, 14:00–15:00, Room: 1.63
Chair: Rudolf Kruse, Co-chair: Vladik Kreinovich

14:00 [#1570168847] What is the Right Context for an Engineering Problem: Finding Such a Context is NP-Hard
Martine Ceberio, Vladik Kreinovich, Hung T. Nguyen, Songsak Sriboonchitta, Rujira Oncharoen

14:20 [#1570167961] In Engineering Classes, How to Assign Partial Credit: From Current Subjective Practice to Exact Formulas (Based on Computational Intelligence Ideas)
Joe Lorkowski, Vladik Kreinovich, Olga Kosheleva

Thursday, December 10, 15:20–17:00

CIHLI’15 Session: 2:
Thursday, December 10, 15:20–17:00, Room: 1.41
Chair: Sławomir Zadrozny, Co-chair: Jacek Mańdziuk

Emmanuelle-Anna Dietz, Steffen Hölldobler, Raphael Höps

15:40 [#1570189065] A Novel Approach Toward X-RAY Images Classifier
Marcin Woźniak, Dawid Polap, Leon Kośmider, Christian Napoli, Emiliano Tramontana

16:00 [#1570192459] Risk-Aware Project Scheduling for Projects with Varied Risk Levels
Karol Wałędzik, Jacek Mańdziuk, Slawomir Zadrozny

16:20 [#1570197747] Design Methodology for Rough Neuro-fuzzy Classification with Missing Data
Robert Nowicki, Bartosz Nowak, Rafal Scherer, Marcin Korytkowski
15:20 [1570190559] Upper Limb Motor Skills Evaluation in Patients with Early Multiple Sclerosis Using the IDEA System
Alexandros Pino, Georgios Kouroupetroglou, Nikolaos Papantheodorou, Elisabeth Andreadou, Charalampos Papageorgiou

15:40 [1570191633] Metric-Based Heuristic Space Diversity Management in a Meta-Hyper-Heuristic Framework
Jacomine Grobler, Andries Engelbrecht

16:00 [1570194635] Evolving Non-linear Stacking Ensembles for Prediction of Go Player Attributes
Josef Moudrik, Roman Neruda

16:20 [1570196317] Acoustic Event Classification Using Ensemble of One-Class Classifiers for Monitoring Application
Achyut Tripathi

16:40 [1570197809] Block Sparse Representations in Modified Fuzzy C-Regression Model Clustering Algorithm for TS Fuzzy Model Identification
Tanmoy Dam, Alok Deb

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Aboubakar Hameed, Anna Kononova, David Corne

15:40 [1570189303] Improved Constructive Cooperative Coevolutionary Differential Evolution for Large-Scale Optimisation
Emile Glorieux, Bo Svensson, Fredrik Danielsson, Bengt Lennartson

16:00 [1570182065] DE vs. PSO: A Performance Assessment for Expensive Problems
Abdullah Al-Dujaili, Muhammad Rizwan Tanweer, Suresh Sundaram

16:20 [1570191503] Adaptive Differential Evolution Applied to Point Matching 2D GIS Data
Noel Khan, Ferrante Neri, Samad Ahmadi

Jiri Jaros, Pavel Mensik

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Wei Shi, Thomas Weise, Raymond Chiong, Bülent Çatay

15:40 [1570191475] Comparing a Weiszfeld’s-based Procedure and (1+1)−es for Solving the Planar Single-Facility Location-Routing Problem
Pepijn van Heiningen, Edgar Reehuis, Thomas Bäck

16:00 [1570196173] Crew Constrained Home Care Routing Problem with Time Windows
Başak Tozlu, Rebi Daldal, Bülent Çatay, Tonguç Unluyurt

16:20 [1570181509] An Integrated Matching and Partitioning Problem with Applications in Intermodal Transport
Erwin Pesch, Dominik Kress, Sebastian Meiswinkel
CIFEr’15 Session: 3: Portfolio Optimization & Hedging Strategies & The Bitcoin Market & Market Games
Thursday, December 10, 15:20–17:00, Room: 1.61
Chair: Katherine Malan

15:20 [#1570191785] Constraint Handling Methods for Portfolio Optimization Using Particle Swarm Optimization
Stuart Reid, Katherine Malan

15:40 [#1570193201] Order Routing and Arbitrage Opportunities in a Multi-Market Trading Simulation
Andrew Todd, Peter Beling, William Scherer

16:00 [#1570193549] Bitcoin Market Return and Volatility Forecasting Using Transaction Network Flow Properties
Steve Yang, Jinhyoung Kim

16:20 [#1570194993] Discrete-time Quadratic-Optimal Hedging Strategies for European Contingent Claims
Easwar Subramanian, Sanjay Bhat

16:40 [#1570197811] Winning in Retail Market Games: Relative Profit and Logit Demand
Jasper Hoogland, Mathijs De Weerdt, Han La Poutré

CIDM’15 Session: 8: Special Session: Partially Supervised Learning
Thursday, December 10, 15:20–17:00, Room: 1.62
Chair: Sascha Meudt

Evgenii Sopov, Iliya Ivanov

15:40 [#1570193097] Ensembles of Support Vector Data Description for Active Learning Based Annotation of Affective Corpora
Patrick Thiam, Markus Küchele, Friedhelm Schwenker, Guenther Palm

16:00 [#1570196177] Applying Interval Type-2 Fuzzy Rule Based Classifiers Through a Cluster-Based Class Representation
Javier Navarro, Christian Wagner, Uwe Aickelin

CIES’15 Session: 2:
Thursday, December 10, 15:20–17:00, Room: 1.63
Chair: Vladik Kreinovich, Co-chair: Rudolf Kruse

15:20 [#1570169177] Computational Intelligence for Efficient Numerical Design of Structures with Uncertain Parameters
Wolfgang Graf, Marco Götz, Ferenc Leischenring, Michael Kaliske

15:40 [#1570192365] Acceptance-based Software Architecture Deployment for Improvement of Existing Applications
Hannes Klee, Michael Buchholz, Torben Materna, Klaus Dietmayer

16:00 [#1570192821] A Clustering Approach to a Major-Accident Data Set: Analysis of Key Interactions to Minimise Human Errors
Raphael Moura, Christoph Doell, Michael Beer, Rudolf Kruse

16:20 [#1570192983] Computational Intelligence for Structural Identifications
Abdullah Al-Hussein, Achintya Haldar

16:40 [#1570192987] Fault Diagnosis and Evaluation of the Performance of the Overcurrent Protection in Radial Distribution Networks Based on Wavelet Transform and Rule-based Expert System
Helton do Nascimento Alves
15:20 [1570192867] Differential Evolution with Random Walk Mutation and an External Archive for Multimodal Optimization
   Yu-Hui Zhang, Yue-jiao Gong, Jun Zhang

15:40 [1570191961] The Impact of Subcultures in Cultural Algorithm Problem Solving
   Robert G Reynolds, Yousof Gawasme, Areej Salaymeh

16:00 [1570171835] A Modified Chaotic Firefly Algorithm for Solving Discrete Logarithm Problem and Analysis
   Mohit Mishra, Utkarsh Chaturvedi, K K Shukla, Roman Yampolskiy